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A Nurse's Reflections on Lifelong Learning

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Editorial Board Member

I've said for almost my entire career that someday I was going to write a book about all the things I wouldn't know if I'd stopped learning when I graduated from nursing school. All the changes we're forced to deal with in our lives have made me think maybe it's not such a silly idea. Instead of a scholarly work about changes, this editorial is one long-time nurse's reflections on a life in this incredible profession and the people who comprise that profession.

I grew up in Indiana in a very small town of 350 people, with a father who was the general practitioner for everyone in the surrounding communities. His office was in the basement of our house, and I remember him coming upstairs with a tray on which were syringes filled with the polio vaccine for our injections. Anytime a new vaccine became available, there he would be, and we'd all run and hide (which didn't actually work). I'm old enough to have a smallpox scar that I received before I have conscious memories, but I distinctly remember the polio and tetanus vaccines coming up the stairs on that tray. I did not know as a preschooler or elementary school-age child why I was getting them; I just knew they hurt and there was no choice (in our house anyway). I remember all of us (my poor mother) having mumps and a year later the measles at the same time. One of my brothers was incredibly ill with measles, and I recall how frantic my mother was.

In the past year, those memories came popping up frequently as our country grapples with information and misinformation surrounding vaccines. I'm not focusing on what's happening right now at the governmental level as I'm not an expert, but all that's been said and written about vaccines has intensified my reminiscences about what else has changed in my life, and specifically in my profession.

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If I had stopped learning when I graduated from nursing school (and yes, this is going to age me, but I'm not alone in our profession at my age yet), I wouldn't know most of the medications available today. I wouldn't know what AIDS is or all the work that has been done to stop it from being an automatic death sentence. Yes, AIDS still kills but look how far we've come with treatment that prolongs life and gives people the chance to live productively. I still would think toxic shock syndrome most often occurs in people who use tampons. I wouldn't be able to dream any joint could be replaced and a patient could be mobile so quickly. I just read that there is experimentation with a glue that will hold bones together instead of rods. How far we've come!

My clinical nursing career was primarily in the medical-surgical area. I felt more connected to that population as people rather than as diseases or connected technology. I'm not saying that's not important, but people generally do not go home from critical care, and I loved walking them to the edge of our unit while they were being wheeled away. Not often but sometimes, I would see them come back in several weeks to let us know how they were progressing. I'm a people person, as you can tell. But even that part of our profession has changed with the increased acuity of the patients in medical-surgical settings. Every time I'm with students on a medical-surgical unit, I

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see the people focus is still there. I've heard it said, and I believe it, that patients currently receiving care on medical-surgical units are those who were in critical care units when I started nursing. The acuity is higher, the stress is greater, but the same people focus is still present on the medical-surgical unit. I believe because of who we are, medical-surgical nurses learn more about families, their hobbies, jobs, and the things that make them whole people. I know there are medical-surgical nurses still walking patients to the end of their unit, or sometimes even to the door, to wish them good luck at home (or rehab or wherever they are going). What has changed is the types of diseases, injuries, and treatments my younger medical-surgical colleagues have had to learn and manage. I admire the passion and the skill I still see in today's medical-surgical nurses and am proud we have maintained that sense of purpose.

The second half of my professional career has been spent in various aspects of nursing education, and changes there are also dramatic. Every time new diseases, or treatments of new and old diseases are discovered, we've had to change and adapt what we teach. We've gone from everyone having to be in a classroom, lab, and clinical, to so many hybrids of those things it often doesn't feel like the same world. As I work with students who are on a medical-surgical unit, it is the same (or close anyway). The students still may be intimidated by the pace and number of skills they need to learn. I still see the experienced nurses willing to share their knowledge and sometimes, remember what it was like to be in that student's place. Our healthcare system is not the same as it was when I first started working, but the people are the same. As I watch my students working with nurses today, I am filled with hope for the future of medical-surgical nursing. The compassion, the ability to do 14 things at one time with grace is awe-inspiring.

I want to end by summarizing an article I read many years ago in a journal that is no longer published. I can't give a citation, but the heart of that article has stayed with me for many years. It was a summary of the evolution of a nurse. The journey of becoming a nurse comes in stages, much like walking through a tunnel. Beginners look at the tunnel and are quite sure they are never going to get through it, never going to know enough to get out of the tunnel. In the intermediate stage, they're gaining basic skills, but they still feel as if the end of the tunnel is so far away. In my teaching of students, I often ask them to turn around in their mind to see what they know now that they didn't know when they started school. I want to remind them they are farther on their journey than they thought. Once they get out of the tunnel, they are functional but still learning. Sometimes they need to be reminded they will never know everything but they're working on it. The author ended by saying the expert nurses are those who are comfortable enough to say, "I'm good at what I do, and I know a lot, but I don't know everything and I'm not afraid to ask someone to help me learn." That is my hope for all my current and future medical-surgical nursing colleagues: to work toward being an expert nurse in this changing nursing professional world. MSN

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Clinical Case Study

A Case Study of Medical-Surgical Nurses Advocating for Palliative Care

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This case study examines the role and responsibilities of medical-surgical nurses in providing timely, holistic palliative care to seriously ill patients through advocacy and collaborative interprofessional efforts. As this case illustrates, medical-surgical nurses are not only caregivers but also essential catalysts for integrating palliative care across the continuum of serious illness.

Keywords: palliative care, medical-surgical nursing, advance care planning, nurse advocacy, interdisciplinary collaboration, goals of care

Learning Outcome: After completing this education activity, the learner will be able to discuss the role and responsibilities of medical-surgical nurses in providing timely, holistic palliative care to seriously ill patients.

Palliative care is a type of care delivery that provides relief from pain and other physical, psychosocial, or spiritual symptoms. The symptoms associated with palliative relief are distressing to patients and accompany serious and life-threatening illnesses (World Health Organization [WHO], 2023). Palliative care can be delivered in any care setting and at any stage of illness, regardless of prognosis. However, it often is equated mistakenly with hospice care (Ferrell et al., 2018). Hospice is an advanced type of palliative care that similarly focuses on relieving symptoms, providing support to the patient and family caregivers, and delivering compassionate person-centered care (National Hospice and Palliative Care Organization [NHPCO], 2024).

Hospice is a Medicare-funded program and differs from palliative care in that patients must have a terminal diagnosis with an expected 6-month prognosis documented by the provider for service eligibility. Hospice emphasizes delivering high-quality care focused on preserving quality of life rather than providing curative interventions (Ferrell et al., 2018; NHPCO, 2024). Patients who elect hospice usually determine they no longer want life-saving interventions (NHPCO, 2024). Patients who receive hospice are not all imminently dying; however, because they have a serious or life-limiting illness, hospice often is misunderstood by caregivers, patients, and healthcare providers (WHO, 2023).

Timely palliative and hospice care interventions have been beneficial to patient outcomes, with reduced hospital stays leading to decreased costs, improved patient satisfaction, and informed decision-making (Janke et al., 2024; Zaborowski et al., 2022). Zaborowski and co-authors noted a 2-day reduction in length of stay during a retrospective cohort study in a U.S. hospital system. Researchers examined 711 acute and seriously ill patients over 3 months and found patients who received palliative care consults 1 day sooner had an overall 2-day reduction in hospital length of stay when compared to patients who received palliative care con-

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sults per the system's regular schedule. Additionally, earlier palliative care consults yielded over 26% cost savings during the study.

Medical-surgical nurses should identify palliative care referral needs as soon as patients are admitted to their units, and advocate for coordinated communication so referrals are made before discharge (Ferrell et al., 2018). Early integration of palliative care is essential to ensuring coordinated, patient-centered care throughout hospitalization and beyond. Palliative referrals performed after inpatient discharge may have negative effects on care transitions, putting patients at risk for unmanaged needs and symptoms (Luta et al., 2021). Early palliative care has increased patient decision-making, facilitated earlier discharges, improved patient satisfaction with care, and enhanced overall quality of life (Luta et al., 2021; Zaborowski et al., 2022). Patients and family members who are included in healthcare discussions receive education earlier about the trajectory of the illness and can make informed decisions about advance directives, treatment options, and life-sustaining measures (Luta et al., 2021). Discussions about advance directives or code status ensure care decisions represent the patient's wants and needs should the patient later be unable to participate (Zaborowski et al., 2022), and can reduce advanced medical-surgical and intensive care interventions, including mechanical ventilation (Luta et al., 2021).

Palliative care discussions also empower patients and family caregivers to engage actively in decision-making and care planning, including options for pain and symptom management, and make informed choices about discharge with an understanding of available community resources (Luta et al., 2021). These palliative care discussions give patients the agency to choose where their symptomatic care occurs and where they prefer to die if that is the expected outcome. Luta and co-authors also suggested earlier palliative care interventions provide caregivers with education and supportive resources, empowering them with information and critical support needed to care for their family members, thus also reducing re-hospitalizations.

Despite the positive effect of identifying patients who could benefit from early palliative intervention, barriers to access continue with misconceptions surrounding palliative care referrals and care delivery. These barriers are individualized and systemic, and may originate with patients, family members, healthcare team members, or system administrators. One notable barrier is the lack of consistent palliative care education in nursing and medical schools to give providers necessary communication skills and competence to deliver palliative care (Potthoff et al., 2023). Nursing curricula may not prepare nurses entering the workforce for their roles in assessing, referring, advocating, and coordinating care (Ferrell et al., 2018; Potthoff et al., 2023). Newly graduated medical-surgical nurses may face challenges in managing the needs of seriously ill patients and engaging in emotional conversations regarding serious or terminal illness and advance directives (Nelson et al., 2021; Potthoff et al., 2023).

Further, palliative service delivery is not standardized (Rosa et al., 2021). Some hospitals have standalone palliative care teams, other hospitals refer services to the community, and other areas lack the services or the funding to support palliative care (Nelson et al., 2021). The lack of standardization may be the result of policymakers, healthcare professionals not working in palliative care, and the general population not understanding the services. The demand for palliative care referrals exceeds the ability to deliver in some instances. Nelson and co-authors noted only an estimated 17% of hospitals in rural locations in the United States have palliative care services. Patients who also are underrepresented in palliative care include those in under-resourced communities, patients with non-cancer diagnoses, and those who lack knowledge about palliative services. Patients who do not ask about services may not be approached by healthcare team members about the care due to systemic barriers, such as lack of cultural communication, lack of resources, and lack of training. Populations at risk for limited access to palliative care services include persons from racial and ethnic minority groups, those without caregiving support or insurance coverage, people with multiple chronic conditions, and members of the LGBTQIA+ community (Nelson et al., 2021; Rosa et al., 2021). Shi and colleagues (2025) further found a lack of Medicare insurance was a deterrent for patients accessing or accepting palliative care services.

Patients and family caregivers often mistakenly believe accessing palliative or hospice care will hasten death (Liao et al., 2023; Nelson et al., 2021; WHO, 2023). Medications used to alleviate symptoms or promote comfort sometimes are associated with substance misuse, which can contribute to stigma or hesitation in their use. Patients may delay accessing palliative or hospice care due to fear of opioids or benzodiazepines, or fear of pain (Liao et al., 2023; WHO, 2023). These attitudes and beliefs may be attributed to a lack of familiarity

with palliative care or a lack of symptom relief when patients participate in palliative or hospice care but do not use the medications (Nelson et al., 2021; WHO, 2023). The WHO (2023) estimated only 13% of the morphine prescribed for palliative pain and symptom relief is used. Liao and colleagues (2023) attributed the decreased use of morphine to increased care quality, while Nelson and co-authors (2021) identified this as a deterrent to care.

Attitudes and beliefs may prevent people who can benefit from palliative or hospice care from accepting services (Liao et al, 2023; Nelson et al., 2021). Patients may believe palliative and hospice care is only for patients with cancer (Nelson et al., 2021). Palliative and hospice services are provided regardless of diagnosis (Ferrell et al., 2018; NHPCO, 2024). In 2022, the top six principal diagnoses for hospice were (in rank order) senile degeneration of the brain, Alzheimer's disease, chronic obstructive pulmonary disease, Alzheimer's disease with a late onset, Parkinson's disease, and heart failure (NHPCO, 2024).

Cultural position on care delivery also may prevent patients from accessing care (Nelson et al., 2021). Some cultural norms do not support receiving treatment for serious illness or embrace the hospice philosophy of care (Nelson et al., 2021; WHO, 2023). Further, different populations may have an inherent distrust of care being delivered by healthcare team members, contributing to a lack of access (Nelson et al., 2021).

The number of people who access hospice and remain on service past the first benefit period of 90 days has been increasing since 2021 but remains low. In 2022, 75% of the patients who were receiving the Medicare hospice benefit were on the service for 84 days or less; 25% of those were enrolled for 5 days or less (NHPCO, 2024). This means patients were placed on hospice to receive comprehensive pain and symptom management, respite relief for caregivers, medication and equipment coverage, and supportive services for psychosocial, spiritual, and other emotional needs, but may not have benefited.

Patient care needs should be assessed continuously by nurses and healthcare team members to ensure concerns surrounding patient preferences and care are addressed at all care transitions (National Consensus Project for Quality Palliative Care, 2018). Recognizing patients who are receiving or could benefit from palliative care helps medical-surgical nurses tailor their care to meet individual needs. Because hospice and palliative care services can be provided in any setting, medical-surgical nurses should understand their role in caring for patients already receiving these services, identifying those who may benefit, and preparing patients for discharge to services in another location (Ferrell et al., 2018). Medical-surgical nurses skilled in palliative care will identify patient and caregiver needs, communicate with members of the care team, recognize the need for resources and referrals, and advocate for services not in place (Ferrell et al., 2018; Potthoff et al., 2023).

Case Study

The following case outlines a patient's illness progression and highlights the role of the medical-surgical nurse throughout care.

Part 1

Sandra is a 61-year-old female. She lives with her spouse, Mary, and they have two cats. This morning, she was getting ready to go to her busy job as an accountant and she became dizzy in the shower. Her spouse was still home and noticed Sandra's color was ashen and she was having labored breathing. Mary convinced Sandra to go for an evaluation.

The nurse at the emergency department asked Sandra how long she had been having her symptoms. Sandra did not know; it is tax season, and she had been working a lot. She told the nurse she has been seeing a cardiologist for 5 years for aortic valve stenosis diagnosed after an infection as well as hypertension, but she missed this year's appointment due to her job. Sandra identified her home medications as atorvastatin, metoprolol, and furosemide (Lasix®), and an antibiotic before dental visits. She told the nurse she does not monitor her blood pressure, pulse, or weight at home, and she reported a lack of consistency with following a "healthy" diet as she and her spouse do not cook; they eat out often. The nurse performed an assessment and completed initial laboratory studies (see Table 1).

Sandra had an echocardiogram that showed her aortic stenosis has worsened from her previous exam 1 year ago. Additionally, the echocardiogram identified left ventricular heart failure with an ejection fraction (EF) of 25%. Sandra was admitted to a medical-surgical unit with an order for a surgical consult to determine possible candidacy for a valve repair.

The medical-surgical nurse needs to determine what Sandra and her spouse have been told about her current medical condition and identify their educational needs. Because the EF indicates her left ventricle is not pumping efficiently, she is at risk for pooling blood or backflow. This also increases risk for other cardiac

TABLE 1.
Assessment Findings and Laboratory Results

Assessment/Diagnostic	Findings
Vital signs	Temperature 98.4° F Pulse102 beats per minute Respiratory rate 22 breaths per minute Blood pressure 134/90 mm Hg O_2 saturation 90% room air Weight 240 lbs, body mass index 40
General survey	Appears weak Anxious, restless, reports "cannot miss work"
Neurological	Alert and oriented X4 Strengths equal bilaterally
Respiratory	Fine crackles to bilateral bases Labored effort at rest No cough
Cardiac	S1, S2 sounds irregular S3 gallop irregular Murmur auscultated No jugular vein distention noted 1+ edema bilateral lower extremities
Abdomen	Soft, round, non-tender Bowel sounds auscultated all four quadrants
Skin	Color ashen, warm, dry Capillary refill >3 seconds
Social	Lives with spouse No children, no other close family Works full-time Eats out often Full code
Relevant labs	Na 135 mEq/L K 4.1 mEq/L BNP 950 pg/mL Urinalysis yellow, clear, negative

complications, including worsening heart failure, myocardial infarction, a venous thromboembolic event, or arrhythmia resulting from decreased contractility (Pujari & Agasthi, 2023). Sandra is taking medications to manage atherosclerosis and hypertension, and to improve the efficiency of her heart rate. She will have anticoagulants added to her regimen to prevent a clot, particularly if she meets criteria for valve repair.

Importantly, the medical-surgical nurse should advocate for Sandra's code status to be addressed. It is unclear if the patient has had a goals-of-care discussion since her last visit. Heart failure is a progressive chronic disease, and Sandra should have an advance directive indicating her wishes in the event her decision-making capacity is affected (Fasolino & Mayfield, 2020). Additionally, she will require teaching about diet, exercise, and weight reduction due to her elevated body mass index and heart failure symptoms (Fasolino & Mayfield, 2020). Her spouse should be included in all these discussions. Finances may be a concern as Sandra has indicated she cannot miss work. The medical-surgical nurse additionally can advocate by collaborating with the nurse case manager or medical social worker to assist with optimal care transitions.

Part 2

Sandra is scheduled for a transcatheter aortic valve replacement (TAVR) the next day. She is kept NPO, and the surgical resident speaks with her about what to expect during and after the procedure. Her spouse goes home, and Sandra goes to sleep. During the night, she wakes up and states she is experiencing sudden chest pain and feels she is "dying." She wants Mary to return to the hospital. The medical-surgical nurse suspects Sandra has developed a pulmonary embolism. As she places Sandra on her left side, Sandra becomes unresponsive and pulseless. The medical-surgical nurse calls for a code and begins to administer cardiopulmonary resuscitation.

Sandra regains a pulse after four resuscitation cycles, and the medical team determines she is too weak to have the surgery that day. They cancel the surgery with plans to reschedule after a follow-up cardiology visit. They plan for Sandra to go home with her current medications and a bridge to warfarin (Coumadin®). Additionally, she will attend cardiac rehabilitation four times a week and see a dietitian to help her with strategies for a new 2-grams per day sodium restriction. When Mary arrives on the unit, she is distraught and concerned about Sandra's deconditioned state. She tells the medical-surgical nurse she does not know what to do. She confides they both "have to" work full-time because their insurance plans are not sufficient.

