International Journal of Nursing Studies Advances 8 (2025) 100293

Contents lists available at ScienceDirect

International Journal of Nursing Studies Advances

journal homepage: www.sciencedirect.com/journal/international-journal-of-nursing-studies-advances

Teamwork between registered nurses and unlicensed assistive personnel in acute care settings: A scoping review

Kang Lynn Wong [a], Wei Ling Chua [a,*], Peter Griffiths [b,c], Qin Ling Pearlyn Goh [d], Kye Wern Chelsea Low [a], Jia Qi Apphia Tan [a], Sok Ying Liaw [a]

[a] Alice Lee Centre for Nursing Studies, Yong Loo Lin School of Medicine, National University of Singapore, Singapore, Singapore
[b] School of Health Sciences, University of Southampton, Southampton, United Kingdom
[c] International Journal of Nursing Studies, King's College London, London, United Kingdom
[d] Department of Nursing, National Healthcare Group, Khoo Teck Puat Hospital, Yishun Health Campus, Singapore, Singapore

ARTICLE INFO

Keywords:
Nurses
Nursing assistants
Nursing staff
Patient care
Registered nurses
Scoping review
Teamwork

ABSTRACT

Background: Unlicensed assistive personnel are increasingly employed to support the nursing workforce in providing bedside care.
Aim: To scope the literature on the factors influencing teamwork between registered nurses and unlicensed assistive personnel in acute care settings
Methods: A scoping review was conducted using the Arksey and O'Malley (2005) framework. Eight electronic databases were searched from inception of each database to August 2024 to locate studies that reported issues relating to teamwork between registered nurses and unlicensed assistive personnel on patient care in general wards of acute care settings. Two reviewers independently screened titles, abstracts, and full text for eligibility. The data were extracted, analysed, and synthesised using the data-based convergent qualitative synthesis
Results: Thirty-eight studies were included. Five themes were generated: (1) role clarity, (2) delegation, (3) communication, (4) ward culture and practice, and (5) interpersonal relationships. Challenges in registered nurses–unlicensed assistive teamwork include unclear roles and responsibilities, ineffective delegation, and communication barriers. Work culture that excludes unlicensed assistive personnel from shift handovers were found to hinder shared goals for patient care. The importance of interpersonal relationships between registered nurses and unlicensed assistive personnel was highlighted to aid in the power disparity between them.
Conclusions: This review found suboptimal teamwork between registered nurses and unlicensed assistive personnel. Teamwork between registered nurses and unlicensed assistive personnel can be improved through clearly defined roles and responsibilities, better delegation practices, effective communication, and improved interpersonal relationships. Future research should focus on optimising communication processes and enhancing registered nurses' delegation skills through education.

What is already known?

* Corresponding author at: Alice Lee Centre for Nursing Studies, Yong Loo Lin School of Medicine, National University of Singapore. Level 5, Centre for Translational Medicine (CeTM), Block MD6, 14 Medical Drive, Singapore 117599.
E-mail address: chuaweiling@nus.edu.sg (W.L. Chua).

https://doi.org/10.1016/j.ijnsa.2025.100293
Received 27 September 2024; Received in revised form 2 January 2025; Accepted 12 January 2025
Available online 13 January 2025

- An increasing pool of unlicensed assistive personnel is recruited to address nursing workforce shortages and support basic direct patient care needs (e.g., feeding, toileting and ambulating).
- Given that registered nurses and unlicensed assistive personnel work interdependently, their relationship introduces another dimension of complexity in care delivery.
- Understanding the teamwork dynamics in clinical practice is essential for identiyfing opportunities to strengthen registered nurse–unlicensed assistive personnel collaboration, directly influencing patient safety.

What this paper adds

- The review identifies persistent challenges influencing teamwork between registered nurses and unclicensed assistive personal, including issues related to role clarity, delegation practices, communication barriers, and ward culture and practices.
- Findings highlight the need to clearly define roles, strengthen registered nurses' delegation competencies, enhance communication processes, foster positive ward cultures, and optimise nursing team structures to improve nursing teamwork and patient care quality.

1. Introduction

Nurses represent the largest proportion of healthcare professionals globally and play a vital role in delivering high-quality, safe, and patient-centered care (International Council of Nurses, 2024). However, a global shortage of nurses, exacerbated by the COVID-19 pandemic, poses significant challenges to healthcare systems (International Council of Nurses, 2024). An estimated 13 million additional nurses will be needed to bridge this workforce gap by 2030 (International Council of Nurses, 2021).

An inadequate supply of nurses negatively affects both the quality of patient care and the well-being of nurses (Royal College of Nursing, 2023). Insufficient staffing has been shown to increase nurses' workloads, contributing to stress, burnout, and job dissatisfaction, leading to high turnover rates (Aiken et al., 2002; Dall'Ora et al., 2020; Shah et al., 2021). Several studies have also found a strong association between low nurse staffing levels and higher reports of missed nursing care (Aiken et al., 2018; Ball et al., 2018; Cho et al., 2020; Griffiths et al., 2018a). Missed nursing care is defined as any required aspect of patient care that is delayed, partially completed, or entirely omitted by nursing staff (Kalisch et al., 2009). It has been linked to a range of adverse patient outcomes, including medication errors, pressure ulcers, hospital falls, hospital-acquired infections, failure to rescue, and even hospital deaths (Chaboyer et al., 2021; Kalisch et al., 2009; Recio-Saucedo et al., 2018; Willis and Brady, 2022).