The medical-surgical nurse should refer Sandra and Mary to the case manager and a social worker if not already done. Sandra

needs to be connected to services; with Mary's work demands, she may not be the person to provide rides to appointments. They do not have other family support available. Ride-sharing programs, volunteer agencies, or Senior Centers may provide rides to and from cardiac rehabilitation and other appointments. Sandra's current ability to learn will need to be assessed, and she may need to see the dietitian on an outpatient basis. In collaboration with the healthcare team, the medical-surgical nurse should ensure Sandra's home needs are met. Sandra may not be able to return to work for some time. She also may not be able to access stairs going in and out of her home, as well as within the home, and may require durable medical equipment. A referral to a visiting nurse is needed to assist with transitions to the next level of care.

Part 3

One year later, Sandra has had the TAVR. She has been unable to resume working full-time due to fatigue and decreased endurance. Sandra currently receives long-term disability benefits through her employer. She and Mary have had to assume a home equity loan for their expenses; Mary is not sure what to do, as she planned to retire at age 63 but will not be able to afford early retirement anymore. The loss of income has been too great. Sandra's new anticoagulant is very expensive, even with the insurance co-payments, and they recently purchased a motorized scooter so Sandra can get around their home. Sandra has been sleeping in the recliner in their first floor living room for the past 3 months because she can no longer climb the stairs to the bedroom. At a follow-up cardiologist appointment and echocardiogram, Sandra is told her new valve is leaking and not working properly. Her EF is now 20%. The cardiologist would like to admit her for more tests to see if she is a candidate for valve repair. Then, they can discuss options together. Mary is struggling with concerns and anticipatory grief about Sandra's declining medical status.

The code status has not been determined, and it is unclear what Sandra's wishes are. The medical-surgical nurse on the unit should advocate for a discussion with the healthcare team and involve Mary in the discussions. Sandra's reduced EF, her continued symptom burden following TAVR, as well as difficulty negotiating her home surroundings and inability to work make it important to establish Sandra's wishes. Palliative care is a valuable option regardless of whether Sandra chooses to undergo valve repair or decides to return home without surgery. It can offer symptom management, supportive services, and access to community resources. Just as importantly, it can help Sandra's spouse navigate complex care decisions and provide much-needed psychological support during this stage of her health journey.

Discussion

Medical-surgical nurses are an important part of the palliative care team. They are in a unique position to identify patients who may benefit from support to alleviate symptom burden through direct care, case management, admissions, discharge planning, and patient education (Fasolino & Mayfield, 2020). As patient conditions evolve, medical-surgical nurses evaluate trends toward improvement or decline and prepare patients and families for the changes that accompany either end of the healthcare continuum (Fasolino & Mayfield, 2020; Heshmatifar et al., 2025). These opportunities present during education and preparation for diagnostic tests, new medications, surgeries, and treatments, and transitions to new care locations (Fasolino & Mayfield, 2020). The American Nurses Association (ANA, 2024) emphasized the vital role nurses play in responding to a patient's changing condition and possible impending death, while providing compassionate support to the patient and the family. All patients are entitled to quality palliative care and should be assessed for this need by healthcare team members, including medical-surgical nurses (ANA, 2024; Nelson et al., 2021; WHO, 2023).

Effective assessment is critical to identifying patients who may benefit from palliative care. Nurses must assess not only physical symptoms, such as pain, dyspnea, or fatigue, but also psychosocial and spiritual needs. Regular, comprehensive assessments allow providers to monitor changes in condition, engage in proactive care planning, and tailor interventions to enhance comfort and quality of life. In Sandra's case, early identification of symptom burden could have prompted a timely referral to palliative care services and offered her and Mary support earlier in the disease process.

In addition to conducting thorough assessments, nurses advocate for patients by initiating palliative care discussions, ensuring their voices are heard, and supporting timely referrals to appropriate services (Fasolino & Mayfield, 2020). Advocacy also involves facilitating the completion of advance directives, promoting informed decision-making, and connecting patients and caregivers with necessary resources (Fasolino & Mayfield, 2020). For Sandra, early advocacy for a case manager and palliative consult could have eased her transition

TABLE 2.
Key Principles and Knowledge for Medical-Surgical Nurses in Palliative Care

Best Practice	Explanation
Use person-centered, compassionate language (e.g., "patient with a serious illness" instead of "terminal patient").	Avoid terms that seem hopeless or dehumanizing, such as "terminal case."
Engage in shared decision-making by discussing goals of care early and often.	Avoid conversations about prognosis or assuming preferences without discussion.
Provide holistic interprofessional care that includes physical, emotional, spiritual, and social needs.	Avoid focusing solely on medical interventions without addressing quality of life.
Recognize palliative care is not just end-of-life care.	Integrate palliative care at any stage of serious illness alongside curative treatment to manage symptoms and improve quality of life.
Advocate for early identification.	Understand medical-surgical nurses are often the first to notice functional decline or frequent hospitalization, key indicators for initiating palliative care discussions.
Practice cultural humility to improve care.	Approach care with curiosity and respect, sensitively addressing diverse values and potential barriers.
As medical-surgical nurses, be an active part of the palliative care team.	Even without a formal team, provide comfort-focused care, educate patients and families, and coordinate with interprofessional colleagues.

and reduced avoidable stressors during her illness trajectory. This includes the financial burden of care. There could have been more informed discussions with Sandra and Mary to weigh surgical coverage options with Sandra's insurance provider against other available treatment options. A case manager could assist further by reviewing Sandra's ability to pay for her medications and advocate for lower-cost generic options. The stigma of their financial status may have prevented Sandra and Mary from bringing up financial concerns previously (Nelson et al., 2021; Shi et al., 2025).

Communication in palliative care must be clear, compassionate, and rooted in cultural humility, recognizing and respecting diverse beliefs, values, and experiences (Ferrell et al., 2018; Heshmatifar et al., 2025; Rosa et al., 2023). Nurses often bridge gaps among the patient, family, and interprofessional team. Table 2 highlights key guiding principles in working with patients who are receiving palliative care. Nurses translate medical information, clarify prognosis, and provide emotional support. An open dialogue helps correct misconceptions, such as the belief that palliative care means giving up. By facilitating transparent discussions around goals of care, prognosis, and treatment options, nurses foster trust and ensure care delivery that aligns with the patient's values. Palliative care thrives on strong interprofessional collaboration. Nurses and other providers, social workers, chaplains, and case managers bring unique expertise that enhances holistic care. Seamless communication and teamwork ensure patient needs are addressed comprehensively (Ferrell et al., 2018; Heshmatifar et al., 2025; Rosa et al., 2023). For patients such as Sandra, coordinated planning can help navigate complex transitions, provide financial counseling, manage medications, and offer emotional and spiritual support to the patient and the caregiver.

Nursing Implications

Access to palliative care is a fundamental human right, and failing to provide it undermines ethical obligations and legal responsibilities (Rosa et al., 2021). Medical-surgical nurses must be competent and confident in advocating for and communicating patients' palliative care needs. Education for healthcare providers and patients is critical in promoting timely palliative care. Nurses play a pivotal role in interprofessional care; because they often spend the most time with patients and families, they are essential healthcare professionals in palliative care (Glover et al., 2025). To deliver compassionate, person-centered care with confidence, nurses need formal training in communication, symptom management, ethical decision-

making, and cultural humility (Rosa et al., 2023). Educating patients and families helps dispel myths about palliative and hospice care, reduces fear surrounding opioids, and supports informed shared decision-making (Ferrell et al., 2018; Heshmatifar et al., 2025; Potthoff et al., 2023; Rosa et al., 2023). Table 2 provides medical-surgical nurses with strategies that emphasize essential aspects of palliative care.

Cultural norms significantly influence how patients perceive illness, death, and the appropriateness of palliative care interventions (Rosa et al., 2023). Some communities may resist end-of-life discussions, decline symptom-relieving medications due to stigma, or prefer family-centered decision-making (Rosa et al., 2023). Nurses must assess and honor these beliefs while offering culturally responsive education that empowers patients to make informed choices. In particular, opioid use for managing pain and dyspnea remains a key component of palliative care, yet fear of addiction or misuse may lead to underutilization (Liao et al., 2023; WHO, 2023). Nurses play a vital role in addressing these concerns, advocating for equitable access to medications, and ensuring patients receive the relief and dignity they deserve (Liao et al., 2023). Rosa and co-authors (2023) reported patients from historically marginalized backgrounds who have a serious illness often receive lower-quality care compared to their non-marginalized counterparts. Medical-surgical nurses should engage in education and self-reflection to recognize implicit bias and enhance the quality of care for patients receiving palliative care.

Timely referral to palliative care enables patients to benefit from symptom management, psychosocial support, and care planning early in the disease course (Ferrell et al, 2018; Luta et al., 2021; Zaborowski et al., 2022). Delayed referrals often result in missed opportunities to improve quality of life and reduce hospital readmissions (Luta et al., 2021; Zaborowkski et al., 2022). Nurses should recognize clinical indicators, such as frequent hospital admissions, a serious or worsening health trajectory, or notable changes in functional status, as important considerations for initiating a palliative care referral and advocating for early involvement of the care team.

Conclusion

Medical-surgical nurses play an important role in advocating for timely, person-centered palliative care. This case study highlights how nurses serve as advocates by recognizing changes in patient condition, initiating goals-of-care conversations, and coordinating interprofessional resources. Through early identification of needs and compassionate communication, nurses help patients and families navigate complex decisions, reduce symptom burden, and improve care transitions. Advocacy in palliative care requires clinical judgment, cultural humility, and an understanding of available services. As this case illustrates, medical-surgical nurses are not only caregivers but also essential catalysts for integrating palliative care across the continuum of serious illness. MSN

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Colorectal Cancer in Young Adults: Unique Psychosocial Healthcare Needs

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The rise of early-onset colorectal cancer has prompted earlier screening recommendations by the U.S. Preventive Services Task Force. Adults under age 50 commonly present with symptoms at late stages of the disease, which translates into higher rates of morbidity and mortality. Unique psychosocial considerations that influence treatment and nursing interventions in persons with early-onset disease are addressed.

Keywords: colorectal cancer, early-onset colorectal cancer, screening, quality of life, psychosocial

Colorectal cancer (CRC) is the second most common cause of cancer death in the United States. Over the last few decades, aggressive campaigns to raise awareness and screening in persons over age 50 have succeeded in reducing incidence and mortality of CRC in this population. Incidence in those over age 55 slowed from 3%-4% annually during the 2000s to most recent estimate of 1% annually (Siegel et al., 2022). However, CRC incidence in persons under age 50 (early onset colorectal cancer [EOCRC]) is increasing by 2%-3% annually, particularly in those ages 20-24 (Shah & Itzkowitz, 2022). In 2023, there were 153,020 new cases of CRC in the United States, including 106,970 tumors in the colon and 46,050 tumors in the rectum. Although the majority of diagnoses occur in people age 65 and older, 19,550 cases (13%) were in individuals younger than age 50 in 2023 (Siegel et al., 2022). EOCRC is expected to account for 11% of colon cancers and 23% of rectal cancers by 2030. This trend is observed in different parts of the world in men and women.

In 20% of patients with EOCRC, a hereditary cancer syndrome is found as the underlying cause. However, the majority of patients have no genetic predisposition. In young adults, CRC also is diagnosed at later stages; this leads to poorer outcomes and higher morbidity and mortality compared to late onset CRC (Siromoni et al., 2024). Black Americans have a higher incidence of early onset CRC compared to White Americans, 12.2 vs. 9.2 per 100,000. Across all ages, Blacks have a CRC incidence 1.28 times that of Whites (Muller et al., 2021). Because of this trend of earlier onset of CRC, the U.S. Preventive Services Task Force (USPSTF, 2021) recommends initial screening at age 45. However, by 2030, CRC is expected to be a leading cause of death in persons ages 20-49 (Xi & Xu, 2021).

Etiology and Risk Factors

Research concerning EOCRC identifies male sex, family history of CRC, and personal history of inflammatory bowel disease as predictors of early-onset CRC compared to age-matched controls and late-onset CRC cases (Siromoni et al., 2024). Additionally, persons with EOCRC are more likely to be Black compared to persons with late-onset disease regardless of socioeconomic status. Certain non-modifiable risk factors contribute to EOCRC. After excluding all known cases of hereditary cancer syndromes, persons with EOCRC are more than eight times as likely to have a family history of CRC compared to controls and nearly three times more likely than patients with

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late-onset CRC. CRC diagnosed before age 50 has been associated more strongly with family history of CRC or probable hereditary syndrome than CRC diagnosed later in life.

Almost 30% of EOCRC is attributable to high-risk genetic variants, such as those found in Lynch syndrome (also called *hereditary nonpolyposis colon cancer* or *familial adenomatous polyposis*) (O'Sullivan et al., 2022). Chromosomal instability is involved in oncogenesis for 85% of CRCs. Mutations in the APC gene on chromosome 5 codes for the syndrome known as adenomatous polyposis coli. The APC gene is a tumor suppressor gene that becomes defective in CRC and stimulates the formation of aberrant crypt foci in the colon. This formation is one of the earliest changes in the colon, followed by adenomatous polyp formation. If KRAS or TP53 mutations occur within the adenomatous polyp, the transition to CRC will occur. KRAS mutations are activated oncogenes on chromosome 12. They code for abnormal oncoproteins, activated cell proliferation, and enhanced tumor growth. A defective tumor suppressor gene, TP53 on chromosome 17, is present in approximately half of all CRC cases. O'Sullivan and colleagues noted the prevalence of TP53 mutations is reported to be higher in EOCRC compared to later-onset CRC. CRC oncogenesis also can occur via alternate pathways involving the formation in BRAF and NRAS gene mutations. The BRAF gene mutation on chromosome 7, present in 7% of CRCs, codes for the BRAF oncoprotein to be continuously active, sending signals to cells to divide without stopping. The NRAS gene mutation on chromosome 1 causes suppression of apoptosis of intestinal crypt cells in CRC (Spaander et al., 2023).

The gut microbiome has been a focus of study regarding EOCRC. Research has found the bacterial cluster of *Parvimonas*, *Fusobacterium*, *Faecalibacterium,* and *Bacteroides fragilis* is overrepresented significantly in stool samples of patients with CRC (Conde-Perez et al., 2024). Dimethylhydrazine, a metabolite of the microbiome, has been found to act as a carcinogen that initiates tumorigenesis (Qu et al., 2023). Further research is needed regarding the microbiome's involvement in CRC development.

The highest CRC incidence is found in countries in which the diet includes predominantly red and processed meats and low amounts of fiber. A meta-analysis found CRC risk increases by 20% for every 150 g increase in daily red meat intake (Bulanda & Janoszka, 2022). In addition, the processing of red meat by grilling or frying at high temperatures results in formation of numerous carcinogenic proteins.

Another etiologic factor may be widespread antibiotic use in early life. Early antibiotic use may select for one or more types of bacteria in the colon, which over years or decades promote oncogenic events (Weng et al., 2022). Alternatively, early antibiotic exposure may lead to loss of certain protective microbiota that curtail carcinogenesis in the colon. Simin and coauthors (2020) found exposure to antibiotics at ages 40-59 is associated significantly with adenomas after age 60, whereas antibiotic exposure at ages 20-39 is associated with adenomas in persons younger than 60. Pre-malignant lesions thus may be associated with antibiotic exposure years or decades earlier.

The contribution of obesity as an etiologic agent is unclear. Obesity may be an independent EOCRC risk factor or be associated with other factors, such as red meat consumption or low consumption of high-fiber foods. The mechanisms by which obesity predisposes to EOCRC are unknown. According to Venogopal and Carethers (2022), obesity is associated with insulin resistance, systemic inflammation, and high levels of insulin-like growth factor-1. These authors suggested hyperinsulinemia and high levels of insulin-like growth factor-1 drive intestinal cell proliferation, trigger cell cycle progression, and inhibit apoptosis. In contrast, a large retrospective study comparing cases of CRC in young adults to controls found specific dietary components, rather than obesity or diabetes, to be risk factors for EOCRC (Liu et al., 2021).

Pathophysiology

Normal colonic epithelium maintains a dynamic growth pattern of proliferation, differentiation, and apoptosis. The colonic epithelium is a flat surface with highly repetitive invaginations known as crypts of Lieberkühn. Actively proliferating colonic stem cells, which are located at the very bottom of these crypts, drive self-renewal of the epithelium. Cells at the base of the colonic crypts divide rapidly before they begin to differentiate and move upward in the crypt. Colon cancer begins at the bottom of the crypts, first as an aberrant crypt stem cell then as an adenomatous polyp or villous adenoma (Schmitt & Greten, 2021).

An adenomatous polyp is a small, mushroom-like growth that originates from the glandular tissue lining the colon and protrudes into the lumen of the colon. A villous adenoma is a broad-based, flat or slightly raised lesion with a cauliflower-like surface. Villous adenomas have a

high risk of becoming cancerous, with an estimated 30% developing into colon cancer. Villous adenomas are likely to contain cancer cells, especially if they are larger than 2 cm. The malignant carcinoma then can metastasize most commonly to the liver. CRC follows an adenoma-carcinoma-metastasis sequence (Myers & Arora, 2023).

Left- and right-sided colonic tumors differ in morphology, histology, detection, and rate of growth. Left-sided tumors are usually polypoid in appearance, allowing easy detection by colonoscopy, whereas right-sided CRCs appear as flat villous adenocarcinomas. Younger individuals and males are more likely to have left-sided CRC whereas right-sided CRC occurs predominantly in older adults and females (Tom et al., 2023).

Left-sided CRC is the most commonly diagnosed cancer across all age groups. However, it often has better outcomes compared to right-sided CRC. Right-sided CRC is more likely to be diagnosed at an advanced stage due to the tendency to grow as flat, less noticeable polyps, leading to delayed detection. Right-sided lesions also tend to have a more aggressive biological behavior with a higher risk of metastasis, particularly to the liver (Weledji, 2024).

Signs and Symptoms

Major signs of EOCRC include rectal bleeding, abdominal pain, unintended weight loss, diarrhea, and iron deficiency anemia (Wang, 2023). Iron deficiency anemia in males or post-menopausal females acts as a red flag for CRC. Iron deficiency occurs due to slow, chronic blood loss from the colonic tumor with gradual depletion of iron stores. Blood mixed with the stool is demonstrated as dark, tarry stool (melena). EOCRC has a predilection for the left-sided bowel and rectum, which translates into classic symptoms of bright red rectal bleeding (hematochezia), anemia, and rectal pain (Fritz et al., 2023).

Screening and Diagnostic Testing

The most widely used method for bowel cancer screening is the fecal immunochemical test. This test, which largely has replaced the less sensitive fecal occult blood test, measures the quantity of hemoglobin present in the stool (Patel & Dominitz, 2024). Stool DNA testing is another screening method. The test analyzes cells from the digestive tract that pass through the stool. Cancer or polyp cells often have DNA mutations in certain genes, and these can be detected in the stool. Patient screening should be based on risk factors, red flags, and, most importantly, family history (Waddell et al., 2024).

The American Society for Gastrointestinal Endoscopy recommends flexible sigmoidoscopy for patients under age 40 with rectal bleeding, with a full colonoscopy for persons age 40 and older. For iron deficiency anemia, the American Gastroenterological Association recommends all adults receive diagnostic evaluation that includes colonoscopy (Ko et al., 2020).

The gold standard diagnostic test for CRC is colonoscopy. High-quality, high-definition white-light endoscopy through the entire bowel up to the cecum is preferred over computed tomography (CT) colonoscopy. USPSTF guidelines by age are as follows: 45-75 – colonoscopy every 10 years for average-risk patients; 76-85 – selective testing based on individual factors, such as overall health, life expectancy, and previous screening history; 85 and older – not recommended (Centers for Disease Control and Prevention, 2024).

In the past, colonoscopy was recommended for patients at age 50, then every 10 years. Patients under age 50 did not undergo screening, and clinicians often misinterpreted symptoms of rectal bleeding as related to benign disease such as hemorrhoids. Therefore, undetected CRC tumors in young adults thrived and proliferated, leading to later stage cancers found on diagnosis (Patel & Dominitz, 2024).

Pattern of Delayed Diagnosis for Younger Patients

Society still views CRC as a condition of older age. Therefore, hesitancy and misdiagnosis are common on the part of the patient and physician, who expect the symptoms to be related to a benign disease process. Due to the delay in diagnosis, a higher proportion of patients presents with metastatic disease compared to their older counterparts. Up to 76% of patients younger than age 30 present with stage III or IV disease, compared with less than 50% of patients over age 50 (Esteva et al., 2022).

Lack of patient awareness of EOCRC is widespread. Many patients believe they are too young to worry about cancer. Castelo and co-authors (2022) found an average 6-to-7-month delay until diagnosis from symptom presentation in patients with EOCRC. This prolonged time delays diagnosis and allows the colorectal tumor to develop into a late-stage cancer. Approximately 25% of EOCRCs are diagnosed at an advanced stage with metastases in distant organs, which is difficult to manage surgically (Abedizadeh et al., 2024). Diagnosis of CRC at

an advanced stage translates into poorer treatment outcomes. Lack of patient awareness, lack of health insurance coverage of colonoscopy for young adults, and clinician misinterpretation of symptoms are barriers to timely screening in persons with EOCRC (Burnett-Hartman et al., 2021).

Treatment Strategies

Standard treatment for CRC is multi-modal, with surgery, chemotherapy, immunotherapy, and radiotherapy used in combination. Surgical treatment involves colonic segmental surgical resection based on the tumor site. Right hemicolectomy, transverse colectomy, left hemicolectomy, and total colectomy are the most common surgical procedures. Depending on the site of the tumor, surgery is always indicated in the absence of metastases (Abedizadeh et al, 2024). Treatment of stage III or high-risk stage II CRC requires a combination of surgery, chemotherapy, and sometimes radiation therapy as these tumors have certain features that indicate a higher chance of recurrence and poorer prognosis after surgery (Mohamed et al., 2021).

For EOCRC, surgery is considered the primary treatment option and is often curative when the cancer is localized. In most cases, this is accomplished by excising the polyp via a colonoscope (American Cancer Society, 2024). Removing part of the colon (partial colectomy) may be necessary if a cancer is too big to be removed by local excision. If the cancer has spread to nearby lymph nodes, adjuvant chemotherapy may be given after surgery to reduce risk of recurrence (National Cancer Institute, 2025).

In early-stage resectable colon cancer, a colonoscopy within a year after surgery and then every 3-5 years is follow-up treatment. A periodic CT scan of the chest and abdomen to check for cancer in the lymph nodes, lungs, and liver is needed every year for 3 years after surgery. A carcinoembryonic antigen test is used commonly in patients' follow-up care to monitor potential recurrence. A rising blood value can indicate the cancer may be returning; this test usually is done every 3-6 months, along with CT or MRI to assess any suspicious areas further (Pu et al., 2024).

Unresectable advanced or recurrent CRC is treated with chemotherapy along with targeted therapy and radiotherapy to reduce tumor size and prolong patient life. Cytotoxic chemotherapy remains the standard treatment strategy for late-stage CRC. Fluoropyrimidines play an important role as the backbone of combination regimens. Chemotherapy, such as FOLFOX (fluorouracil, leucovorin, and oxaliplatin), FOLFIRI (fluorouracil, leucovorin, and irinotecan), or FOLFOXIRI (fluorouracil, leucovorin, oxaliplatin, and irinotecan), with or without targeted drugs (anti-epidermal growth factor receptor antibody or anti-vascular endothelial growth factor antibody), is considered the first-line treatment for late-stage CRC (American Cancer Society, 2024). Each type of chemotherapy has potential side effects (see Table 1.).

Bowel Diversion Surgery

A stoma originating from the small intestine is called an *ileostomy*, whereas creation of a stoma from the large intestine is termed *colostomy*. An ileostomy diverts stool from the small intestine, usually at the terminal ileum, resulting in a stoma on the lower right side of the abdomen. A colostomy can be created anywhere along the large intestine, with the most common site over the sigmoid portion, the part of the colon directly above the rectum. This results in a stoma on the lower left side of the abdomen (Cross & Schempp, 2024).

Nursing Interventions in Patients with EOCRC

Nurses play a vital role in caring for and educating patients, enabling them to adapt better to the new conditions they will face in their daily lives. Many healthcare institutions employ a certified wound, ostomy, and continence nurse who specifically provides preoperative and postoperative care and teaching. When a certified nurse is not available, clinical nurses assume responsibility for providing necessary care and meeting patients' educational needs (McCartney et al., 2023).

Before surgery, nurses should meet with the patient and family, including the person who will assume the role of postoperative caregiver, to provide information about the type of surgery the patient will undergo, the position of the stoma, and what to expect (e.g., postoperative diet, pain management) (McCartney et al., 2023). In addition to concerns involving practical issues, such as stoma care, management of the pouch system, nutrition, and analgesia, patients may have questions about the impact of surgery on their physical, emotional, professional, and social lives. For young adults with EOCRC, the diagnosis and therapy can affect quality of life. Research has identified a lack of support in relation to mental health, sexual health, and fertility in patients with EOCRC (Miniotti et al., 2022).

Psychosocial Impact of EOCRC

Nurses must understand the psychosocial developmental level

TABLE 1.
Most Common Side Effects of Chemotherapy Used for Colon Cancer

Fluorouracil (5-FU)*	Leucovorin	Oxaliplatin	Irinotecan
Leukopenia (increased risk of infection)	Severe allergic reaction; anaphylaxis, angioedema	Leukopenia	Leukopenia
Anemia (extreme fatigue, weakness)	Decreased effectiveness of seizure medications	Anemia	Anemia
Thrombocytopenia (bruising, bleeding)	Stomatitis	Thrombocytopenia	Thrombocytopenia
Diarrhea	Fever	Nausea/vomiting	Acute cholinergic syndrome (diarrhea, sweating, abdominal pain, watery eyes, and excess salivation)
Dyspnea	Thrombus formation	Diarrhea	Diarrhea
Dysrhythmias	Diarrhea	Fever	Alopecia
Oral stomatitis	Anorexia	Fatigue	Oral stomatitis
Anorexia	Fatigue	Anorexia	Fever
Alopecia	Nausea/vomiting	Oral stomatitis	Hepatotoxicity (jaundice, pale stools, dark urine, pruritus)
Hand-foot syndrome (palmar-plantar erythrodysesthesia)	Hand-foot syndrome	Hand-foot syndrome	
Infertility teratogenicity	Teratogenicity	Teratogenicity	Teratogenicity
Immunosuppression			Immunosuppression

*Before treatment with fluorouracil (5-FU) is started, a blood test for the enzyme dihydropyrimidine dehydrogenase (DPD) is necessary. Low DPD indicates the patient may have severe side effects from this chemotherapy, so lower doses may be needed or a different treatment altogether (Casale & Patel, 2024).

Sources: Devanabanda & Kasi, 2023; Hegde & Nagalli, 2023; Paulik et al., 2020

of young adults with EOCRC. Younger adults are in stage 6 of Erikson's stages of psychosocial development (intimacy vs. isolation) or in stage 7 (generativity vs. stagnation) (Orenstein & Lewis, 2022). Adults in stage 6 may find it difficult to experience intimacy with a partner or spouse because of a disorder that has required body-altering treatment. Adults in stage 7 may experience stagnation and self-absorption, as they need to turn their full attention to their own health rather than attending to the needs of future generations.

Bowel diversion surgery serves as a permanent reminder of the patient's underlying disease. The pouch is visible to partners, and many patients feel unattractive due to the body-altering surgery. Patients with a stoma and pouch fear the appearance, odor, noise, and possible leakage of the pouch. United Ostomy Associations of America provides practical patient education materials on care of the stoma (Cross & Schempp, 2024). The association's Virtual Ostomy Clinic can provide support through telehealth visits and ongoing touchpoints via texting and emailing to ensure each patient has the right supplies and thoroughly understands how to care for the ostomy (United Ostomy Associations of America, n.d.).

The fear of death and the effects of cancer treatment, chemotherapy, and radiation can cause loss of social activity and changes in body image. Patients under age 50 with EOCRC experience body-image distress 1-2 weeks after surgery (Phung & Fang, 2023). Self-esteem can be impacted by a negative body image, leading to depression and anxiety. In a study of more than 2000 patients with EOCRC, anxiety and depression affected up to 69% of participants (Feier et al., 2024). Because psy-

chosocial adjustment is key to the patient's recovery, Antoniadis and colleagues (2024) suggested it is important to identify those who are vulnerable to negative psychological outcomes. Some psychooncology needs require referral to mental health professionals.

Several assessment tools can assist nurses in evaluating the psychosocial impact of postoperative EOCRC on the patient. Three quality-of-life assessment tools used in patients with CRC are the Functional Assessment of Cancer Therapy-Colorectal (FACT-C), the European Organization for Research and Treatment of Cancer (EORTC) Quality of Life Questionnaire (QLQ-C30), and the EORTC Quality of Life Questionnaire Colorectal Cancer Module (QLQ-CR38) (Feizpour et al., 2024).

Genetic testing for EOCRC can be done before diagnosis to determine a person's risk or after diagnosis to determine if genetic changes contributed to the cancer. Genetic testing involves taking a tissue sample from blood, polyp, or tumor and looking for changes in genes associated with hereditary syndromes. If a mutation is found, close relatives also should be tested (Eng et al., 2022).

Young adults with EOCRC face a higher rate of sexual dysfunction than the general population and report being less active sexually after surgery. A systematic review involving more than 2000 individuals with EOCRC revealed a high prevalence of sexual dysfunction, with up to 50% of men experiencing erectile dysfunction and 58% reporting sexual dysfunction; 36% of women experienced sexual difficulties (Feier et al., 2024). According to Brissette and co-authors (2024), nurses should use open communication about sexual health and sexuality concerns with patients.

Surgery for CRC generally does not affect sexual function or fertility. However, chemotherapy (particularly fluorouracil) may reduce sperm count or cause amenorrhea, and radiotherapy may reduce fertility in men and women. Fertility may be a major concern in the management of patients with EOCRC because they still may be of reproductive age and have incomplete reproductive plans. Patients should be referred to reproductive specialists because options for fertility preservation, such as banking and cryopreservation of sperm/oocytes/embryos, are recommended before gonadotoxic chemotherapy and should be discussed before starting treatment (Oktay, 2020).

Another aspect to consider in patients with EOCRC is the possibility the diagnosis or treatment may be coincidental with a pregnancy, especially with the common delay in childbearing age in the developed world. Studies show fertility counseling provided by clinicians is low, with 15%-52.5% of female patients with EOCRC receiving counseling (Landay et al, 2023; Peng et al., 2025). Medical oncologists provide pregnancy counseling to women with cancer. Studies show women with EOCRC who do not receive counseling often expressed desire for these discussions and regret they did not occur (Peng et al., 2025; Savitch et al., 2024). An interprofessional approach should be used to weigh risks and benefits for the mother and the fetus. Consensus indicates the first trimester is the most vital period to avoid systemic agents (Landay et al., 2023).

Conclusion

The incidence of CRC is rising among young adults, specifically in people under age 45. Several possible causes have been investigated, but etiology for the majority of cases remains unclear. Treatment options include surgical procedures, chemotherapy, and radiation. Body image changes, self-esteem issues, sexual functioning, fertility, and pregnancy are issues of concern among young adults with CRC. Nurses need to be able to discuss these issues openly and refer patients to appropriate specialists to provide comprehensive patient care. MSN

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Continuous Quality Improvement

Reducing Workplace Violence in Health Care Using the Brøset Violence Checklist

Jacqueline Ortiz
April Alfano
Kerry A. Milner

Workplace violence (WPV) by patients against healthcare workers is a significant global concern, with prevalence rates of 50%-75% (Rossi et al., 2023). It includes physical violence and non-physical forms, such as verbal abuse, threats, and sexual harassment. Nurses are particularly at risk, experiencing WPV at rates of 25%-100% (Ajuwa et al., 2024).

The Joint Commission (2018) issued recommendations and resources to help healthcare leaders prevent and respond to WPV. A key recommendation involved use of structured violence risk assessments to identify patients at risk for future violent behavior. Because patients are the primary perpetrators of WPV in health care, assessing them for potential violence risk and implementing interventions based on assessment results may help prevent

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A quality improvement project used Brøset Violence Checklist-guided security rounding to reduce workplace violence on all medical-surgical units in a 501-bed hospital. Interventions included staff education and real-time reporting. Adherence reached 100%, behavioral alerts dropped 32%, and interprofessional collaboration improved.

Keywords: workplace violence, Brøset Violence Checklist, security rounding, medical-surgical units, behavioral alerts, nursing safety, interprofessional

Learning Outcome: After completing this education activity, the learner will be able to describe the impact of a security rounding intervention on workplace violence in a level II trauma center.

Literature Summary

- The Brøset Violence Checklist (BVC) is a risk assessment tool used to predict likelihood of patient violence in the next 24 hours (Adams et al., 2024; Almvik et al., 2000), with nurses conducting assessments in nearly 75% of studies evaluating its use (Hvidhjelm et al., 2023).
- In a study across four medical-surgical settings, 36,155 BVC assessments on 4,437 patients demonstrated the BVC was a strong predictor of violence (Spencer et al., 2024).
- BVC use on a surgical unit led to a 17.6% reduction in nursing restraint use (χ^2=15.9, p=0.03), a 60% decrease in security calls (from 5.4 to 1.6 per week, p=0.01), and a decline in staff assaults over the 25-week intervention period (Adams et al., 2024).
- BVC use led to better identified risk of violence than usual hospital reporting systems (Quinn & Koopman, 2023).
- Proactive security rounding (e.g., engaging with nurses, addressing concerns) reduced violence-related injuries and staff injuries (Johnson-Howell & Derscheid, 2020).

CQI Model

Model for Improvement (Langley et al., 2009)

Quality Indicator with Operational Definitions & Data Collection Methods

- Security Rounding Adherence – Security rounding involves rounding on patients with high BVC scores (>2), performing visual assessments, and collaborating with primary or charge nurse to develop safety plans for patients and staff; this is reported as the percentage of patients with high BVC scores who received documented security rounding per shift based on electronic health record audits.
- Behavioral Alert Reduction – Percentage decrease in documented behavioral alerts (e.g., aggression, restraint use); incident reports extracted from hospital's safety reporting system at baseline and monthly. Behavioral alerts are documented incidents involving patient behaviors that pose a risk to staff or patient safety, such as aggression or violence. They typically are tracked through a safety reporting system.

Clinical Setting/Patient Population/Average Daily Census

All medical surgical units in a 501-bed level II trauma center, focusing on patients with high BVC scores (≥3) indicating elevated risk for violence

Program Objectives

- Increase security rounding of patients with BVC scores ≥3 from baseline to 30% in the first month, 50% in the second month, and 75% in the third month.
- Decrease behavioral alerts by 20% by the third month.

aggressive or violent behaviors toward healthcare workers.

The Brøset Violence Checklist (BVC) is a validated, evidence-based tool that can be completed in under 2 minutes, aiding in early identification and prevention of violent incidents. It demonstrates satisfactory psychometric properties for predicting violence within a 24-hour period in psychiatric inpatient settings (Almvik et al., 2000). The BVC has strong interrater reliability, with Kappa values of 0.44-1.00 across its six items and agreement rates of 90%-100%. In psychiatric settings, a cutoff score of 2 or more yields a sensitivity of 0.63 and specificity of 0.92, with higher cutoff scores increasing specificity at the expense of sensitivity.

In medical-surgical settings, the BVC has shown a specificity of 98% and a sensitivity of 64%, with an area under the curve of 0.80, indicating predictive performance significantly better than chance (p<0.001), and supporting its utility beyond psychiatric populations (Spencer et al., 2024). The tool's reliability is evidenced further by a strong positive association between nurses' and auditors' scores, as shown by Kendall's coefficient of concordance (W=0.71, p<0.001) (Spencer et al., 2024). Additional studies have affirmed the BVC's efficacy in hospital settings for identifying patients at risk for violence (Adams et al., 2024; Hvidhjelm et al., 2023; Russell-Babin et al., 2025; Senz et al., 2021). Collectively, these findings support the BVC as a reliable and valid instrument for short-term violence risk prediction across diverse clinical settings.