To address the nursing workforce shortages, alleviate heavy workloads, and support cost containment, unlicensed assistive personnel–sometimes referred to as unregulated healthcare workers–are increasingly employed to assist registered nurses in delivering bedside care in acute care settings (Crevacore et al., 2023; Duffield et al., 2019; Twigg et al., 2016). Unlicensed assistive personnel go by various job titles globally, including assistant in nursing or personal care assistant in Australia, healthcare assistant in the United Kingdom and Ireland, unlicensed assistive personnel, nursing assistant or certified nursing aide in the United States, and healthcare or home support worker in Canada (Blay and Roche, 2021; Crevacore et al., 2023; Jackson et al., 2024; Wilson et al., 2023). Unlike licensed nurses, such as registered nurses, enrolled nurses and licensed practical nurses, unlicensed assistive personnel do not ungergo formal nursing education (Blay and Roche, 2021). Their educational preparation varies widely, ranging from short courses and apprenticeships to on-the-job training (Blay and Roche, 2021). In some settings, unlicensed assistive personnel enter the workforce with minimal preparation and rely heavily on supervision and mentorship (Blay and Roche, 2021).

Unlicensed assistive personnel are generally tasked with assisting patients with daily activities, such as turning and repositioning patients, feeding, toileting, ambulating, dressing, and, in some settings, measuring vital signs (Blay and Roche, 2021; Crevacore et al., 2022; New South Wales Health, 2019; Wilson et al., 2023). By taking up these routine but essential tasks, unlicensed assistive personnel can free up registered nurses to focus on complex clinical activities requiring a higher level of expertise (Twigg et al., 2016). However, inconsistencies in the training among unlicensed assistive personnel can affect their ability to perform tasks safely and effectively (Blay and Roche, 2021). Inadequate supervision by registered nurses, ineffective delegation practices, and poor teamwork can jeopardise patient safety, particularly so when tasks assigned to unlicensed assistive personnel are out of their scope of practice and competency or when communication breakdowns occur between registered nurses and unlicensed assistive personnel (Crevacore et al., 2024; Twigg et al., 2016; Wagner, 2018).

Therefore, effective teamwork and communication between registered nurses and unlicensed assistive personnel is critical for delivering safe and high-quality patient care (Campbell et al., 2020; Ceravocore et al., 2024). However, challenges such as role ambiguity, misaligned expectations, lack of shared goals, educational gaps, ineffective communication, and inadequate supervision by registered nurses can hinder collaboration, resulting in fragmented care and increased risks of unsafe patient care delivery (Bakht et al., 2024; Blay and Roche, 2021; Bellury et al., 2016; Jackson et al., 2024). Given the growing reliance on unlicensed assistive personnel to address staffing shortages in acute care settings, optimising teamwork between registered nurses and unlicensed assistive personnel is essential. Previous reviews have primarily focused on registered nurses' delegation practices to unlicensed assistive personnel across both acute and community care settings (Crevacore et al., 2023; Shore et al., 2022; Wilson et al., 2023) or mapping the tasks undertaken by unlicensed assistive personnel (Blay and Roche, 2021; Jackson et al., 2024). While these reviews provided insights into

task delegation and supervision, they do not address the broader factors influencing teamwork between registered nurses and unlicensed assistive personnel in acute care settings.

Therefore, this paper employed a scoping review method to examine the key factors influencing the teamwork between registered nurses and unlicensed assistive personnel. A better understanding of the facilitators and the challenges in their teamwork can provide insights to strengthen collaboration, inform future research, and enhance clinical practices.

2. Materials and methods

The Arksey and O'Malley (2005) five-stage framework guided the methodological approach of this scoping review: (1) identification of the research question, (2) identification of relevant studies, (3) study selection, (4) charting of data and (5) collating, summarising, and reporting of results. This review was reported according to the guidelines of the Preferred Reporting Items of Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) checklist (Tricco et al., 2018).

2.1. Stage 1: identifying the research question

The main objective of this review was to explore the factors influencing teamwork between registered nurses and unlicensed assistive personnel in patient care in acute care settings. Specifically, the research question was: *'What is known from existing literature about the factors influencing teamwork between registered nurses and unlicensed assistive personnel in the care of patients in acute care settings?'*

2.2. Stage 2: identifying relevant articles

Eight electronic databases (PubMed, Embase, Cochrane CENTRAL, CINAHL, ProQuest Dissertations and Theses, PsycINFO, Scopus, and Web of Science) were searched from inception point until August 2024. The search strategy consisted of keywords based on four concepts relating to registered nurses, unlicensed assistive personnel, teamwork, and patient care. Each concept's keywords, synonyms, and Medical Subject Headings (MeSH) terms were combined using Boolean operators and truncation symbols. The detailed search strategy can be found in Supplementary Table 1. To ensure a comprehensive review, a search on grey literature resources on Google Scholar was conducted alongside a backward and forward citation search to look for additional papers.

2.3. Stage 3: study selection

Articles were eligible for inclusion if they examined or discussed teamwork between registered nurses and unlicensed assistive personnel on patient care in general wards of acute care settings and were published in the English Language. Recognising the value of scoping reviews in obtaining knowledge from a heterogeneous corpus of literature, no limitations were imposed on the study design or publication type to ensure relevant publications were not unintentionally excluded. Studies were excluded if they described teamwork between registered nurses and unlicensed assistive personnel in non-acute care settings (e.g., long-term care) or teamwork among registered nurses, unlicensed assistive personnel, and other healthcare professionals. To prevent duplication of results, reviews were excluded if they included primary studies that were already located from our search strategy (Peters et al., 2022).