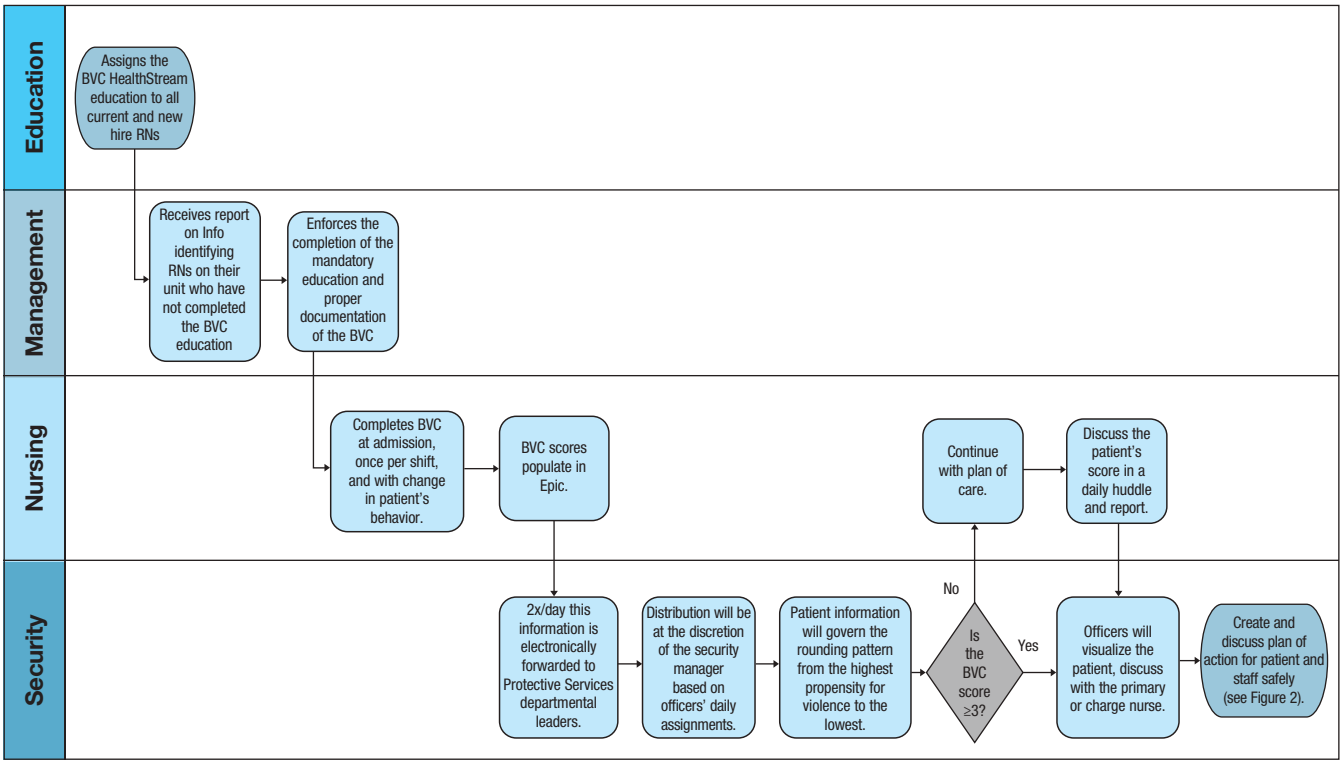
The BVC evaluates six patient behaviors: confusion, irritability, boisterousness, physical threats, verbal threats, and attacks on objects, assigning one point for each behavior present (Almvik et al., 2000) Total scores range from 0 to 6, with 1-2 indicating moderate risk and 3 or higher indicating high risk. Nurses and other healthcare professionals can use these scores to implement proactive safety interventions to maintain a secure care environment.

Project Site and Reason for Change

The quality improvement (QI) project was conducted December 2023-March 2024. Participants were clinical nurses, nurse managers, safety nurses, patients, and security officers along with their managers. This project was reviewed by the university institutional review board and deemed not to be human subject research. The Model for Improvement (Langley et al., 2009), which guided the project, contains two parts. The first part focuses on three fundamental questions: What are we trying to accomplish? How will we know a change is an improvement? What change will result in improvement?

The practice change was driven by the need to reduce behavioral incidents and staff injuries. The largest hospital in the system had demonstrated BVC-linked security rounding was associated with fewer security interventions, while the hospital without tailored rounding continued to experience spikes in employee injuries and Occupational Safety and Health Administration (OSHA) claims. To achieve the improvement, security rounding was implemented in

FIGURE 1.
Security Rounding Process Based on BVC Score



response to high BVC scores (≥3) on medical-surgical units. This involved aligning security rounds with real-time BVC scores, establishing a reporting system to ensure timely interventions, and enhancing collaboration between nursing and security staff.

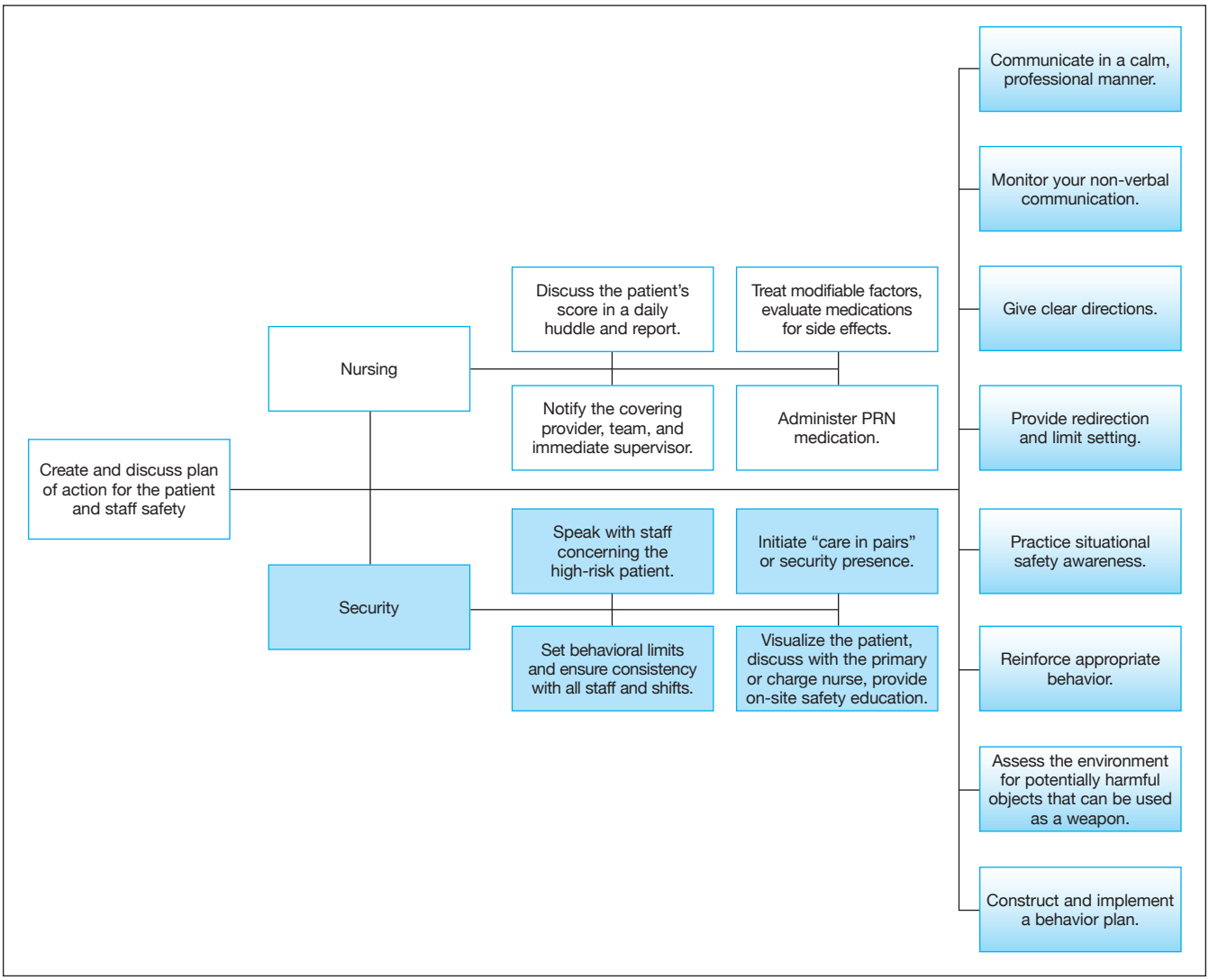
Program

In July 2022, the project site implemented the BVC systemwide, though the interventions to support its use varied across hospitals. For example, the largest hospital adopted a security rounding intervention in fall 2022 for all patients with a BVC score greater than 2. Security officers received a report every 12 hours identifying affected patients and conducted rounds at least twice daily. Rounding included visual observation and consultation with the assigned nurse. Officers made their presence known to the patient when appropriate, but direct interaction with patients was used selectively to avoid possibly escalating aggressive behavior. In collaboration with nursing staff, they reviewed patient behaviors and reinforced safety strategies to help prevent escalation.

In contrast, a smaller hospital within the health system did not implement security rounding despite a spike in employee injuries due to WPV and OSHA claims in July 2023. Although security staff conducted general rounds every 4 hours, no tailored reporting system or security rounding was used in response to BVC scores. While nurses documented the BVC scores in the electronic health record on patient admission, every 24 hours, and with behavior change, security officers conducted their rounds independently without considering BVC scores. This variation was not intentional; rather it reflected the differences in leadership priorities and security team processes across hospitals in the system and drove the need for this project and the implementation of a similar security rounding process.

The process for integrating the BVC into daily patient safety management emphasized the importance of nurse education and required BVC completion at admission, during each shift, and in response to changes in patient behavior (see Figure 1). The security rounding protocol involved forwarding BVC data to security department leaders, who used this information to prioritize security rounding based on BVC scores, starting with highest-risk patients. Additionally, for patients with BVC scores of 3 or higher, security officers conducted visual assessments and collaborated with primary or charge nurses to develop actionable plans aimed at ensuring patient and staff safety.

FIGURE 2.
Nursing and Security Interventions for Patients with BVC Scores ≥3



Nurses (white) and security staff (blue) followed a collaborative process for patients with BVC scores of 3 or higher (see Figure 2). Key nursing actions included discussing BVC scores in daily huddles, notifying providers and supervisors, and establishing consistent behavioral limits across shifts. Nurses also addressed modifiable factors, evaluated medications for side effects, and administered medications as needed. Security officers focused on consulting with staff, visualizing the patient, enforcing consistent behavior limits (e.g., no threats or physical aggression), and initiating care in pairs or providing security presence. Joint interventions also were used, such as maintaining calm communication, assessing the environment for safety, and developing and implementing a behavior plan to ensure patient and staff safety.

The second part of the Model for Improvement (Langley et al., 2009) consists of small tests of change using plan-do-study-act (PDSA) cycles to test and refine the intervention. A project team was assembled consisting of a project manager, the co-chair of the hospital WPV Prevention Governance Committee, Vice President of Patient Services, Director of Safety and Security, Manager of Hospital Security, and a QI expert from the local university.

Pre-implementation activities included confirming availability and readiness of the twice-daily report with BVC scores for launch to security. Nurse managers were emailed the process of security rounding for addressing BVC scores greater than 2, reinforcing the existing BVC policy nurses should follow. Educational materials, such as posters with color-

coded BVC scores (low, medium, and high) to categorize risk levels, were created. The posters also outlined recommended interventions, including security rounding for patients with higher BVC scores, to guide staff in managing potential violent behavior. These materials were distributed across medical-surgical units to support the change. Security officers were notified about the rounding process, and education sessions were scheduled with dedicated question-and-answer periods to ensure clarity. Safety nurses were identified as champions, with time allocated to establish their roles, review the BVC and security rounding processes, and conduct audits to monitor adherence (e.g., security rounding per protocol) and effectiveness (e.g., behavior alerts).

During the implementation phase (PDSA Cycle 1, Plan, Do; Langley et al., 2009) nurses documented the BVC every shift and with changes in patient's behavior in the electronic health record. Documentation was used to generate a report sent to security leaders. Leaders distributed this report to the security officer who would be completing the rounding. The security officer then rounded on patients listed in the report by observing each patient, consulting with the primary nurse, and participating in planning discussions to reinforce consistent behavior limits and assess safety needs. When appropriate, joint interventions such as care in pairs or maintaining a calming presence were initiated. Safety nurses completed audits as part of their daily environmental rounds, with security rounding questions added to the existing structured audit tool to support the project. These questions were developed by the project manager and the safety nurse supervisor, and integrated into the original audit tool created by nursing leaders and the QI specialists. The project manager rounded on medical-surgical units and spoke with security officers and nurses about the BVC rounding process.

During PDSA Cycle 2 (Plan, Do; Langley et al., 2009), lead security officers were re-educated and the importance of discussing the patient with the primary nurse was stressed by the project manager. The security rounding process continued, and the project manager continued rounds in the units talking to security officers and nurses.

Evaluation and Action Plan

Progress for the first objective related to security rounding was measured through audits conducted by safety nurses, who made daily rounds to units with patients scoring 3 or higher on the BVC. During rounds, they asked the primary nurse or nurse manager if security officers had rounded on the patient, spoken with staff, and engaged in discussion and planning regarding safety interventions. Safety nurses in this setting were responsible for performing daily environmental safety assessments; this auditing task was added to their existing role. Goal 2 sought to reduce the number of behavioral alerts by 20%, with progress monitored through reports provided by the quality specialist.

The first month of project manager rounds and safety nurse audits revealed security officers were not rounding (PDSA Cycle 1, Study; Langley et al., 2009). Further inquiry revealed the lead security officers were doing the rounding but not talking to the primary nurse because they were busy. The project manager collaborated with security leaders to clarify expectations for rounding, emphasizing the need for security officers to engage directly with the primary nurse or charge nurse during each round (PDSA Cycle 1, Act).

During PDSA Cycle 2 (Study; Langley et al., 2009), the safety nurse audits confirmed security officers were consistently engaging with nursing staff during rounds. The intervention was reinforced as standard practice. Continued monitoring through safety nurse audits was planned to sustain the change and ensure ongoing compliance (PDSA Cycle 2, Act).

The success of this project has extended beyond the initial 3 months, demonstrating institutional adoption and cultural shift. The WPV Committee continues to monitor security rounding to maintain accountability and address any emerging issues. Follow-up at 1 year (April 2025) revealed even greater impact. Security leaders not only sustained the intervention but also expanded rounding for high-risk patients (BVC scores ≥3) to four times daily, citing operational benefits rather than increased high-risk volume. The Security Manager emphasized, "I love this. It increases visibility. My officers are on the floors much more, and patients and staff see a true security presence" (C.B., personal communication, April 9, 2025).

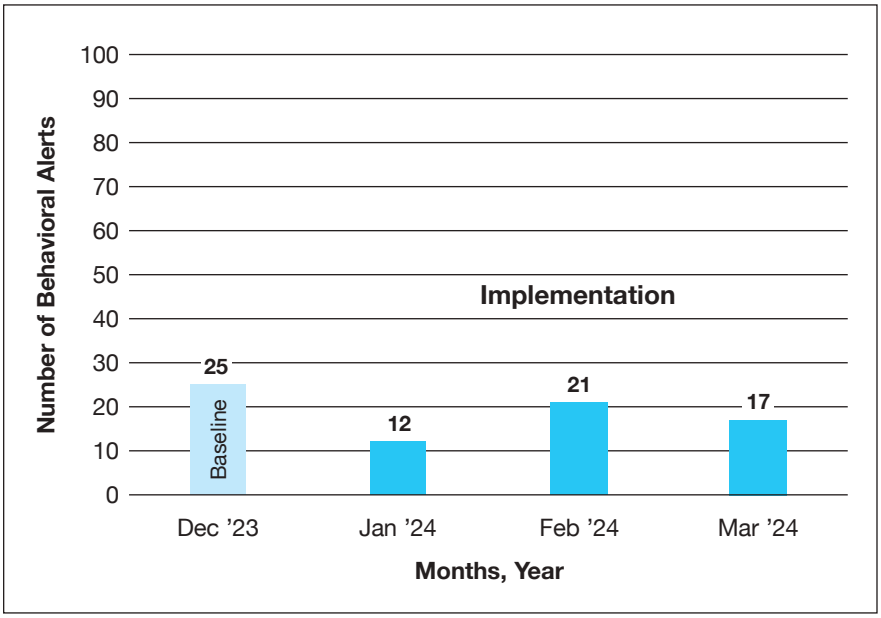
Results and Limitations

Results showed consistent success in security rounding for high-risk patients, with rounding rates exceeding expectations each month: 50% in January (surpassing the 30% target), 73% in February (above the 50% goal), and 100% in March (well beyond the 75% target) (see Table 1). By the end of the third month, all high-risk patients received security rounding, demonstrating a strong and sustained improvement in adherence. Rounding

TABLE 1.
Monthly Compliance with Security Rounding for High-Risk Patients (BVC≥3)

Month	Patients BVC≥3 (Rounded, discussed with primary or charge nurse)	Patients BVC≥3 (Not rounded, not discussed with primary or charge nurse)	Total Patients with BVC≥3	% Rounded (Actual)	% Rounded (Goal)
January 2024	4	4	8	50%	30%
February 2024	11	4	15	73%	50%
March 2024	12	0	12	100%	75%

Figure 3.
Behavioral Alerts at Baseline and During Implementation



counts reflect total events, not unique patients. The second goal also was achieved as the number of alerts in the third month was 17, a 32% decrease from baseline (see Figure 3).

An assumption in this project was that nurses who had received education would be proficient in completing the BVC correctly, with the primary focus on the frequency of and adherence to security rounding. However, potential variation in nurses' ability to apply the BVC consistently in each medical-surgical unit was not assessed directly. Additionally, while security officers made efforts to avoid being seen by patients during rounding because a visible uniform or the knowledge of being evaluated based on BVC scores could increase patient agitation, this effect was not tracked systematically or measured in the project. As such, the impact of officer visibility on patient behavior remains unclear and may represent a factor influencing outcomes of the security rounding intervention.

Lessons Learned/ Nursing Implications

Findings from this project align with Senz and colleagues' (2021) emergency department study reporting significant reductions in WPV incidents using BVC-guided interventions. The current project also addressed a gap in general medical-surgical units, where BVC scores had been documented previously but were not acted upon by security officers. The success of this project aligns with existing evidence supporting proactive violence prevention strategies. The BVC, already validated for risk prediction, proved even more effective when coupled with security rounding, a finding consistent with studies emphasizing interprofessional collaboration (Partridge & Affleck, 2018; Senz et al., 2021).

Implementation required substantial time and persistence to build trust and engagement from the security team. In addition, organizational policies restricted the project manager from directly conducting security staff education and collecting attestations, resulting in delays in the rollout process. Despite these challenges, nursing leaders and clinical staff demonstrated strong support for the intervention. Their commitment was motivated by concerns about personal safety and reinforced by the opportunity to engage directly with security officers during rounding. This collaboration fostered confidence among staff, showing the value of joint nursing-security partnerships in addressing WPV.

The intervention also marked a cultural shift in the role of security officers, who previously had not

been engaged as proactive partners in preventing WPV on general medical-surgical units. Before implementation, their involvement was largely reactive, limited to responding after incidents already had escalated. The introduction of BVC-guided rounding formalized a new expectation that security officers would visit units regularly, engage in direct communication with nursing staff, and monitor at-risk patients. This structured presence represented a change in practice and increased security officers' day-to-day visibility on the units. Their active involvement signaled a shift toward interprofessional collaboration and prevention-focused strategies. While the primary aim was to support early identification and shared planning, the enhanced visibility itself reflected a meaningful organizational culture change. This approach aligns with The Joint Commission (n.d.) call for systemic, team-based solutions to address WPV in healthcare settings.

The success of this QI project highlights the importance of collaboration between nurses and security personnel when addressing WPV. A coordinated approach, in which nurses and security staff work together to identify and respond to potential risks, can lead to improved patient safety and a reduction in disruptive behavior. Future nursing practice should prioritize interprofessional communication and joint initiatives to improve patient care. The next steps are to implement this intervention in every hospital in the health system.