All studies identified from each database search were exported to Endnote 20. After removing duplicates, the titles and abstracts of all studies were screened according to the inclusion and exclusion criteria. After that, the full texts of selected articles were assessed for eligibility. Two reviewers independently conducted the screening process. Cohen's Kappa statistic was used to measure inter-rater agreement between the two reviewers (Cohen, 1960). Kappa values of 0.61–0.80 indicate moderate agreement, while values between 0.81–1.00 indicate almost perfect agreement (McHugh 2012). The kappa statistic between the two reviewers (KLW and KWCL) in this study was 0.71 (95 % CI: 0.57–0.85), reflecting moderate inter-rater agreement with an observed agreement of 85.5 %. A third reviewer (SYL) was consulted to resolve any disagreements that could not be resolved through discussion between the two reviewers. The PRISMA 2020 flow diagram was used to record the results (Page et al., 2021).

2.4. Stage 4: charting the data

Based on the research question, data was extracted using a self-developed data charting form: author(s), year, country where the study was conducted, study aim, study design, sample characteristics, and findings relating to teamwork and working relationship between registered nurses and unlicensed assistive personnel in the provision of patient care. One reviewer (KLW) performed the data extraction, and all the extracted data were cross-checked by another set of reviewers (WLC and JQAT) for accuracy. Any disagreements were discussed between the two reviewers until a consensus was reached.

2.5. Stage 5: collating, summarising, and reporting the results

A narrative synthesis approach was used to analyse, summarise, and report the findings. After the concepts and data on the teamwork between registered nurses and unlicensed assistive personnel were extracted from the included articles, the data from each article were first converted into a textual summary (Pluye and Hong, 2014). Subsequently, the consolidated qualitative data were further analysed using Thomas and Harden's (2008) three-step thematic synthesis approach: coding of text, developing descriptive

themes, and generating analytical themes. Two reviewers (KLW and WLC) independently coded the textual data extracted from the individual articles and organised codes of similar meanings into descriptive themes. Next, the reviewers used the descriptive themes from the analysis to infer issues surrounding the teamwork between registered nurses and unlicensed assistive personnel in the provision of patient care. The analytical themes were finalised when a consensus was reached between the two independent reviewers after several discussions with a third independent researcher (SYL).

3. Results

3.1. Search outcome

A total of 1428 records were identified from the search of nine databases. After removing 388 duplicates, the 1040 resulting records were screened for relevance by their title and abstract. Ninety-seven records were considered for full-text screening. We also assessed the eligibility of 15 full-text articles identified by citation searching. Thirty-eight articles were included in this scoping review (Fig. 1).

3.2. Study characteristics

The included articles were published between 1994 and 2023. They comprised a range of scoping review ($n = 1$), narrative reviews ($n = 2$), research reports ($n = 25$), commentaries ($n = 4$), opinions ($n = 2$), editorials ($n = 2$), perspective paper ($n = 1$), and newsletter ($n = 1$). Among the research reports were 15 qualitative, five quantitative studies, and five mixed methods studies. The majority were from the United States ($n = 24$), followed by Australia ($n = 8$), Canada ($n = 2$), the United Kingdom ($n = 3$), and Norway ($n = 1$). The details of the included articles can be found in Table 1.

3.3. Review findings

Based on the thematic analysis, five themes were generated: (1) role clarity, (2) delegation, (3) communication, (4) ward culture and practice, and (5) interpersonal relationships.

3.3.1. Theme 1: role clarity

Role clarity emerged as a critical factor influencing teamwork between registered nurses and unlicensed assistive personnel. However, the lack of clear role definitions and scope of practice for unlicensed assistive personnel was a recurring issue, as highlighted in 10 studies (Conway and Kearin, 2007; Crevacore et al., 2024; Dahlke and Baumbusch, 2015; Kalisch, 2011; Johnson et al., 2015; Marshall, 2006; Potter and Grant, 2004; Standing and Anthony, 2008; Walker et al., 2021; Wilson et al., 2023). This role ambiguity negatively affected collaborative practices between registered nurses and unlicensed assistive personnel, often resulting in frustration,

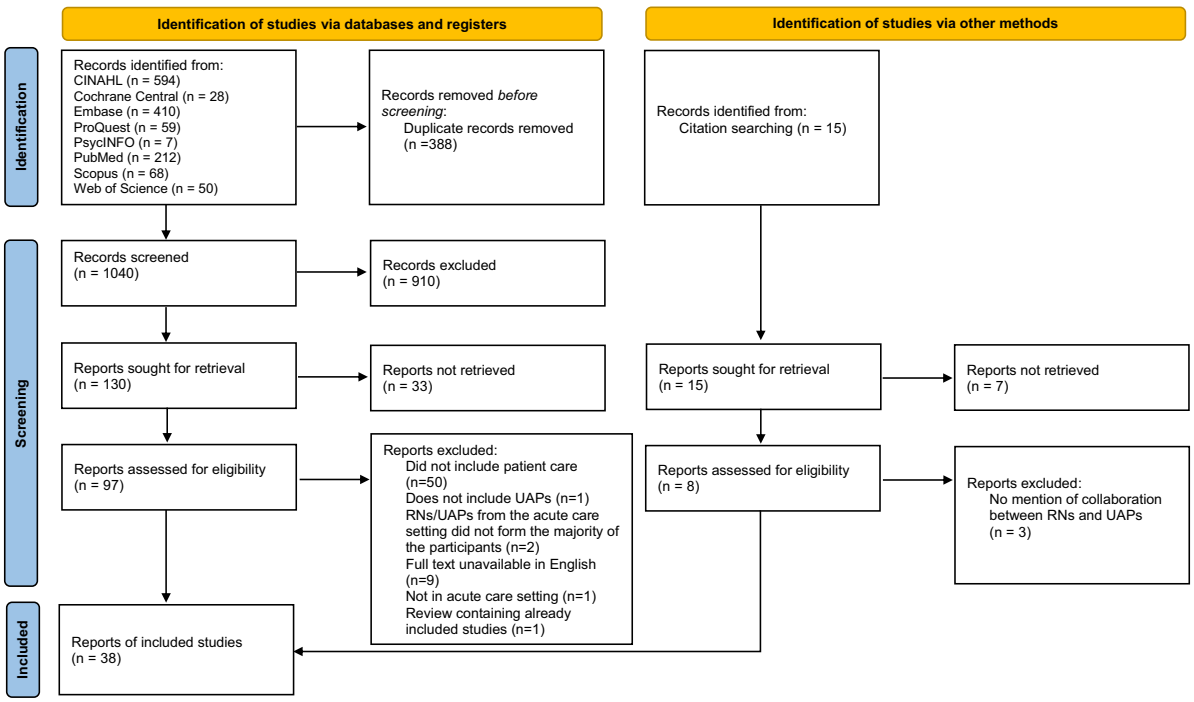

Fig. 1. PRISMA flow diagram.

Table 1
Summary of included articles.

Authors	Country	Aim(s)	Type of articles	Key relevant findings [Theme]
Scoping review ($n = 1$)				
Wilson et al. (2023)	Australia	To explore and map RNs delegated models of support and care to UAPs	Scoping review	• Three delegation models for RNs to UAPs: (i) direct—24-hour RN oversight, (ii) indirect—no 24-hour RN oversight, and (iii) mixed. Direct delegation is common in general hospital and acute care settings with 24-hour RN presence [delegation] • Patterns in RN delegation: Confusion over accountability, unclear roles of unlicensed workers, and lack of confidence in less experienced RNs. Effective delegation depends on experience, communication, trust, and adequate training [role clarity, delegation, interpersonal relationship] • Gaps in RN delegation: Limited data on delegation thresholds, task specificity, and patient outcomes. Need for regulation, accreditation, and minimum education standards for unlicensed workers [ward culture and practice, delegation]
Narrative reviews ($n = 2$)				
Anthony and Vidal (2010)	United States	To explore how the 'right communication' provides an explanatory framework for effective delegation	Narrative review	• While nurses may delegate the tasks of direct care, they remain accountable and responsible for the outcomes [delegation] • Communication between the RN-UAP dyad in providing direct care is a key factor in patient safety [communication] • By virtue of their common goal to accomplish quality and safe patient care, they have a dynamic and reciprocal interdependence on each other [ward culture and practice]
Mueller and Vogelsmeier (2013)	United States	To describe effective delegation by presenting the factors affecting delegation, explaining when and what an RN can delegate, and describing the delegation process	Narrative review	• RNs must understand the responsibility, authority, and accountability related to delegation. [delegation] • The RN is responsible for overseeing the patient and nursing assistant, determining any difficulties the assistant may have in completing the task safely and accurately [delegation] • Effective delegation requires clear, concise and correct communication of direction from the RNs • When RNs and UAP are partnered for the same shifts, positive work relationships can develop, resulting in respect, trust, and effective communication [interpersonal relationship, communication]
Original studies ($n = 25$)				
Apker et al. (2006)	United States	To identify the professional nurse communication skills that are considered to be effective in health care team interactions	Qualitative design • 21 individual interviews and 7 focus groups • 25 RNs, 3 clinical nurse specialists, 7 physicians, 6 patient care assistants, 4 unit clerks, 5 charge nurses/unit coordinators	• Actions of professional nurses: (i) communicate with others in ways that display their consideration of and caring of team member concerns, especially novice nurses or PCAs; (ii) Routinely taking those lower in status under their wings in socially supportive ways strengthened team members' emotional bonds and ultimately enhanced patient outcomes; (iii) advocate for other team members' concerns when needed

(*continued on next page*)

Table 1 (*continued*)

Authors	Country	Aim(s)	Type of articles	Key relevant findings [Theme]
				[communication, interpersonal relationship]
Ballangrud et al. (2020)	Norway	To describe healthcare professionals' experiences with teamwork in a surgical ward before and during the implementation of a longitudinal interprofessional team training programme	Qualitative design • 10 focus groups of 4 RNs, 4 physicians, 3 certified nursing assistants of a combined gastrointestinal surgery and urology ward	• Using the closed-loop tool, the RNs detected misunderstandings that could have caused consequences for the patient [communication] • Teamwork was dependent on openness and that team members spoke out when they needed help [interprofessional relationship]
Bellury et al. (2016)	United States	To gain insights into the perceptions of UAP and RNs on teamwork in acute care	Qualitative design • 3 focus group discussions of 33 UAPs • Open ended surveys of 18 RNs	• Both RNs and UAPs acknowledged the importance of communication teamwork to achieve quality care and positive patient outcomes • Mental models of team goals, team member tasks, and team coordination were rarely shared by RN and UAP [ward culture and practice] • Closed-loop communication was less common than one-way requests [communication] • Mutual trust was desired, but RNs' delegation of tasks conveyed to UAP a lack of value and respect for the NAP role [delegation] • NAP across the focus groups stated that their work included "everything except medications" [Role clarity]
Bittner and Gravlin (2009)	United States	To understand how nurses use critical thinking to delegate nursing care	Qualitative design • 4 focus groups of 27 surgical care RNs	• At times, RNs unclear whether the tasks delegated to UAP were within the UAP scope of practice [Role clarity/ delegation] • Delegation overload to UAP [delegation] • Nurses expected UAP to report significant findings and have higher level knowledge, including assessment and prioritizing skills [communication] • Successful delegation was dependent on the relationship between the RN and the UAP, communication, system support, and nursing leadership • Lack of communication between RNs and UAP due to language barrier; UAPs have limited information regarding patients whom they are caring for [communication]
Conway and Kearin (2007)	Australia	To explore the perceptions of UAPs and nurses on the role of UAP in direct patient care	Quantitative design • Separate surveys for UAPs (n = 21) and nurses (n = 120) with two open-ended questions	• Both UAPs and nurses identified positive team working relationship between nurses and UAPs [interpersonal relationship] • When questioned about whether nursing staff should be accountable for PSAs work, 80.3 % did not agree [delegation] • Not all RNs had a clear understanding of the role of the UAP and the UAPs believed that they did not receive adequate feedback about their work [role clarity] • 75.3 % of nurses felt confident supervising UAP in provision of direct patient care but 80.3 % of nurses believed they should not be accountable for UAP's work [delegation] • 26.8 % of nurses feel that the introduction of the PSAs role is detrimental to the role of the nurse [interpersonal relationship]