Conclusion

WPV continues to be a global problem. The BVC is a risk assessment tool appropriate for hospitalized medical-surgical patients. For this project, patients who scored medium or high risk on the BVC were prioritized for targeted interventions, including security rounding, as a locally driven strategy to support early identification and response to potential behavioral escalation. While outcomes were not evaluated for statistical significance, these interventions were part of a broader QI effort and may offer useful insights for similar healthcare leaders seeking to enhance WPV prevention. MSN

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Meta-Analysis

Meta-Analysis: Contamination of Mobile Phones and Hands of Healthcare Workers

Linda Denke
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Denke, L., Alayon, A.Z.M., &≥Atem, F.D. (2025). Meta-analysis: Contamination of mobile phones and hands of healthcare workers. *MEDSURG Nursing, 34*(6), 288-299. https://doi.org/10.62116/MSJ.2025.34.6.288

This meta-analysis compares pathogenic and non-pathogenic contamination rates on mobile phones (9%-95.7%) and hands (39.3%-98.3%) of healthcare workers. Many pathogens identified are linked to surgical site infections (SSIs). A random effects model was used, ensuring more generalizable conclusions by accounting for study variations. SSIs can occur at every surgical touch point in acute care.

Keywords: meta-analysis, bacteria, mobile phones, healthcare workers, operating room, surgical site infections

Learning Outcome: After completing this education activity, the learner will be able to discuss the findings of a meta-analysis regarding surgical site infections and bacterial contamination rates of healthcare workers' hands and mobile phones.

Technology plays a significant role in modern daily life, and people have become increasingly dependent on handheld devices such as mobile phones. Mobile phone use is widespread, including in healthcare workplaces. Research shows mobile phones, tablets, and other handheld devices often are contaminated with microorganisms, including some that can cause infection (Olsen et al., 2020). This concern led a perioperative nurse and nursing research fellow to ask, "Is there strong evidence to support guidelines for mobile phone decontamination and use, particularly in the operating room (OR)?"

The Association of periOperative Registered Nurses (AORN, 2020) position statement on managing distractions and noise in the OR is evident, but there is not a position statement on the use of mobile phones and decontamination of these mobile devices in the OR. The AORN focus is decreasing noise distraction because of mobile device use, which is an indirect threat to patient safety and a potential risk for surgical site infections (SSIs).

A further online search was completed related to current cleaning guidelines from manufacturers of mobile phones, tablets, and other hand-held electronic equipment. Apple (iPhone®) and Samsung (Android®) are the two best-selling phones in the world (International Brand Equity, 2025). These manufacturers list three cleaning and disinfecting products for their mobile phones: Zeiss mobile screen wipes, PhoneSoap 3 UV, and DanziX 35-piece phone cleaning kit (Fatmi, 2023). Apple, Inc. (n.d.a, n.d.b) recommends cleaning and disinfecting the iPhone with 70% isopropyl alcohol wipes or Clorox® disinfectant wipes, not bleach or hydrogen peroxide. The perioperative nurse author of this article observed fellow OR nurses and obtained anecdotal reports, concluding they are not following

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cleaning and disinfection guidelines consistently.

Currently, clear policies for mobile phone decontamination in the OR are lacking. The lack of clear guidelines for cleaning and disinfecting mobile phones, along with anecdotal observations, highlights the need to examine disinfectant and cleaning policies closely. Updates should be based on current evidence about how pathogens are transmitted through mobile phones and if any tested decontamination methods are effective.

Statement of the Clinical Problem

Healthcare delivery and patient safety in the OR are adversely affected because of SSIs, potentially due to bacterial residue on workers' hands and mobile phones (AORN, 2020). SSIs account for 20% of all healthcare-associated infections (HAIs) and occur in 5% of surgical inpatients (Pinchera et al., 2022). The standard infection ratio (SIR) had been trending upward at the authors' organization since 2017 (0 in 2017; 0.771 in 2018; 1.566 in 2019). This metric is a summary used to track HAIs within each organization (Centers for Disease Control and Prevention [CDC], 2024b).

When the leaders in the OR concentrated their efforts to reduce the SSI rate, they learned decontamination was not being performed and an OR policy for use of mobile phones was lacking. Nurses in the OR reported not only a high frequency of mobile phone use in the OR, but also indicated they rarely cleaned or disinfected their phones.

The authors continued to search for information on cleaning and decontamination procedures. The Joint Commission (as cited by Advisory Board, 2023) identified the risk for contamination due to noncompliance with infection reduction strategies for medical equipment, devices, and supplies in hospitals is 72%. The only cleaning recommendations mentioned on the Joint Commission website were instructions that directed the viewer to CDC guidelines; however, the CDC website did not contain item- or setting-specific decontamination or cleaning recommendations for the OR at the time of the researchers' literature review. Healthcare site-specific decontamination and cleaning recommendations since have been added to the CDC website (CDC, 2024a).

Objectives of the Review

Although there has been a 17% decrease in SSIs in the authors' organization since 2017, the SIR was 0.00 at that time; in 2018, SIR was 0.771, and SIR in 2019 was 1.566. The SIR in 2017 and 2018 was lower than the national average, but it was higher than the national average in 2019; this indicates poorer performance and suggests more can be done in the organization to prevent SSIs. The lack of guidance from The Joint Commission and CDC highlights the need to develop a clear, evidence-based policy for mobile phone use and cleaning in the OR. The goal is to address this gap and help reduce SSIs.

The purpose of this review was to identify high-level research and analyze findings to determine if mobile phones are a reservoir for contamination and transmission of pathogens responsible for SSIs. The meta-analysis evaluated findings to support development of a policy for decontamination of mobile phones. Additionally, this review increases staff awareness regarding the direct threat to patient safety posed by lack of a mobile phone decontamination policy in the OR.

Relevant Literature

SSIs occur in 2% to 4% of all inpatients undergoing surgical procedures (UC Davis PSNet Editorial Team, 2024). Mobile phones used by healthcare workers are known to carry bacteria and other microorganisms, offering a potential cause of HAIs (Shah et al., 2019). Due to the scarcity of high-quality research on mobile phone contamination in acute care medical-surgical settings, this statistical analysis incorporated international studies examining pathogenic bacterial growth on mobile phones and healthcare workers' hands to highlight their possible role in HAIs (Di Mario et al., 2022).

Methods for Conducting the Review

A literature search was conducted collaboratively by a nurse scientist and a nursing research fellow under the guidance of a medical librarian associated with the healthcare organization. Searches were conducted in CINAHL, Scopus, Ovid MEDLINE, and PubMed using keywords *bacterial contamination, cellphones, mobile phones, and hospital-acquired infections, surgical site infection, pathogenic and non-pathogenic infections, nosocomial infections,* and *healthcare personnel*. Articles had to report results of randomized controlled or quasi-experimental studies conducted in healthcare settings, written in English, and published 2004-2021. Although the period extends beyond the typical 5-year window, this broader range was chosen to capture a comprehensive body of evidence with sufficient sample size, including foundational studies that have shaped

current knowledge and practice. This approach allowed a more thorough analysis, with description of interventions and their long-term impacts, while maintaining relevance to contemporary healthcare research. Additionally, restricting studies to the English language ensured accessibility and consistency in data interpretation. Studies associated with COVID-19 pandemic protocols were excluded. The search returned 627 articles, with 88 abstracts to review for relevancy. Authors divided the abstracts and reviewed them initially for relevance.

Google Scholar was used for a literature search with keywords *bacterial contamination, cellphones, hospital-acquired infections, surgical site infection,* and *pathogenic and nonpathogenic infections.* Using dates and language filters previously established, eight articles were located; after duplicate articles and low-quality studies, editorials, and case studies were removed, one relevant article was identified. Studies in this meta-analysis included international studies to widen the scope and provide a worldwide perspective. Observational studies were included with the correct bias reduction mechanism due to the lack of randomization. The initial review allowed articles to be eliminated by reading abstract and title. In the second review, full-text readings allowed articles to be excluded if the study did not align with the aims. Finally, the criteria were examined independently by two reviewers for relevance against inclusion criteria.

Sixteen articles from all databases and searches were analyzed. The review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) statement (Page et al., 2021). Level of evidence was established using Johns Hopkins evidence level and quality guide (Dang et al., 2022).

Data Analysis

A random effects mixed model with the SAS 9.4 PROC MIXED procedure was used to analyze differences in contamination rates (SAS Institute Inc., 2024). A random effects model assumes the studies in the analysis may have differences in methods, populations, or environments. This approach allows results to be more generalizable in different settings.

Studies were treated as a random effect to compare contamination rates between pathogenic and non-pathogenic bacteria, as well as between mobile phones and hands. Authors and statisticians worked together to finalize the number of studies to include. Because only 16 studies were available, the consensus was to group them into three categories:

1. Pathogenic vs. non-pathogenic contamination of mobile phones
2. Contamination rates of mobile phones vs. hands
3. Pathogenic contamination rates of both mobile phones and hands

Results

A pooled analysis combined data from 16 studies to provide a more accurate estimate of contamination rates. This method increases statistical power and helps identify patterns across different studies (Ioannidis & Lau, 1999). Results showed no significant difference between pathogenic and non-pathogenic contamination rates (p=0.9884). However, in Group 2, a significant difference was found in contamination rates between hands and mobile phones (p<0.0001). Hands were slightly more contaminated than mobile phones, with 1.03 instances of hand contamination for every instance of mobile phone contamination. In Group 3, a chi-square analysis of pathogenic contamination types revealed significant differences between hand and mobile phone contamination rates (p=0.0020). These findings highlight variations in contamination patterns and suggest a need for targeted cleaning protocols.

Discussion

The primary goal of this meta-analysis was to determine if mobile phones act as reservoirs for pathogenic contamination capable of causing SSIs. Initial findings showed no significant differences between pathogenic and non-pathogenic contamination rates overall. The first group analyzed focused solely on contamination rates of mobile phones, and results were not statistically significant (see Table 1). However, several studies identified common bacterial contaminants, including methicillin-resistant *Staphylococcus aureus*, methicillin-sensitive *S. aureus*, and other *Staphylococcus* species. Additionally, coagulase-negative *Staphylococcus* (CoNS), *Escherichia coli*, *Enterobacter*, and *Klebsiella*, as well as molds and yeasts, were detected frequently. These findings highlight the wide variety of microorganisms present on mobile phones, underscoring the potential risk for contamination and the need for further investigation into effective decontamination strategies.

Results include contamination rates from seven studies. Findings confirm mobile phones are contaminated with pathogenic and non-pathogenic organisms (range 9%-83% and 47.8%-97.2%, respectively) (Brady et al., 2007;

TABLE 1.
Mobile Phones: Pathogenic and Non-Pathogenic Contamination Rates

Authors/Year	Country	Evidence Type (Dang et al., 2022)	*N*	Pathogenic (%)	Non-Pathogenic (%)
Brady et al., 2007	United Kingdom	Level III B	105	11.5% • MSSA=6.5% • *Pseudomonas* spp.=3.0% • *Acinetobacter* spp.-2.17% • *Stenotrophomonas maltophilia*=2.2% • Anaerobes=2.17%	82.6% • CoNS=82.6% • *Micrococcus* spp.=28.3% • *Bacillus* spp.=26.1% • *Staphylococcus aureus*=0.0% • *Pseudomonas* spp.=2.2% • *Streptococcus viridans*=6.7% • Coliforms=5.1% • MRSA=2.0% • *Enterococcus*=1.0% • *Clostridium*=1.0%
Chang et al., 2017	Taiwan	Level III B	72	13.89% • MSSA=5% • MRSA=3% • *Enterobacter aerogenes*=1% • *Acinetobacter baumannii*=1% • *Pseudomonas putida*=2%	97.2% • CoNS=65% • Gram-positive bacillus=14% • *Streptococcus* spp.=10% • *Moraxella* spp.=2% • Gram-negative bacillus=2%
Datta et al., 2009	India	Level I A	200	36% MRSA=18% MSSA=32%	64% • CoNS=13.2% • *Micrococcus* spp.=2.8% • *Viridans streptococci*=1.4% • Aerobic spore bearers=33%
Karabay et al., 2007	Turkey	Level III A	122	9% • *Escherichia coli*=3.6% • *Enterococcus feacalis* (vancomycin-sensitive)=1.8% • *Pseudomonas aeruginosa*=1.8% • *Klebsiella pneumoniae*=0.9%	90% • CoNS=68.4% • *Bacillus* spp.=14.4% • MSSA=8.1%

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TABLE 1. (CONTINUED)
Mobile Phones: Pathogenic and Non-Pathogenic Contamination Rates

Authors/Year	Country	Evidence Type (Dang et al., 2022)	*N*	Pathogenic (%)	Non-Pathogenic (%)
Shakir et al., 2015	United States	Level III B	53	83% (% of each type not reported) • CoNS • *Viridans streptococci* • *S. aureus* • *E. faecalis*	59% (% of each type not reported) • *Bacillus* spp. • *Micrococcus* spp. • *Corynebacterium* spp. • *Lactobacillus* spp. • *Paracoccus yeei* • *Pseudomonas oryzihabitans*
Srikanth et al., 2010	India	Level III B	51	17% • MSSA=7.8% • MRSA=3.9%, • *E. coli*=1.96% • *Klebsiella* spp.=1.96% • *Pseudomonas* spp. =1.96% • *Acinetobacter* spp.=11.8%	83% (% of each type not reported) CoNS, micrococci and aerobic spore bearers as incidental isolates, some of which probably represent normal skin flora
Venkatesan et al., 2015	India	Level III A	140	22.8% • *S. aureus* =14.6% (27.7% MRSA) • *Enterococcus* spp.=6.6% • *E. coli*=23.8% • *Klebsiella* spp.=15.78% • *Citrobacter* spp.=16.0% • *Pseudomonas* spp.=9.3%	47.8% (% of each type not reported) CoNS and *Bacillus* spp. were considered to be non-pathogenic due to their presence as normal flora.

CoNS=coagulase-negative *Staphylococcus*, MRSA=methicillin-resistant *Staphylococcus aureus*, MSSA=methicillin-sensitive *Staphylococcus aureus*

TABLE 2.
Mobile Phones and Hand Contamination Rates

Authors/Year	Country	Evidence Type (Dang et al., 2022)	*N*	Contamination on Mobile Phones (%)	Contamination on Hands (%)
Badr et al., 2012	Egypt	Level III B	32	93.7% • *B. Staphylococcus aureus*+ B. • *Anthracoid*=6.6% • *Klebsiella pneumoniae*=26.6% • CoNS=33.3% • *S. aureus*=16.6% • *Serratia marsescens*=6.6% • *Proteus mirabilis*=10%	93.7% • CoNS=33% • *S. aureus*=23.3% • *K. pneumoniae*=16.6% • *K. pneumoniae* + (CoNS)=10% • *S. marsescens*=6.6% • *P. mirabilis*=10%
Chang et al., 2017	Taiwan	Level III A	72	Overall contamination rate=97.2% Pathogenic=13.89% • MSSA=5% • MRSA=3% • *Enterobacter aerogenes*=1% • *Acinetobacter baumannii*=1% • *Pseudomonas putida*=2% Non-pathogenic=97.2% • CoNS=65% • Gram-positive *Bacillus*=14% • *Streptococcus* spp.=10% • *Moraxella* spp.=2% • Gram-negative *Bacillus*=2%	Overall contamination rate=97.2% Pathogenic=9.72% • MSSA=1% • MRSA=3% • *E. aerogenes*=1% • *A. baumannii*=3% Non-pathogenic=97.2% • CoNS=60% • Gram-positive *Bacillus* =24% • *Streptococcus* spp.=13% • *Moraxella* spp.=3% • Gram-negative *Bacillus*=0%
Gunasekara et al., 2009	Sri Lanka	Level III A	72	70% • MRSA=13.33 • MSSA=44.4% • CoNS=0.0% • Micrococci=0.0% • Enterococci=0.0% • *Enterobacter cloacae*=2.2% • *K. pneumoniae*=0.0% • *A. baumannii*=2.2%	71% • MRSA=22% • MSSA=55% • CoNS=2.2% • Micrococci=8.8% • Enterococci=4.4% • *E. cloacae*=2.2% • *K. pneumoniae*=2.2%

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TABLE 2. (CONTINUED)
Mobile Phones and Hand Contamination Rates

Authors/Year	Country	Evidence Type (Dang et al., 2022)	*N*	Contamination on Mobile Phones (%)	Contamination on Hands (%)
Martina et al., 2019	Argentina	Level III A	596 256	92.9% (*n*=256) (% of each type not reported) • *Bacillus subtilis* • *Bacillus pumilus* • *Lysinibacillus sphaericus* • *Staphylococcus cohnii* subsp. urealyticus • *Staphylococcus warneri* • *Staphylococcus saprophyticus* • *Enterococcus durans* Seven species of gram-negative bacteria: • *S. marcescens* • *P. putida* • *Sphingomonas paucimobilis* • *Acinetobacter baumannii* complex • *Stenotrophomonas maltophilia* • *K. pneumoniae* subsp. pneumonia • *Ochrobactrum anthropi*	98.3% (*n*=596) (% of each type not reported) • *B. subtilis* • *B. pumilus* • *Lysinibacillus sphaericus* • *S. cohnii* subsp. urealyticus • *S. warneri* • *S. saprophyticus* • *E. durans* Seven species of gram-negative bacteria: • *S. marcescens* • *P. putida* • *S. paucimobilis* • *A. baumannii* complex • *S. maltophilia* • *K. pneumoniae* subsp. pneumonia • *O. anthropi*
Pal et al., 2015	India	Level III A	316 309	81.8% (*n*=316) • MSSA=28% • CoNS=38% • MRSA=2% • *E. coli*=2% • *K. pneumoniae*=3% • *Proteus mirabilis*=1% • *Pseudomonas aeruginosa*=1% • *Acinetobacter*=13% • *Pseudomonas* spp. and *Enterococcus* spp.=12%	80% (*n*=309) • MSSA=24% • CoNS=47% • MRSA=0.2% • *E. coli*=9% • *K. pneumoniae*=0.8% • *Acinetobacter*=8% • *Pseudomonas* spp. and *Enterococcus* spp.=11%
Sepehri et al., 2009	Iran	Level III A	107	32% • *Staphylococcus epidermis*=77.1% • *S. aureus*=12.5% • *B. subtilis*=2.1% • *K. pneumoniae*=2.1% • *Enterococcus* spp.=0% • Yeasts=10.4%	39.3% • *S. epidermis*=79.7% • *S. aureus*=6.8% • *B. subtilis*=3.4% • *K. pneumoniae*=3.4% • *Enterococcus* spp.=1.7% • Yeasts=5.1%

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TABLE 2. (CONTINUED)
Mobile Phones and Hand Contamination Rates

Authors/Year	Country	Evidence Type (Dang et al., 2022)	*N*	Contamination on Mobile Phones (%)	Contamination on Hands (%)
Shah et al., 2019	India	Level III A	150	96% • CoNS=52.79% • Bacillus=13.66% • MSSA=8.69% • *K. pneumoniae*=6.21% • *A. baumannii*= 6.21% • MRSA=5.59% • *Corynebacterium* species= 3.1%	96.7% • CoNS=50.58% • *Bacillus* spp.= 14.53% • MSSA=9.88% • *K. pneumoniae*=6.97% • *Enterococcus* spp.=5.81% • *A. baumannii*=4.65% • MRSA=2.32%
Shahlol et al., 2015	Libya	Level III A	140	52.5% • *S. aureus*=16.6% • *E. coli*=4.16% • *Staphylococcus albus*=8.3% • *Bacillus* spp.=23.3%	64.1% • *S. aureus*=24.16% • *Bacillus* spp.=15.8% • *E. coli*=5.8% • *S. albus*=18.3%
Ulger et al., 2009	Turkey	Level III A	200	94.5% • *S. aureus*=25% • *Streptococcus* spp.=6% • CoNS=90.5% • *Enterococcus* spp.=3.5% • Non-fermentative gram negatives=9.5% • Coliforms=7.5% • Molds=10% • Yeasts=1.5%	94.5% • *S. aureus*=26.7% • *Streptococcus* spp.=9% • CoNS=96.5% • *Enterococcus* spp.=4,5% • Non-fermentative gram negatives=13% • Coliforms=6% • Molds=9.5% • Yeasts=1.5%
Venkatesan et al., 2015	India	Level III A	140	70.7% Pathogenic=22.8% • *S. aureus*=14.6% (27.7% MRSA) • *Enterococcus* spp.=6.6% • *E. coli*=23.8% • *Klebsiella*=15.78% • *Citrobacter*=16% • *Pseudomonas* spp.=9.3% Non-pathogenic=47.8% *Bacillus* spp. and CoNS were considered to be non-pathogenic due to their presence as normal flora.	86.4% Pathogenic=30.7% • *S. aureus* =14.6% (27.7% MRSA) • *Enterococcus* spp.=6.6% • *E. coli*=23.8% • *Klebsiella*=15.78% • *Citrobacter*=16% • *Pseudomonas* spp.=9.3% Non-pathogenic=55.7% *Bacillus* spp. and CoNS were considered to be non-pathogenic due to their presence as normal flora.