(*continued on next page*)

Table 1 (*continued*)

Authors	Country	Aim(s)	Type of articles	Key relevant findings [Theme]
Crevacore et al. (2022)	Australia	To explore current delegation practices between RN and the UAPs in acute care and explore factors that impact the RN's decision to delegate them	Mixed methods design • Survey of 100 RNs followed by interviews with 12 RNs	• 45 % of RNs reported a 'somewhat negative attitude', such as; having to 're-do' a delegated task or unmet expectations. In contrast, 48 % had a 'somewhat positive attitude' towards delegation, feeling in control when delegating, delegation saves RN time, belief that the UAP were committed staff members and the delegated activity would be completed as to an appropriate level. • 52 % of RNs 'always' provided appropriate supervision, support and education to the UAP, but only 46 % 'always' assessed patient needs or UAP competencies before delegating. • 67 % of RNs 'always' determined if the UAP was competent to perform an activity safely • Factors influencing RNs' decision to delegate to UAP: RNs' desire for control, RN's level of experience (newly qualified RNs avoided delegation due to self-expectations of having to complete all the nursing care by themselves), accountability concerns, limited education on delegation, UAP attributes (skills, knowledge, and traits), and individual RN personality traits.
Crevacore et al. (2024)	Australia	To investigate the experiences of NAs being delegated nursing tasks by RNs	Mixed methods design • Survey of NAs ($n = 79$) & interviews with NAs ($n = 11$)	• Not all NAs are fully aware of their roles and at times can feel unprepared for their shifts, however, they did feel supported by the RNs and were usually supervised when working [Role clarity]. Feeling supported by the RNs contributed to their sense of belonging in the ward [interpersonal relationship] • NAs felt that having mutual respect, such as being recognised along with the RNs made them feel like part of the team. However, they felt that they were always delegated 'dirty work' and at times tasks outside of their scope of practice but felt they didn't have the right to refuse a delegation [delegation] • NAs needed to understand their scope of practice to deliver their tasks [role clarity], which was influenced by their familiarity with the ward, receiving quality handover and adequate information [communication], and the ability to decline certain delegated tasks [role clarity]. Some RNs did not seem to have clarity on the NAs' scope of practice [role clarity]
Dahlke and Baumbusch (2015)	Canada	To offer an explanation of how RNs are providing care to hospitalised older adults in nursing teams comprised of a variety of roles and educational levels	Qualitative design • 375 h of participant observations, interviews, and review of selected documents • 18 RNs, 3 LPNs, 3 care aides	• Lack of clarity or understanding among nursing team members about each other's roles and care assignments [role clarity] • There were numerous instances when RNs, ENs and UAP worked together to admit a new patient, prepare for receiving extra patients, or help out with an urgent or emergency situation [ward culture and practice]
DiGerolamo and Chen-Lim (2021)	United States	To improve collaboration between RNs and senior nurse aides, and to enhance their knowledge of fall risk factors and	Quantitative design • Pre and post-test survey • 25 RNs, 2 senior nurse aides	• Understanding each other's roles and priorities will lead to better care coordination [role clarity]

(*continued on next page*)

Table 1 (*continued*)

Authors	Country	Aim(s)	Type of articles	Key relevant findings [Theme]
		evidence-based prevention guidelines for paediatric oncology patients		• Delineation or delegation of the care needs between the roles can be complex [delegation]
Dykes et al. (2009)	United States	To obtain the views of nurses and assistants about why patients in acute care hospitals fall	Quantitative design • 8 focus groups of 23 RNs and 19 NAs	• While RNs received report at the beginning of their shift, NAs provided care for hours without receiving report on their patient assignment [ward culture and practice] • NAs did not have access to relevant patient information unless nurses were available for verbal consultation [communication]
Graham et al. (2021)	Australia	To describe information exchanges between nurses who caring for "special" people with cognitive impairment experiencing behavioural and psychological symptoms and whether psychosocial strategies are explicitly communicated.	Mixed-method design • Survey of 139 AINs • Group discussion with 14 AINs	• For survey responses about handover, 87 % of respondents reported some sort of handover within the first 15-minute, but 4.4 % claimed to have received no handover whatsoever [ward culture and practice] • "Some RN's in the ward would not communicate or provide specific patient-related information which we are not sure about." [communication] • The AINs also expressed a desire to be: (a) included in the nursing team; (b) receive handover from an RN rather than AIN; (c) valued for their patient specific insights; and, (d) provided with specific guidance, information and delegation of care specific to managing BPS in patients they provided care. They felt this was necessary to improve safety for themselves and the patients. [ward culture and practice]
Gravlin and Bittner (2010)	United States	To measure RNs' and nursing assistants' reports of frequency and reasons for missed nursing care and identify factors related to successful delegation	• Quantitative design • Surveys of 241 RNs, 99 NAs, 16 NMs	• Although 48.6 % of nurses reported as never having a formal course in delegation, 82 % were comfortable with the delegation process [delegation] • 83 % of the nurses reported that they delegated to 2 NAs per shift on average and 65 % of NAs reported that they were assigned >10 patients per shift [delegation] • Approximately 50 %! of both RNs and NAs reported tension or communication breakdown occurring as reasons for missed care [communication] • Factors affecting successful delegation were good communication, positive relationships and attitudes, NA's competence and knowledge and workload [delegation]
Johnson et al. (2015)	United Kingdom	To explore how newly qualified RNs develop delegation skills to HCAs	• Qualitative design using ethnographic case studies at three hospital sites • 66 participant observations of 33 nurses • Individual interviews of 28 RNs, 10 HCAs, and 12 ward managers	• Nurses and HCAs had a collaborative culture because there were clear expectations on what they were tasked to do. There was shared responsibility for physical care of the patients. [role clarity] • In contrast, it was observed that another ward had less collaborative ward culture, role confusion due to task delegation being based on nurses' individual preferences [role clarity], inadequate communication between nurses and HCAs, and ineffective delegation and supervision of the HCAs [communication]. Apart from lack of confidence, newly qualified RNs' ability to delegate and supervise were limited