CoNS=coagulase-negative *Staphylococcus*, MRSA=methicillin-resistant *Staphylococcus aureus*, MSSA=methicillin-sensitive *Staphylococcus aureus*

TABLE 3.
Mobile Phones and Hands Pathogenic versus Non-Pathogenic Contamination

Authors/Year	Country	Evidence Type (Dang et al., 2022)	*N*	Organisms	Contamination on Phones (%)	Contamination on Hands (%)
Chang et al., 2017	Taiwan	Level III A	72	No micro-organisms	2.8	2.8
				Pathogenic organism	13.9	9.7
				Non-pathogenic organism	83.3	87.5
Venkatesan et al., 2015	India	Level III AI	140	No micro-organisms	29.3	13.6
				Pathogenic organism	22.8	30.7
				Non-pathogenic organism	47.8	55.7

Chang et al., 2017; Datta et al., 2009; Karabay et al., 2007; Shakir et al., 2015; Srikanth et al., 2010; Venkatesan et al., 2015). Study designs in this group included one randomized controlled study conducted in India for pathogenic versus non-pathogenic results (Datta et al., 2009); one observational cohort study conducted in Taiwan (Chang et al., 2017); five cross-sectional studies conducted in the United Kingdom (Brady et al., 2007), Turkey (Karabay et al., 2007), United States (Shakir et al., 2015) and India (Srikanth et al., 2010; Venkatesan et al., 2015).

Group 2 included 10 studies comparing mobile phone and hand contamination, all of which were Level III evidence (see Table 2). A chi-square test revealed a significant difference between the two types of contamination ($p<0.0001$). These studies were conducted in eight countries to determine rates of contamination of mobile phones and hands of healthcare workers: Egypt (93.7% and 93.7%, respectively; Badr et al., 2012); Taiwan (97.2% and 97.2%; Chang et al., 2017); Sri Lanka (70% and 71%; Gunasekara et al., 2009); Argentina (92.9% and 98.3%; Martina et al., 2019); India (81.8% and 80%, Pal et al., 2015; 96% and 96.7%, Shah et al., 2019; 70.7% and 86.4%, Venkatesan et al., 2015); Iran (32% and 39.3%, Sepehri, et al., 2009); Libya (52.5% and 64.1%, Shahlol et al., 2015); and Turkey (94.5% and 94.5%, Ulger et al., 2009). Average contamination rates of mobile phones were 78.13% (range 32%-97.2%).

Finally, Group 3 (see Table 3) presents an analysis of two studies comparing pathogenic and non-pathogenic contamination rates on hands and mobile phones (Chang et al., 2017; Venkatesan et al., 2015). Pooled findings revealed significant differences in contamination rates between mobile phones and hands ($p=0.0020$).

Many studies in this meta-analysis identified similar microorganisms, including CoNS and *S. aureus*. Nearly half the studies also reported contamination by *E. coli*, gram-negative bacilli, gram-positive bacilli, *Enterococcus*, and *Klebsiella pneumoniae*. Microorganisms commonly responsible for SSIs include *S. aureus*, CoNS, *Enterococcus* species, and *E. coli*. Among these, CoNS (especially *Staphylococcus epidermidis*) are responsible for 45%-80% of SSIs. However, this microorganism only was reported in one study (Venkatesan et al., 2015), while *Staphylococcus* was mentioned in almost every study (Badr et al., 2012; Brady et al., 2007; Chang et al., 2017; Datta et al., 2009; Gunasekara et al., 2009; Martina et al., 2019; Pal et al., 2015; Pinchera et al., 2022; Sepehri et al., 2009; Shahlol et al., 2015; Srikanth et al., 2010; Venkatesan et al., 2015). These findings suggest contamination of mobile phones and hands by these pathogens could contribute to the risk of SSIs, underscoring the importance of mobile phone use and decontamination policies and practices (Badr et al., 2012; Chang et al., 2017; Datta et al., 2009; Gunasekara et al., 2009; Martina et al., 2019; Sepehri et al., 2009; Shahlol et al., 2015; Shakir et al., 2015; Ulger et al., 2009; Venkatesan et al., 2015).

In one systematic review on bacterial growth on smartphones (Di Mario et al., 2022), the included studies varied in aims, methods, results, and implications for practice. Authors found the bacterial growth on nurses' smartphones included higher rates of enterobacteria and bacilli species. Galazzi and colleagues (2019) examined nurses' phones and determined no significant differences (*Staphylococci* and *Bacillus* species) existed before and after work, indicating pathogenic bacteria were evident on 98% of smartphones even before nurses started work. The current meta-analysis did not include any studies with a control group.

Simmonds and co-authors

(2020) compared two groups in their case-control study: healthcare staff (n=250) and a public sector control group (n=191). For 92% of hospital staff smartphones, compared to 96.9% of control group smartphones, the most common isolated bacteria were CoNS, *S. aureus*, and *Enterococcus* species. Some of the same microorganisms were identified in later studies and reported in other earlier studies. However, the variation in the types of bacteria cultured and reported in the findings made comparisons difficult (Badr et al., 2012; Chang et al., 2017; Shakir et al., 2015). The current meta-analysis revealed some studies similarly cultured CoNS and *S. aureus*. Almost half the studies reported contamination of *E coli*, gram-negative bacilli, gram-positive bacilli, enterococcus, and *K. pneumoniae*.

Implications for Practice, Education, and Research

Meta-analysis is a statistical technique used to combine data from more than one study for more robust analysis using pooled statistics to formulate new conclusions (Deeks et al., 2024). This approach has some limitations, including heterogeneity, where variations in study designs, populations, or methodologies can affect the comparability of results (Borenstein et al., 2009). Publication bias also may skew findings if only positive studies are published. Additionally, data quality depends on the included studies, meaning any biases or flaws in the original research can impact the meta-analysis. Finally, limited generalizability can arise if the included studies do not adequately represent broader populations or settings.

Analysis of the pooled data from these reviews represents only randomized controlled trials. Findings demonstrate significant differences between contamination of mobile phones and hands (p<0.0001), and significant differences between hand and mobile phone contamination rates (p=0.0020).

Nurses in the OR need to know mobile devices increase the risk for the transfer of pathogens known to contribute to higher rates of SSIs. Because only a few high-quality studies exist, however, developing best practices is not possible until more current, well-designed research becomes available. Olsen and colleagues (2020) suggested it is surprising there has been almost no effort to develop standardized guidelines in hospitals and other settings for proper decontamination of mobile phones. Given the available research, lack of recommendations until recently from the CDC or AORN for cleaning devices such as mobile phones and stethoscopes is not surprising. These recommendations include designing a process, developing practices and providing disinfectant supplies in easy-to-access locations, and educating staff on cross contamination and frequency of use (Periop Today, 2024). The authors' aim is to put a mobile phone or handheld device decontamination policy in place across the healthcare facility.

Calderwood and colleagues (2023) outlined SSI prevention measures that need to be adopted in acute care hospitals. These include an interprofessional approach with essential practices at all touch points, highlighting the key role of medical-surgical nurses practicing in preoperative, perioperative, and postoperative settings to reduce SSIs. One study identified outside inclusion criteria for this meta-analysis demonstrated ultraviolet (UV) radiation or germicidal wipes as a disinfecting strategy; they are equally effective in reducing bacterial load on mobile devices and effective when used on tablets compared to disinfecting only when the tablet was visibly soiled (Allen et al., 2020). Evidence also suggests providers can access current practices quickly from their mobile devices as questions arise in the OR, perhaps making it unreasonable to limit mobile phone use. Authors of this meta-analysis plan to conduct a prospective pre-test/post-test interventional study to compare bacterial contamination rates for mobile phones used by nurses working in a medical-surgical unit to the contamination rates of phones used by nurses in the OR. Additional future research should focus on effective decontamination strategies, compliance with hygiene protocols, technological solutions, policy implementation, long-term contamination trends, microbial resistance, and broader hospital impact.

Conclusion

Results of this meta-analysis demonstrate mobile phones and hands harbor pathogenic organisms, including many of the organisms found in SSIs. All medical-surgical nurses are encouraged to evaluate their current mobile device decontamination and use policies. If no policies exist, they should alert nurse leaders and providers of the potential for pathogenic contamination that contributes to SSIs. Strict hand hygiene and appropriate use of mobile devices with established procedures for decontamination are needed. Without action, mobile devices and hands will continue to allow transmission of pathogenic organisms in the OR and acute care settings. MSN

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Supporting Nurses: Understanding Compassion Fatigue and Burnout

Deborah Bass
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Some moments linger long after a shift ends: the face of a patient in pain, a family member's final goodbye, or the quiet relief of a small victory. Nurses carry these memories with them, a mixture of reward and burden. Each day brings encounters with life and loss, as well as joy and heartbreak. Nursing isn't just a checklist of tasks; it's a calling built on compassion, empathy, and the steady choice to care for others. Yet this devotion comes at a cost. Long hours, heavy workloads, and constant emotional demands can leave nurses vulnerable to exhaustion, compassion fatigue, and burnout (Dall'Ora et al., 2020).

Caring deeply for patients can take an emotional toll. Compassion fatigue develops when nurses repeatedly face suffering or death (Beres et al., 2022). Oncology nurses, for example, may be haunted by the faces of patients they could not save, even as they move on to care for the next person. Burnout, on the other hand, often sneaks up slowly. Long shifts, chronic understaffing, and limited support can deplete nurses' motivation and energy gradually (Crabtree-Nelson et al., 2022; Dall'Ora et al., 2020). While compassion fatigue can leave nurses drained in the moment, burnout gradually erodes resilience, motivation, and engagement.

Together, these challenges affect not only nurses' well-being but also patient safety and workforce stability (Li et al., 2024). Recognizing early signs and addressing root causes are essential to supporting a healthy nursing workforce and sustaining compassionate, high-quality care. Prevention of compassion fatigue and burnout is needed to promote resilience in nursing.

Causes

Working in a stressful oncology unit may lead to psychosocial consequences of compassion fatigue and burnout. One cause of compassion fatigue is the exposure to trauma and caring for people who have been traumatized (e.g., patients with a terminal cancer diagnosis who are dealing with the threat of death). In a study by Jarrad and Hammad (2020), 100 oncology nurses completed a compassion fatigue self-test and a survey. Results indicated those nurses were at extremely high risk for compassion fatigue and at moderate risk for burnout.

Signs and Symptoms

Compassion fatigue, which may lead to burnout, may cause physical, emotional, social, and spiritual distress that develops rapidly or gradually over time. Insomnia may be one of the first signs and may be accompanied by problems with eating, headaches, inability to concentrate, fatigue, and frequent illnesses. Some emotional signs of compassion fatigue are depression, anxiety, mood swings, exhaustion, and increased crying (Demeyer, 2022). An oncology nurse may isolate and start to detach from the team, become irritable and complain about patients or other team members, and have impaired decision-making. This inability to cope with stressors leads the nurse to feel hopeless with a loss of purpose that may diminish the sense of career fulfillment and prompt

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Nurses working in high-stress environments may be vulnerable to compassion fatigue and burnout. Recognizing early signs and addressing root causes are essential to supporting a healthy nursing workforce, sustaining compassionate, high-quality care, and promoting resilience in nursing.

Keywords: nurse burnout, compassion fatigue, nurse well-being, resilience, healthy work environment

the nurse to leave the job or even the profession. Demeyer suggested knowing signs and symptoms of compassion fatigue and burnout may help prevent them or at least manage them as quickly as possible.

Compassion Fatigue vs. Burnout: Understanding the Differences

Though often used interchangeably, the terms *compassion fatigue* and *burnout* are distinct experiences. Compassion fatigue strikes nurses who repeatedly witness trauma, suffering, or death. It can leave them emotionally depleted, less empathic, or detached from their patients (Crabtree-Nelson et al., 2022). Interventions such as debriefing sessions or resilience programs can help nurses recover and cope. These strategies are particularly effective in high-stress areas, including trauma, emergency, and intensive care settings (Beres et al., 2022).

Unlike compassion fatigue, which can develop quickly after a challenging patient encounter, burnout progresses more gradually. It is marked by emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment (Dall'Ora et al., 2020). Compassion fatigue and burnout can overlap, and unaddressed compassion fatigue may even contribute to the development of burnout (Ilola et al., 2024).

Prevention and Management

To maintain energy and focus, nurses must prioritize self-care. Mindfulness, stress management techniques, and self-compassion exercises help restore energy and strengthen resilience. Research indicates mindfulness programs have helped nurses feel less stressed, more resilient, and more engaged in their work (Klatt et al., 2025). The American Nurses Association (2024) also recommends practical strategies for nurse well-being, including getting sufficient rest, exercising regularly, and seeking emotional support. Even small habits, such as taking a quick stretch, stepping outside for fresh air, or jotting down one positive interaction, can make a real difference in how nurses feel at the end of a shift. Nurses who reflect briefly on small daily successes or maintain gratitude journals often feel better able to manage ongoing stressors. A gratitude journal is a simple tool in which nurses record positive moments or things for which they are thankful each day, and its use can help shift focus away from challenges and strengthen emotional resilience (Beres et al., 2022).

Early recognition is also key. Leaders and colleagues can watch for red flags, such as emotional exhaustion, loss of empathy, or frequent absenteeism, as early warning signs of compassion fatigue (Demeyer, 2022). Tools such as the Maslach Burnout Inventory often are used in research and practice to screen for burnout and guide timely support (Dall'Ora et al., 2020). By identifying risk factors early, organizational leaders can intercede before burnout becomes severe.

Leadership and Peer Support: Strengthening Well-Being

Strong leadership and peer support are essential for nurses to thrive. Leaders who prioritize their teams' needs often see lower burnout, higher morale, and improved perceptions of workplace safety (Dall'Ora et al., 2020). Servant leadership and peer support, demonstrated by structured debriefings or informal check-ins, strengthen resilience and help nurses navigate difficult experiences while maintaining job satisfaction (Beres et al., 2022; Crabtree-Nelson et al., 2022). Encouraging open communication and recognizing small achievements further bolster staff engagement and well-being.

While individual strategies such as mindfulness and self-care are valuable, lasting improvement requires commitment by organizational leaders. Adjusting staffing ratios, creating peer support groups, and offering flexible scheduling can reduce stress significantly (Olorunfemi et al., 2025; Raqueno et al., 2025). Organizational strategies, such as structured debriefings and resilience programs, can strengthen team cohesion, enhance coping skills, and reduce stress among nurses working in high-demand areas (e.g., trauma, emergency, and intensive care settings) (Beres et al., 2022). These systemic changes remind nurses they are supported not only as professionals but also as people.

Creating a Healthy Work Environment: Staffing and Culture Matter

The work environment itself is a key factor in nurse well-being. Nurses who work in supportive, collaborative settings often experience less burnout, enjoy their jobs more, and are less likely to leave their positions (Dall'Ora et al., 2020; Li et al., 2024). Workplace supervisors who encourage strong leadership, clear communication, teamwork, and professional autonomy tend to support nurses better and help them feel valued. Adequate staffing is equally critical; nurses report feeling less overwhelmed and more supported in facilities with optimal nurse-to-patient ratios and a strong workplace culture, which ultimately lead to better outcomes for patients and staff (Li et al., 2024). Even small acknowledgments

such as a sincere thank-you from leaders can boost staff morale and resilience.

Conclusion

Nurses work in high stress areas and are at risk for compassion fatigue and burnout. Signs and symptoms can range from a headache to not wanting to come to work. Prevention is key. Self-care, stress management, leader and peer support, and creation of a healthy environment can help build resilience and strengthen nurses' well-being, in turn preventing or managing compassion fatigue and burnout. MSN

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Articulating the Value of Nursing Work: Leaders Needed

Katie A. Chargualaf

Efforts to combat rising healthcare costs and improve outcomes emphasizing quality and safety dominated the healthcare reform discourse for the last few decades with limited meaningful progress. As the largest segment of the healthcare workforce, nurses account for a substantial portion of healthcare organizations' operational (labor) costs (Garcia et al., 2024). Yet their individual and collective contributions to care delivery and clinical outcomes often are underappreciated. Because nurses spend the most time providing direct patient care, they play a critical role in delivering quality care, influencing health outcomes, and contributing to revenue generated through reimbursement (DePesa et al., 2023). However, Schwartz and Swanson (2025) contended elements of nursing practice, such as prioritization, clinical judgment, and autonomy, are unobservable. This limited awareness of the professional nursing role and all it encompasses hinders a clear understanding of how nurses and nursing practice influence organizational and health outcomes, making it difficult to operationalize nursing value (Garcia et al., 2024).