(*continued on next page*)

Table 1 (*continued*)

Authors	Country	Aim(s)	Type of articles	Key relevant findings [Theme]
				by pressure to maintain up-to-date documentation [delegation]
Kalisch (2006)	United States	To determine nursing care regularly missed on medical-surgical units and reasons for missed care	• Qualitative design • 25 focus groups of 107 RNs, 15 LPNs and 51 NAs from medical-surgical units	• Ineffective delegation with nurses delegating without retaining accountability was identified as the major contributor of missed care. [delegation] • NAs not attending report taking with nurses leading to lack of collaborative planning for patient care [ward culture and practice] • All of the staff indicated that it was difficult for them to engage in conflict and many tried to avoid it if possible. [communication]
Kalisch (2009)	United States	To compare RNs' versus UAP's perceptions of elements of missed care and reasons for missing care and assess how they explained selected issues underlying teamwork between RNs and UAP	• Mixed-method design • Survey of 633 RNs and 121 NAs • 4 focus groups *[sample size not reported]*	• Both NAs and RNs pointed to a lack of a joint report at the beginning of the shift and few contacts or debriefings during the time they are working together. [ward culture and practice, communication] • Both RNs and NAs agreed that poor communication can lead to missed care. RNs felt that the NAs did not communicate care that was not done, while NAs identified tension or communication breakdowns within the nursing team more often [communication] • Inactions from RNs or NAs were not being listened by RNs [interpersonal relationship]
Kalisch (2011)	United States	To determine the barriers that inhibit effective RN-UAP teamwork and then to ascertain if and how dysfunctional teamwork leads to problems in quality of care and patient safety	• Qualitative design • Wave 1: 9 focus groups of 81 RNs and 12 focus groups of 118 UAPs. • Wabe 2: 19 individual interviews with 10 RNs, 6 UAPs and 3 NMs	• Seven barriers identified: (1) Lack of role clarity, (2) lack of working together as a team, (3) inability to deal with conflict, (4) not engaging UAP in decision making as UAPs did not attend report taking and UAPs were not being listened to, (5) deficient delegation due to RNs not retaining accountability and unclear directions by RNs, (6) UAPs reporting to two or more RNs, and (7) 'it's not my job syndrome' [role clarity, communication, ward culture and practice, delegation]
Lancaster et al. (2015)	United States	To gain a greater understanding of interdisciplinary communication and collaboration among physicians, nurses, and UAPs	• Qualitative design • Individual interviews of 12 physicians, 13 nurses & 11 UAPs	• A hierarchical, subservient relationship among nurses and UAPs [interpersonal relationship] • UAPs were rarely included in any type of meaningful patient discussion [communication] • Poor communication could cause conflict and relationship between nurses and UAPs [communication, interpersonal relationship] • "A nurse is somebody who takes care of a patient like a CNA [UAP]… Almost the same work plus they do medication" (UAP Jane Doe 3). [role clarity]
Potter and Grant (2004)	United States	To better understand the working relationships between RNs and UAP and the influence this has on patient care delivery	• Qualitative design • Focus groups of 13 RNs and 9 UAPs	• Trust is central to effective RN and UAP relationships and how RNs and UAPs are assigned to work together has direct bearing on the type of working relationship they develop. [interpersonal relationship] • Lack of role clarity creates resentment among staff [role clarity]

(*continued on next page*)

Table 1 (*continued*)