At this pivotal moment in health care, the growing demand for nurses intersects with the need to demonstrate clearly the value of nursing work. In their concept analysis, Dick and co-authors (2017) identified three dimensions of nursing care value: economic, relational, and societal. Each varied in importance based on stakeholder perspective (direct care nurses, patients/families, healthcare administrators, third-party payors, and nurse researchers). If the value of nursing work (VONW) were demonstrated clearly through a return on investment (ROI) perspective, many of the ongoing challenges facing the profession and the healthcare system could be mitigated. Nurse leaders must unite to articulate the VONW.

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Nurses have advanced the profession into a respected, evidence-based, and autonomous field with a broad scope and great influence. Now, nurses need to assert their value confidently within the broader healthcare landscape. Nurse leaders must be engaged in decision-making about nursing practice and its value.

Keywords: nurse leader, nursing value, value of nursing work, return on investment

The Issue

The link between nursing care and clinical outcomes is well established in the literature (DePesa et al., 2023). When a desired clinical outcome is achieved, it is perceived to be value-added. Schwartz and Swanson (2025) asserted "each profession – including nursing – is responsible for describing and accounting for the value it provides in accordance with its societal contract" (p. 21). Despite growing attention to the concept of valuation of nursing work and attempts to measure that value over the last 70 years, the connection between nursing care and the value of nursing care in healthcare business operations remains largely unrecognized. The result is a lack of appreciation for the VONW and the true impact of nursing care on organizational and patient outcomes.

Several models have been developed to categorize nursing work to articulate its value. The Value of Nursing Work Model identifies four interrelated components (work systems, work processes, work outcomes, adaptation) as critical to defining nursing value (Schwartz & Swanson, 2025). The model emphasizes the role of feedback mechanisms in shaping adaptation, defined as "the dynamic reaction to interactions between a work system's influ-

TABLE 1.
Nurse Leader Actions to Support Valuation of Nursing Work

1	Advocate for inclusion of competencies related to value-based care in prelicensure nursing education (Barnes et al., 2025).
2	Establish clear definitions for nursing terms and implement a standardized nursing language to support consistent coding and benchmarking (Garcia et al., 2024).
3	Leverage technologies to collect and analyze data that inform organizational decision-making and reimbursement (Garcia et al., 2024).
4	Develop nurse-sensitive datasets by extracting relevant information from electronic health records (DePesa et al., 2023; Garcia et al., 2024).
5	Emphasize the need for evidence-based practice tools that can be integrated seamlessly into daily operations to accurately measure both the cost and value of nursing care (Chipps et al., 2021).
6	Support participation in empirical studies investigating nursing metrics that measure nursing value.
7	Measure the impact of specific nursing interventions on clinical outcomes, care costs, and return on investment to healthcare organizations (Garcia et al., 2024).
8	Support efforts to tailor training and ongoing professional development to individual performance metrics (DePesa et al., 2023).
9	Allocate resources to support development of knowledge, skills, and experience needed to strengthen nurses' human capital (DePesa et al., 2023; Yakusheva et al., 2025).
10	Explore using the unique nurse identifier, assigned with initial licensure, to link individual nursing care with reimbursement (Garcia et al., 2024).
11	Allow nurses to practice to the full scope of their licensure to contribute meaningfully to optimizing clinical outcomes and maximizing use of available resources.

ence on work processes and the resulting work outcomes" (p. 29). Similarly, the Nursing Human Capital Value Model describes the interconnected relationship among nursing human capital, nursing care delivery, healthcare outputs, and organizational operating margin and expenditures (Yakusheva et al., 2024). Together, these models outline key factors that strengthen the nursing workforce, demonstrate how nursing metrics can be connected to ROI to convey value, and identify work-related elements and processes that clarify the nurse's role within the healthcare system.

Support is growing for transitioning to a value-based healthcare system in which all providers are held accountable for care outcomes individually and as part of a team (Centers for Medicare & Medicaid Services, 2024). Historically, nursing work has been measured in aggregate, making it difficult to demonstrate clearly the specific impact of nursing care on individual clinical outcomes (DePesa et al., 2023). Currently, the costs of providing nursing care are embedded within the daily hospital charge (Garcia et al., 2024). Additional issues related to a lack of standardized nursing language, an inability to share nursing-related data across settings, the shift from acute to community-based settings for care delivery, and research gaps exist. Garcia and co-authors concluded, "Until the unique contribution of nurses can be tied to individual patient and associated outcomes, quantifying nursing value will be elusive" (p. 41).

A working group of big data nurse scientists collaborated to define value and develop real-time metrics to measure the impact of nursing care, aiming to enhance the visibility and recognition of the nurse-patient relationship (Garcia et al., 2024). They developed the Nursing Value Data Model as a framework to articulate relationships between data from available technologies such as the electronic health record to operationalize nursing value. The model includes four domains: nurse/provider, facility/entity, patient, and cost. The model's development was a significant step toward successfully quantifying nursing value within the larger healthcare landscape. Garcia and colleagues asserted "transformation to value-based care and operationalizing nursing care value is built on leveraging technology and prescriptive analytics" (p. 44).

Taking Action to Articulate the Value of Nursing Work

Demand is increasing to reconsider methods used to evaluate and compensate nurse performance. "The

calculation of individual nurse value to both an organization and to patient care could inform a payment structure that appropriately compensates individual nurses based on the quality of their work" (DePesa et al., 2023, p. 111). A recent systematic review on the financial impact of healthcare organizations' investments in nursing human capital found the available literature is narrow in scope and yields inconsistent conclusions (Yakusheva et al., 2024). Authors noted this "hinders the development of a strong business case for prioritizing organizational investments in nurses" (p. 21).

Nurse leaders must advocate to keep valuation of nursing work in the national discourse. Several strategies may be employed to demonstrate clearly nurses' value to patients, their families, nurses, healthcare organizations, and policymakers (see Table 1).

Healthcare organizations' investment in nursing is necessary and mutually beneficial. Yakusheva and co-authors (2024) argued investing in the nursing workforce could "increase access, quality, and affordability of healthcare overall" (p. 3). If healthcare organizations were reimbursed for the high-quality care nurses deliver, the ROI could improve staffing, increase resources, and expand opportunities to meet the healthcare needs of patients and communities (DePesa et al., 2023). In turn, this could help address major challenges, such as job dissatisfaction, burnout, and turnover, and impact nurses, patient care delivery, and the broader healthcare system positively.

Conclusion

Nursing work is vital, positively impacting patients, families, communities, and healthcare organizations alike. Nurses must challenge traditional subordinate roles confined to basic care and emotional support with limited autonomy. Over time, nurses have advanced the profession into a respected, evidence-based, and autonomous field with a broader scope and greater influence. Now nurses need to assert their value confidently within the broader healthcare landscape. Nurse leaders must be engaged in decision-making about nursing practice and its value. Without this involvement, the true ROI of nursing work will continue to be overlooked and underappreciated. MSN

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The Mission: Developing Nurses' Leadership Capacity

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Nurses make up the largest percentage of the healthcare workforce, positioned to lead teams and evidence-based practice, among other things (Wymer et al., 2023). Despite the presence in numbers, nurses may not be prepared adequately to take on informal or formal leadership roles. Military nurses, on the other hand, develop leadership skills from the first day they enter the military (Elliott et al., 2024; Wilmoth & Shapiro, 2014). As such, leadership skills evolve alongside nursing skills. Being a leader is every nurse's role, not just those with a title.

As articulated in a study by Elliott and colleagues (2024), everyone in the military is developed to be a leader because everyone is expected to assume a leadership role. The military is very intentional in how leadership development is actualized. Education and training focused on leadership competencies are incremental from the time a person enlists or is commissioned into the military. In addition, the significant focus on professional development and career growth may be one key difference from civilian settings. Based on the evidence, leaders in nursing education and practice have an opportunity to rethink how nurses' leadership capacity and business acumen are developed to be effective members of the interprofessional team in complex healthcare organizations (Chargualaf et al., 2025, Elliott et al., 2024; Patterson et al., 2025).

Nursing Education and New Graduate Residency

Leadership development is not contingent on nursing skill acquisition, yet it is often one of the last courses students take in their nursing curriculum before transition to professional practice. We contend leadership development should start during a student's freshman year. The American Association of Colleges of Nursing (AACN, 2021) included a domain on leadership development as one of the essential elements of professional nursing practice. This demonstrates the importance of an early focus on developing emotional intelligence, a sense of self, and relationship building as foundational to building leadership capacity. Creating an environment in which students and new graduate nurses gain a sense of ownership for their leadership development may position nurses to be involved when decisions are made that influence patient care outcomes. In addition, infusing foundational business knowledge can aid students and new graduate nurses in developing business acumen as an essential skill for making sound financial decisions and driving organizational performance (AACN, 2021; Patterson et al., 2025).

Healthcare Organizations

For organizational leaders in health care, the answer seems simple – make leadership development a priority and ensure everyone receives it (Chargualaf

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Nurses in the military develop leadership skills from the first day they enter the military, with leadership skills evolving alongside nursing skills. Leaders in nursing education and practice have an opportunity to consider the military leadership development model, rethinking how to foster nurses' leadership capacity and business acumen and incorporating leadership competencies earlier in nursing education curricula.

Keywords: military, nurse education, nurse training, leadership development, leadership competencies

et al., 2025; Elliott et al., 2024). Organizational leaders need to create and maintain a culture of safety and teamwork with less focus on individuals. Adopting a "we" mentality versus a "me" mentality can help foster positive, effective team dynamics. While this may need to be scaled initially to minimize significant upfront costs, adopting a new process or format for conducting annual evaluations could help change the narrative. As one example, this could include use of performance appraisal that requires nurses to identify how their behaviors better the team or improve quality and safety.

Human-centered design puts the person or patient at the center of healthcare change and innovation (Wymer et al., 2023). According to Wymer and colleagues, nurses can leverage principles of human-centered design to maximize business opportunities and transform organizations. Nurses who possess business acumen (knowledge, skill, ability) are equipped to lead teams (Patterson et al., 2025). Healthcare leaders can facilitate development of business acumen by incorporating topics, such as reimbursement models, length of stay, quality metrics, and cost containment, into nursing orientation or nurse residency programs. Case studies showing how clinical decisions impact organizational performance (e.g., readmission penalties or supply waste) and patient outcomes could be used to demonstrate basic principles nurses can use from their first day on a unit.

Conclusion

Development of nurses' leadership capacity and business skills has never been so critical to healthcare organizations. As nursing programs move to adopt *The Essentials* (AACN, 2021), new graduate nurses should arrive on units better equipped to understand the business of health care and to function as leaders. However, the responsibility of further development lies with organizational leaders to build on the foundation nurses receive in their educational preparation. Nurses also have a professional responsibility to identify their learning needs and seek coaches or mentors who can support their development across their careers. Nurses' ethical responsibility is to build a workforce of nursing leaders starting on the first day of a student's education. MSN

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Exploring the Relationship Between Nurses' Psychological Well-Being and Patient Satisfaction in Medical and Surgical Wards

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This study examined nurses' well-being and patient satisfaction in medical and surgical wards, finding moderate well-being and high satisfaction. However, satisfaction was lower related to shared decision-making and nurse interaction, with no significant correlation between nurse well-being and patient satisfaction.

Keywords: nurse-patient relations, patient satisfaction, psychological well-being, quality of health care

Psychological well-being is a vital component of a nurse's ability to provide high-quality, patient-centered care (Mohamed et al., 2025). In medical and surgical wards, where the demands of care are intense and emotionally taxing, nurses frequently are exposed to factors that threaten their psychological well-being, such as high workloads, time pressures, and emotionally challenging patient interactions (Li et al., 2021). These stressors not only diminish the psychological well-being of nurses but also have potential implications for quality of care and patient satisfaction. Approximately one in three nurses reports symptoms indicative of psychological distress, underscoring the global scale of this issue (Abdul Rahim et al., 2022). Poor psychological well-being – particularly in the form of depression and anxiety – leads to the loss of 12 billion working days annually, costing the global economy approximately $1 trillion in productivity losses (World Health Organization [WHO], 2024a). Hussein and colleagues (2024) further reported 66.7% of nurses experienced poor psychological well-being, which was associated significantly with reduced work productivity, including absenteeism and presenteeism.

In the context of medical-surgical units, patient satisfaction is linked closely to the emotional and functional presence of nurses. When psychological well-being is compromised, nurses may struggle with concentration, emotional regulation, and interpersonal communication as factors essential to fostering positive patient experiences (Kibru et al., 2023). Therefore, addressing nurses' psychological well-being is paramount to ensure optimal patient care delivery and enhance satisfaction outcomes within health-

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Background

Psychological well-being among nurses plays a vital role in shaping and influencing patient satisfaction. Promoting nurses' psychological well-being is essential not only for sustaining clinical effectiveness and supporting professional performance, but also for enhancing overall patient experience.

Aim

Evaluate the relationship between nurses' psychological well-being and patient satisfaction in medical and surgical wards.

Methods

This cross-sectional study was conducted in the medical and surgical wards at Jeddah Eye Hospital, King Fahad General Hospital, and King Abdullah Medical Complex within the Jeddah Second Health Cluster (Saudi Arabia). The sample included 274 nurses and 385 patients. Data were collected using three instruments: a demographic questionnaire, the WHO-5 Well-Being Index, and the Short Assessment of Patient Satisfaction.

Data Analysis

Descriptive statistics, t-tests, one-way ANOVA, and Spearman's correlation were used for analysis. Data quality was ensured through Cronbach's alpha to assess internal consistency.

Results

Nurses demonstrated a moderate level of psychological well-being (weighted agreement percentage [WAP]=51%), while patient satisfaction was generally high (WAP=64%). However, satisfaction was lowest regarding patients' involvement in decision-making (WAP=46%) and time spent with nurses (WAP=43%). No statistically significant relationship was found between nurses' psychological well-being and patient satisfaction (p=0.190).

Limitations and Implications

The cross-sectional design and reliance on self-reported data, which may affect generalizability, limited the study. The findings have practical implications for implementing comprehensive well-being strategies that include supportive leadership, adequate staffing, and effective communication to improve nurses' resilience and quality of care.

Conclusion

Nurses' psychological well-being and patient satisfaction are distinct yet integral aspects of healthcare quality. Both should be prioritized by policymakers through psychological support for nurses and improved patient experiences via shared decision-making, meaningful nurse-patient interactions, and patient-centered care approaches.

care settings. While global research underscores the role of psychological well-being in improving patient satisfaction, limited evidence exists within Arab countries, including Saudi Arabia.

Purpose

The purpose of the study was to explore the relationship between nurses' psychological well-being and patient satisfaction in medical and surgical wards to guide development of targeted interventions to enhance nurses' psychological health, improve nurse-patient communication, and promote patient-centered care.

Review of the Literature

A comprehensive literature search was conducted using PubMed, CINAHL, Scopus, and PsycINFO for 2019-2025, focusing on original research, systematic reviews, and meta-analyses written in English. Search terms included combinations of the following keywords: *nurses*, *nurse-patient relations*, *patient satisfaction*, *psychological well-being*, and *quality of health care*. Articles older than 5 years were included only when they provided foundational theoretical frameworks or established definitions, such as the Job Demands-Resources (JD-R) model.

Numerous international studies consistently have highlighted a significant association between nurses' psychological well-being and improved patient outcomes (Elliott & Fry, 2021; Lee et al., 2025). Nurses who can be described as psychologically well, that is, experiencing emotional stability, professional support, and personal satisfaction, are more likely to deliver high-quality care that contributes to reduced hospital readmission rates (Entrata & Nicomedes, 2024). This asso-

ciation is critical given nurses as primary care providers maintain continuous, direct interaction with patients, making their psychological well-being fundamental to patient-centered care (Alhussin et al., 2024; Entrata & Nicomedes, 2024). Psychological well-being includes emotional and mental health attributes, such as resilience, contentment, and the ability to maintain stable interpersonal relationships (Sahu & Shukla, 2025). It supports effective stress management, and enhances life satisfaction, emotional strength, self-efficacy, and a strong sense of professional identity within the organization (Gilar-Corbi et al., 2024).

In the Saudi Arabian context, Elias and colleagues (2022) identified patient satisfaction with nursing care as a key indicator of hospital service quality. Among various care domains, interpersonal interactions between nurses and patients emerged as the strongest contributor to satisfaction, emphasizing the role of nurses' psychological states in shaping patient experiences. More broadly, patient satisfaction reflects how well healthcare services align with patient expectations and is used widely as a key performance metric in healthcare institutions (Yunike et al., 2023).

Research suggests a reciprocal relationship between nurses' psychological well-being and patient satisfaction. Antonio and co-authors (2024) noted high patient satisfaction can boost nurses' motivation and engagement, while dissatisfaction may lead to psychological distress and professional burnout. The JD-R model, extended by Demerouti and Bakker (2023), offers a theoretical framework for understanding this dynamic: job satisfaction arises from a balance between workplace demands (e.g., emotional labor, physical effort) and available resources (e.g., autonomy, social support, opportunities for development). Conversely, workplace dysfunction and excessive demands can erode psychological well-being and reduce quality of care (Al-Shomrani et al., 2024; Guo et al., 2022).

Falatah and Alhalal (2022) identified a strong positive correlation between nurses' job satisfaction and patient satisfaction, with motivated nurses more likely to improve clinical outcomes. Key factors contributing to nurse satisfaction include organizational recognition, professional autonomy, and access to career development opportunities (Fernandez et al., 2020; Qanash et al., 2021). However, burnout remains a major threat to nurses' psychological well-being. Emotional exhaustion and depersonalization as core dimensions of burnout impair therapeutic communication and patient care. Saquib and co-authors (2019) identified burnout as a leading predictor of emotional fatigue among nurses. When psychological well-being deteriorates, nurses may become disengaged, emotionally withdrawn, or less empathic (Ataro et al., 2024; Mulugeta et al., 2019). In particular, depersonalization can result in mechanical or impersonal treatment of patients that further diminishes quality of care (Rayani et al., 2024; Wudu, 2021).

Organizational factors, such as leadership style, staffing adequacy, and opportunities for professional development, play a protective role in supporting psychological well-being and thereby enhancing patient satisfaction (Benjamin et al., 2024). In contrast, environments marked by staff shortages, high workloads, limited autonomy, and scarce resources contribute to stress, emotional fatigue, and compromised care. Such organizational deficiencies ultimately jeopardize nurses' psychological well-being and patient satisfaction (Alhussin et al., 2024; Olorunfemi et al., 2024).