Authors	Country	Aim(s)	Type of articles	Key relevant findings [Theme]
				• UAPs did not attend their units' change-of-shift reports [ward culture and practice] • Little evidence that RNs knew how to delegate and adapt an assignment when a UAP was working with multiple RNs [delegation]
Potter et al. (2010)	United States	To understand RNs and UAPs perceptions of delegation practices in delivery of oncology patient care	• Qualitative design • Focus groups of 10 RNs and 6 NAPs	• Successful delegation is characterised by effective communication, teamwork, and initiative [delegation] • RNs completed the change-of-shift report with fellow RNs without the NAP in attendance [ward culture and practice] • RNs are ultimately responsible for supervising NAP to complete delegated tasks. RNs in this study acknowledged the importance of follow-up. [delegation] • RNs identified reluctance on the part of some NAP to accept delegation as the heart of conflict between the two groups while NAP identified that teamwork between RNs and NAP broke down and there was little or poor communication occurring. [delegation, communication] • The NAPs saw their role as being very similar to that of RNs [role clarity]
Spilsbury and Meyer (2004)	United Kingdom	To understand the work of HCAs in a UK hospital setting	Qualitative design • Stage 1: Interviews of 33 HCAs • Stage 2: 220 h of participant observation involving 10 HCAs • Stage 3: 4 focus groups of 69 RNs	• The passing on of information appeared to rely upon the relationship that existed between individual RNs and HCAs [interpersonal relationship] • The hospital lacked systems for the formal transfer of information between HCA and RN which have significant implications for the quality of patient care [ward culture and practice] • RNs did not involve HCAs in discussions about patient care and discharges [ward culture and practice] • RNs admitted to sometimes asking HCAs to do activities that were recognized by RNs as being outside the "accepted" HCA role within the Trust, especially when there is inadequate staffing or increased workload [delegation]
Spilsbury and Meyer (2005)	United Kingdom	To explore how the work of HCAs is played out in practice, how they act and interact with RNs and how their work is negotiated through participation in the social world of caring work	Qualitative design • Interviews of 33 HCAs • 220 h of participant observation with 10 HCAs • 4 focus groups of 69 RNs • Document analysis	• RNs were aware of their responsibilities in supervising the work of HCAs but admitted that this was often lacking. RNs felt that the increased in paperwork was taking them away from the bedside, creating difficulties for them to supervise and monitor HCA's work [delegation] • Lack of systems for formal transfer of information between RNs and HCAs [ward culture and practice] • The HCAs exercised control over whether or not to share information about patients with the RNs
Standing and Anthony (2008)	United States	To describe delegation from the perspective of the acute care nurses	Qualitative design • Individual interviews of 17 RNs	• All 17 nurses strongly believed that they were ultimately accountable for the tasks carried out by UAP [delegation] • Many nurses expressed frustration because the UAP were not held accountable for their tasks and felt this was unfair: "You feel like you have to do everyone's job." [delegation]

(*continued on next page*)

Table 1 (*continued*)

Authors	Country	Aim(s)	Type of articles	Key relevant findings [Theme]
				• Many nurses commented that the UAP did not understand the RN role and consequently did not understand the purpose of delegation [role clarity] • Trust was usually established by getting to know the UAP through working with them and following up on delegated tasks over a period of time and through trial and error [interpersonal relationship]
Tourangeau et al. (1999)	Canada	To evaluate patient, caregiver, and system outcomes associated with the implementation of a partnership model of care delivery involving RN and UAP	Mixed-methods design • Quasi-experimental design: pre-test and 2 post-tests in 3 medical-surgical units • 3 focus groups of 15 RNs	• RNs believed that their workload had increased with the implementation of the new care delivery model [delegation] • RNs felt inadequately skilled at delegating effectively and clearly to UAPs, with some RNs tended to over-delegate while others under-delegated [delegation] • Inadequate communication between the RN and UAP seemed to be at the core of many perceived problems [communication]
Wagner (2018)	United States	To explore the impact of improved delegation-communication between nurses and UAP on pressure injury rates, falls, patient satisfaction, and delegation practices	Quantitative design • Pre and post-test surveys of 51 RNs and 19 UAPs	• Overall, RNs tend to delay the decision to delegate and were more likely to delegate tasks usually expected in UAP job descriptions [delegation] • However, nurses demonstrated significant improvements on their ability to explain performance appraisals, facilitate clearer communication, and seek feedback [delegation]
Walker et al. (2021)	Australia	To understand how supervision and delegation are practised in the nursing team to enhance patient care and teamwork	Qualitative design • 24 Individual interviews, 11 focus groups (20 nurse leaders, 68 RNs, 6 ENs, 10 NAs), document analysis	• There were inconsistencies in the interpretations of the supervision and delegation guidelines and how they were operationalised in practice, which had the potential to impact teamwork and the quality of patient care [role clarity] • Some nurses perceived supervising the NAs as an additional burden. [delegation] • New graduate nurses lacked confident in their ability to delegate and supervise and had a weaker understanding of the boundaries of the NA role [delegation]
Others ($n = 10$)				
Hayllo (2010)	United States	To review an application of Lewin's Theory of Change to improve nursing shift report, nursing documentation, and patient satisfaction	Commentary	• The UAP didn't listen to report on the patients but started their work immediately [ward culture and practice] • The nurse and the patient-care assistant were clearly not communicating effectively about the patient, and a potential for error existed [communication] • The face-to-face report allows nurses to communicate and ask questions of each other, and foster an environment of patient safety which promotes communication and information transfer [ward culture and practice]
Hayes (1994)	United States	To discuss how team building is able to encourage collaboration between RNs and nurse's aides	Opinion	• Although RNs and nurse's aides work interdependently, they share a common purpose. [ward culture and practice] • Both RNs and nurse's aides need clear expectations when working together [role clarity]

(*continued on next page*)

Table 1 (*continued*)