Despite increasing awareness of the importance of nurses' psychological well-being for workforce sustainability and healthcare quality, its direct impact on patient satisfaction remains underexplored, particularly in high-pressure settings such as medical and surgical wards.

Ethics

Ethical approval for this study was obtained from the Research Ethics Committee at the Directorate of Health Affairs in the Jeddah region (Approval No. A01969; July 14, 2024). Administrative approvals were obtained from each participating hospital. Authors of this study were divided into subgroups and assigned to the three target hospitals. All authors received standardized training covering eligibility screening, informed consent procedures, neutral interviewing, and data security. Informed consent was obtained from all participants, and the study objectives, procedures, and participant rights were explained clearly to address any questions or concerns. For patients unable to read or write, the consent information was read aloud, and consent was documented by the researcher in the presence of a witness in accordance with institutional review board approval.

Sample Selection

Convenience sampling was used across the medical and surgical wards of the targeted hospitals. The total number of nurses working in these wards was as follows: Eye Hospital (22), King Abdullah Medical Complex (342), and King Fahad Hospital (547). The patient

sample was determined based on 2023 admissions data, with 22,749 patients at King Fahad Hospital, 22,058 patients at King Abdullah Medical Complex, and 13,256 patients at Jeddah Eye Hospital. All facilities were part of Jeddah's Second Health Cluster.

The formula used for the sample size was:

$$\frac{1+(z^2 x\ p\ (1-p)\ /\ e^2 N)}{z^2\ x\ p\ (1-p)\ /\ e^2}$$

In this formula, *N*=population size, *e*=margin of error (percentage in decimal form), and z=z-score. The z-score is the number of standard deviations that a given proportion is away from the mean.

The final sample comprised 274 nurses (152 from King Fahad Hospital, 100 from King Abdullah Medical Complex, 22 from Jeddah Eye Hospital). The patient sample consisted of 385 persons (150 from King Fahad Hospital, 145 from King Abdullah Medical Complex, 90 from Jeddah Eye Hospital). Inclusion criteria for nurses in this study consisted of registered nurses who provide direct bedside care to adult medical or surgical patients. Inclusion criteria for patients consisted of adults admitted to medical or surgical wards who were capable of providing informed consent.

Design and Methods

This study employed a cross-sectional design, allowing simultaneous assessment of exposures and outcomes at a single point in time. While this approach is cost-effective and time-efficient, it inherently limits the ability to infer causal relationships (Dutta, 2024). Data were collected June 2024-February 28, 2025.

Study Instruments

Three instruments were used for data collection: a demographic questionnaire, the WHO-5 Well-Being Index (WHO-5), and the Short Assessment of Patient Satisfaction (SAPS). Permission was obtained from the original authors (Thompson et al., 2024) to adapt and translate the WHO-5 and SAPS. To ensure clarity and measurement accuracy, the tools were translated from English into Arabic and then translated back into English. The demographic questionnaire was used to gather data that may influence participating nurses' psychological well-being and patient satisfaction. Variables included age, gender, and years of nursing experience.

The WHO-5 is a brief, self-reporting measure designed to assess current psychological well-being. Originally developed by the WHO Regional Office for Europe in 1998 (WHO, 2024b), it has been used widely in clinical and research settings to provide a concise measure of overall emotional well-being. The tool consists of five positively worded items reflecting key aspects of psychological functioning, including feelings of cheerfulness, calmness, vitality, restfulness, and mental engagement. The WHO-5 is a validated and reliable five-item measure used to assess psychological well-being, with a reported Cronbach's alpha of 0.80 (Fekih-Romdhane et al., 2024).

This instrument was used to measure nurses' psychological well-being, and participants responded using a 6-point Likert scale (5=*All of the time*, 4=*Most of the time*, 3=*More than half of the time*, 2=*Less than half of the time*, 1=*Some of the time*, 0=*At no time*) (WHO, 2024b). To quantify the level of agreement and enhance interpretability, researchers converted responses to a weighted percentage. This was calculated by subtracting the neutral score (2=*Less than half of the time*) from the mean score to determine the degree of positive deviation in participant responses. This identifies how much the average response leaned toward the positive end of the scale. The result then was divided by 3 (maximum possible distance above the neutral point) and multiplied by 100 to convert it into a percentage, using the following formula (McHenry et al., 2023):

$$\text{Weighted Percentage} = \left(\frac{\text{Mean} - 2}{3}\right) \text{x } 100$$

To interpret the results, researchers categorized weighted percentages into three levels of psychological well-being. Below 50% indicates low psychological well-being, 50%-59% indicates moderate psychological well-being, and 60% or above reflects high psychological well-being.

The SAPS is a validated and reliable seven-item scale used to evaluate patient satisfaction, with a reported Cronbach's alpha of 0.86 (Hawthorne et al., 2014). Patient satisfaction was assessed using a 5-point Likert scale (0=*Very dissatisfied*, 1=*Dissatisfied*, 2=*Neither satisfied nor dissatisfied*, 3=*Satisfied*, 4=*Very satisfied*). Mean scores were calculated for each item to determine the average satisfaction level. To quantify the level of agreement and enhance interpretability, researchers calculated a weighted percentage using the following formula:

$$\text{Weighted Percentage} = \left(\frac{\text{Mean} - 2}{3}\right) \text{x } 100$$

In this formula, the score of 2 served as the neutral reference point. Subtracting this value from the mean score provided a meas-

ure of positive deviation. Dividing the result by 3 (range from neutral point to highest score) and multiplying by 100 yielded a weighted percentage. Less than 50% indicates low satisfaction, 50%-59% indicates moderate satisfaction, and 60% or above indicates high satisfaction.

Pilot Study

The pilot included 30 nurses and 40 patients (≈10% of the final combined sample). It was conducted September 1-30, 2024, before launching the main data collection.

The reliability of the instruments was assessed using Cronbach's alpha. The nurses' psychological well-being scale demonstrated excellent internal consistency (α=0.905), while the patient satisfaction scale showed good reliability (α=0.883).

Data Collection and Analysis

Data were collected November 1-December 30, 2024. Eligible participants were approached in a private area. Nurses self-completed the questionnaire in Arabic or English according to preference. Patients were interviewed in Arabic. For participants with limited literacy, the interviewer read each item and response options verbatim from the survey form, and the recorder marked the participant's answer without interpretation or prompting, following a standardized script to avoid leading questions.

Data were analyzed using SPSS version 24, applying descriptive and inferential statistical techniques. Descriptive statistics (frequencies, percentages, means, standard deviations) were used to summarize participants' demographic characteristics and survey responses. Inferential statistics included independent samples *t*-tests and one-way analysis of variance (ANOVA) to examine differences in nurses' psychological well-being and patient satisfaction across demographic groups. Spearman's correlation coefficient was employed to assess the relationship between nurses' psychological well-being and patient satisfaction, while Cronbach's alpha was used to evaluate the internal consistency of the study instruments.

TABLE 1.
Nurse Demographics (*n*=274)

Demographic	*n*	%
Gender		
Male	17	6.2
Female	257	93.8
Nationality		
Saudi	163	59.5
Non-Saudi	111	40.5
Education		
Diploma	56	20.4
Bachelor	206	75.2
Master	12	4.4
Nursing Experience (years)		
1-5	93	34.0
6-10	90	32.8
11-15	69	25.2
>15	22	8.0
Worked as Bedside Nurse (years)		
1-<2	41	15.0
2-<3	29	10.6
3-<4	22	8.0
4-<5	32	11.7
≥5	150	54.7

Findings

Nurse participants were predominantly female (see Table 1). Most held a bachelor's degree, while fewer reported holding diplomas or master's qualifications. They represented a broad range of professional experience and more than half reported working as bedside nurses for over 5 years. The sample included Saudi and non-Saudi nurses, reflecting a diverse national representation.

Patient demographics showed a slightly higher proportion of female respondents (see Table 2). The majority of patients were age 51 or older, with smaller percentages in the younger age groups. Most participants reported being married, followed by single and widowed individuals. Educational backgrounds varied, with highest proportions among patients with secondary education and those who were illiterate. Most patients reported staying in their current department for less than 1 week.

Table 3 presents results related to nurses' psychological well-

TABLE 2.
Patient Demographics (*n*=385)

Demographic	*n*	%
Gender		
Male	171	44.4
Female	214	55.6
Age (years)		
21-30	43	11.2
31-40	62	16.1
41-50	69	17.9
51+	211	54.8
Marital Status		
Married	242	62.9
Single	62	16.1
Widowed	59	15.3
Divorced	22	5.7
Education		
Illiterate	106	27.5
Informal education	15	3.9
Primary education	62	16.1
Secondary education	111	28.8
Bachelor's degree	91	23.6
Hospital		
King Abdulla Medical Complex	156	40.5
King Fahad Hospital	130	33.8
Jeddah Eye Hospital	99	25.7
Time in Current Department		
<1 week	242	62.9
1-2 weeks	66	17.1
3-4 weeks	27	7.0
1-3 months	12	3.1
>3 months	38	9.9
Number of Admissions		
1	234	60.8
2	87	22.6
3	24	6.2
>3	40	10.4

being. The overall weighted well-being score was 51%, indicating a moderate level of psychological well-being among participants. Most of the five assessed items also fell within the moderate range. The highest scores were associated with items reflecting interest in daily activities and positive mood states. In contrast, the lowest score was reported for the item related to emotional calmness and relaxation, which was classified as low.

The overall weighted satisfaction score was 64%, indicating a high level of satisfaction (see Table 4). Among the seven assessed items, the highest satisfaction levels were reported for quality of care received and feeling respected by the nurse. Other items (e.g., perceived effect of treatment, clarity of explanations, nurse's carefulness during examinations) also fell within the high satisfaction category. In contrast, the lowest scores were associated with patients' involvement in healthcare decisions and time spent with the nurse, both of which were categorized as low.

An independent samples *t*-test revealed no significant differences in psychological well-being between male and female nurses (T=1.168, p=0.24), or between Saudi and non-Saudi nurses (T=1.443, p=0.15), indicating gender and nationality did not impact well-being significantly. However, one-way ANOVA identified significant differences based on educational level (F=4.121, p=0.017), total years of nursing experience (F=2.867, p=0.037), and time spent working as a bedside nurse (F=3.092, p=0.016). Nurses holding diplomas, those with more than 15 years of experience, and those with longer tenures as bedside nurse reported higher levels of psychological well-being. Although psychological well-being varied across hospitals, the difference was not statistically significant (F=2.900, p=0.06). Nurses from Jeddah Eye Hospital reported the highest scores.

An independent samples *t*-test identified no statistically significant difference in patient satisfaction between male and female patients (T=1.322, p=0.19), suggesting gender did not significantly influence satisfaction. Likewise, one-way ANOVA showed no sig-

TABLE 3.
Nurses' Psychological Well-Being

Items	Mean	Standard Deviation	Weighted Agreement Percentage	Ranking
I have felt cheerful and in good spirits.	3.60	1.14	53	2
I have felt calm and relaxed.	3.36	1.18	45	5
I have felt active and rigorous.	3.57	1.13	52	3
I woke up feeling fresh and rested.	3.50	1.22	50	4
My daily life has been filled with things that interest me.	3.66	1.18	55	1
Overall mean	3.54	0.99	51	

TABLE 4.
Patient Satisfaction

Items	Mean	Standard Deviation	Weighted Satisfaction Percentage	Ranking
How satisfied are you with the effect of your [treatment/care]?	4.14	0.75	71	3
How satisfied are you with the explanations provided by the nurse about the results of your [treatment/care]?	4.12	0.84	71	4
How satisfied are you with how carefully the nurse examined you?	4.05	0.85	68	5
How satisfied are you with your level of involvement in decisions about your healthcare?	3.39	1.21	46	6
How satisfied are you with the respect shown to you by the nurse?	4.15	1.16	72	2
How satisfied are you with the amount of time the nurse spent with you?	3.28	1.18	43	7
How satisfied are you with the overall care you received during your hospital stay?	4.22	0.80	74	1
Overall mean value	3.91	0.53	64	

nificant differences in satisfaction across age groups (F=0.658, p=0.58), marital status (F=1.350, p=0.26), or educational level (F=2.040, p=0.06), although patients with informal education reported slightly higher satisfaction scores. A statistically significant difference in satisfaction was observed across hospital affiliations (F=6.921, p=0.001), with patients from Jeddah Eye Hospital reporting the highest satisfaction. Additionally, multiple regression analysis revealed length of stay in the current department had a significant negative effect on satisfaction (T= −4.109, p=0.000), indicating longer hospital stays were associated with lower satisfaction.

A Spearman's rank-order correlation was conducted to assess the relationship between nurses' psychological well-being and patient satisfaction. The analysis yielded a p-value of 0.190, indicating no statistically significant relationship between the two variables.

Discussion

This study examined the relationship between nurses' psychological well-being and patient satisfaction in hospital settings. Contrary to prior research showing a strong positive correlation (Guo et al., 2022; Lu et al., 2019), findings from this study revealed no statistically significant relationship between these variables. Within this study's context, this suggests patient satisfaction may be influenced by a broader range of factors beyond nurses' well-being, including interactions with other healthcare professionals (e.g., physicians, administrative staff, ancillary personnel) and systemic elements, such as institutional policies, waiting times, and resource availability (Ferreira et al., 2023; Guo et al., 2022). Demographic and socioeconomic char-

acteristics, such as age, gender, marital status, educational level, occupation, residence, family income, type of medical insurance, and the medical department visited, also impact satisfaction (Guo et al., 2022).

Regarding nurse well-being, this study revealed a significant positive association between total years of nursing experience and psychological well-being, with more experienced nurses reporting higher well-being. This aligns with Yi and Lee (2024), who attributed this trend to enhanced resilience and coping strategies developed over longer tenures. Still, Zhou and colleagues (2023) noted well-being may fluctuate across career stages, suggesting experience alone does not guarantee linear improvement. Organizational, situational, and personal factors likely interact with a nurse's career stage to shape mental health. This highlights the need for longitudinal research on well-being trajectories.

Interestingly, this study found significant differences in psychological well-being across educational levels, with diploma-prepared nurses reporting higher well-being scores than those with bachelor's or master's degrees. This contrasts with previous findings from mental health settings where advanced training was linked to greater well-being, which was attributed to increased resilience and professional self-efficacy (Er, 2021).

Overall, nurses in the present study reported moderate well-being, consistent with findings from the scoping review of eight studies by Almeida and co-authors (2024). Nurses generally described themselves as satisfied at work when supported by effective management communication, a positive workplace climate, and strong organizational commitment.

While patient satisfaction with nursing care was generally high, two dimensions scored noticeably lower: time spent with nurses and involvement in decision-making. This concurs with Zozman and Stocker (2024), who emphasized interaction quality matters more than duration. Documentation and administrative tasks also may reduce the time nurses spend with patients (Cooper et al., 2021), further affecting satisfaction. The present study thus reinforces the importance of meaningful nurse-patient interactions and embedding shared decision-making into routine care. The latter aligns with Nuwagaba and colleagues (2021), who documented limited patient engagement in decision-making and recommended targeted capacity-building for providers.

A significant negative relationship between length of hospital stay and patient satisfaction also was observed, echoing work by Haringan and co-authors (2024). Prolonged hospitalization may expose patients to institutional inefficiencies, contributing to dissatisfaction.

In sum, nurses' psychological well-being was moderate yet unrelated to patient satisfaction (p=0.190); satisfaction instead hinged on patient-facing processes, especially shared decision-making and protected time with nurses, and highlighted these as immediate levers for improvement.

Limitations

The cross-sectional design limits its causal inference, as it captures associations at a single point without establishing directionality. Use of convenience sampling may have introduced selection bias, reducing generalizability of the findings to other hospital settings. Exclusion of specialized wards (e.g., ICU, pediatrics) and non-bedside nurses further narrows the study's scope. Additionally, reliance on self-administered questionnaires may have increased the risk of response bias. Crucially, the study did not control confounding variables, such as workload, staffing ratios, or organizational support, which may have influenced psychological well-being and patient satisfaction.

Recommendations for Future Research

Longitudinal and interventional studies are needed to establish causal relationships between nurses' psychological well-being and patient satisfaction. Future research also should incorporate qualitative methodologies to explore the lived experiences of nurses and patients. This would offer greater clarity about emotional and interpersonal dynamics that shape care quality. In addition, future studies should broaden their focus to include overall nursing well-being (not limited to psychological aspects) and examine its association with patient satisfaction. Within this scope, organizational dynamics, such as leadership style, team cohesion, and unit culture, should be investigated as potential mediators or moderators influencing staff well-being and patient experiences. To make future findings more reliable and applicable to different settings, researchers should complete studies at multiple locations using random sampling and consider various contextual and organizational factors that could affect the results.

Nursing Implications

Medical-surgical nursing practice demands continuous physical, emotional, and cognitive

engagement, frequently in high-pressure situations with time constraints. To ensure high standards of patient care, healthcare leaders should prioritize comprehensive well-being strategies for nursing staff. Interventions must extend beyond personal stress management to address challenges, including staffing ratios, leadership involvement, workload allocation, and availability of supportive supervision. Establishing psychologically safe work environments allows nurses to sustain emotional resilience, engage in critical thinking, and deliver empathic, high-quality care. Such environments also mitigate the likelihood of burnout, absenteeism, and turnover, thus enhancing continuity of care and overall organizational efficiency (de Lisser et al., 2024). Moreover, it is essential for medical-surgical environments to emphasize effective nurse-patient communication as a fundamental aspect of delivering quality care. Models of care that prioritize the patient should highlight the importance of engaging individuals in the decision-making process, honoring their preferences, and nurturing therapeutic relationships. Nurses should have dedicated time to interact with patients in a meaningful way. The process may involve rethinking workflows, reallocating non-nursing responsibilities, or using support from other disciplines. Training programs must incorporate communication and relational care skills as essential competencies. By empowering medical-surgical nurses to meet patients' clinical and emotional needs, nurse leaders can enhance care experiences and elevate overall health outcomes.

Conclusion

This study contributes to a deeper understanding of nurses' psychological well-being and patient satisfaction as distinct yet essential aspects of healthcare quality. While no direct association was found, both elements require targeted strategies. Data indicate psychological well-being is crucial for nurse performance and care quality, particularly in demanding roles, and reflect the ongoing demand for supportive organizational environments that mitigate stress, promote peer connection, and ensure professional sustainability. The study also reveals persistent gaps in patient satisfaction, especially regarding limited involvement in decision-making and reduced nurse-patient interaction time. This highlights underlying healthcare delivery challenges that influence patient perceptions, emphasizing operational complexity of delivering patient-centered care in clinical practice. MSN

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