Authors	Country	Aim(s)	Type of articles	Key relevant findings [Theme]
				• NAs expressed need to feel welcome, appreciated, and respected by RNs while RNs needed to feel competent as managers. RNs also felt intimated and humiliated when the nurse's aides did not comply with their request [interpersonal relationship, delegation]
Kalisch and Aebersold (2006)	United States	To present barriers to patient safety on a typical patient care unit in an acute care hospital, along with a framework of practices that can be utilized to reduce errors	Editorial	• Unclear values: In a value-driven patient care unit, the staff continuously refer to their core values when making decisions about their nursing care [ward practice and culture] • Poor teamwork: Most nurses are likely to respond to conflict by avoidance [communication] • Poor teamwork: Many nurses do not understand, or somehow forget, that they retain accountability for whatever they delegate [delegation]
Kalisch and Schoville (2012)	United States	To challenge the belief that each patient should be cared for by just one nurse	Editorial	• The underlying belief on a nursing team is that "we" are responsible for "our" patients—a collective accountability that has been missing in nursing [ward culture and practice]
Marshall (2006)	Australia	To discuss the use of UAP to undertake less complex patient care activities in an attempt by the healthcare system to resolve the nursing shortage	Perspective paper	• This lack of role clarification, led to nurses and UAPs having different views of what it is that these support workers do [role clarity] • RNs have always had to take on the additional task of accountability and responsibility to and for the support worker, and they fear the consequences attached to the failure of effective delegation and supervision of UAPs [delegation] • Negative attitudes from professional nurses for various reasons such as fear of giving up control of patient care to UAPs and additional tasks of having to oversee the UAPs. [Delegation]
Relias Media (2022)	United States	To describe the method found to improve communication between nurses and patient care associates	Newsletter	• Feedback from PCAs indicated they did not have enough information to provide the best care for patients, leading to lower patient safety scores for handoffs and transitions [ward culture and practice] • The new worklist communication tool informed PCAs about necessary tasks, safety concerns, and patient information facilitated communication and improved camaraderie between nurses and patient care associates [communication]
Shearer (2013)	Australia	To highlight a few of the issues highlighted by RNs working in the acute care setting, and how these issues correlate to current literature on skill mix and quality patient care	Opinion	• RNs needed to spend extra time checking the work carried out by the UAPs who were under their supervision and accountability [delegation] • Poor communication between RNs and UAPs may lead to errors [communication] • Clarification of duties, together with increased education opportunities for UAP, are necessary to facilitate the safe care of patients [role clarity]
VanCura and Gunchick (1997)	United States	To explore the five key components for effectively working with unlicensed assistive personnel	Commentary	• Managers are responsible for creating the environment in which staff can develop, maintain, and actually demonstrate competence [ward culture and practice]

(*continued on next page*)

Table 1 (*continued*)

Authors	Country	Aim(s)	Type of articles	Key relevant findings [Theme]
Walton and Waszkiewicz (1997)	United States	To explore how nurses can work more effectively with UAP to improve patient outcomes	Commentary	• Effective communication is recognized as essential in nursing to promote the meeting of patient needs and facilitates effective teamwork. [communication] • Delegation is important to the success of effectively working with UAPs, however, nurses struggle with delegation due to various reasons (e.g. fear of being disliked, losing control, and lack of confidence, experience and knowledge of the delegation decision-making process) [delegation] • Clear instructions and communication help UAP to focus on the important aspects of the delegated task [communication] • Follow-up and supervision of UAP are essential to assuring consistent quality outcomes [delegation] • Managing a team of health care workers requires an underlying belief in the value of all members of this team in contributing to the quality of patient outcomes [ward culture and practice] • Team building is grounded upon respect toward one another, expressing appreciation for quality work and role modeling [interpersonal relationship]
Weydt (2010)	United States	To discuss delegation and its related concepts	Commentary	• RNs frequently comment: If I am responsible for someone else's work, I would rather do it myself. [delegation] • The ability to delegate and the quality of the delegation is influenced by healthy interpersonal relationships, the manner in which the activity is delegated, and the openness of the communication [delegation] • Trust is an important element in developing healthy team relationships. [interpersonal relationship] • The role clarification becomes increasingly important as new positions develop to address the variety of complex patient care needs [role clarity]

AIN-Assistant in Nursing, EN-Enrolled Nurses, HCA-Healthcare Assistant, LPN-Licensed Practical Nurse, NA-Nursing Assistants, NAP-Nursing Assistive Personnel, NM-Nurse Manager, PCA-Patient Care Assistant, PSA-Patient Support Assistant, RN-Registered Nurses, UAP-Unlicensed Assistive Personnel.

inefficiencies, and team conflicts.

Several studies revealed that registered nurses and unlicensed assistive personnel appeared to have different interpretations of their scope of practice (Bittner and Gravlin, 2009; Crevacore et al., 2024; Walker et al., 2021). Unlicensed assistive personnel demonstrated limited understanding of the role of registered nurses and perceived their roles to be similar, except for medication administration rights (Bellury et al., 2016; Lancaster et al., 2015; Potter et al., 2010). This perception sometimes made unlicensed assistive personnel question the need for delegation from registered nurses (Standing and Anthony, 2008). Furthermore, tensions and conflicts often arose due to unfamiliarity with each other's roles (Marshall, 2006; Potter and Grant, 2004; Standing and Anthony, 2008; Walker et al., 2021).

The lack of shared understanding between the registered nurses and unlicensed assistive personnel regarding teamwork and task prioritisation further compounded these challenges (Bellury et al., 2016; Bittner and Gravlin, 2009). Both groups expressed frustration over disagreements about task prioritisation, particularly regarding documentation and direct patient care (Johnson et al., 2015; Kalisch, 2011). Poor understanding of unlicensed assistive personnel roles has also been linked to care omissions, underscoring the risks to patient safety (Bellury et al., 2016; Bittner and Gravlin, 2009; Kalisch, 2011; Hayes, 1994; Walker et al., 2021).

To address these challenges, four articles emphasised the importance of defining and communicating clear roles and scope of practice (DiGerolamo and Chen-Lim, 2021; Johnston et al., 2015; Shearer, 2013; Weydt, 2010). For instance, Johnson et al. (2015) found that role ambiguity was particularly evident in wards with less collaborative cultures, where task assignments by registered nurses were based on individual preferences rather than standardised practices. In contrast, teams with well-defined roles

demonstrated greater cohesion and shared responsibility for patient care (Johnson et al., 2015). These findings highlighted the need for clear role delineation and ensuring all team members understand their roles within the nursing team.

3.3.2. Theme 2: delegation

Delegation is recognised as essential to effective nursing teamwork, with evidence highlighting both its benefits and challenges. When executed effectively, delegation enhances registered nurses' workload management (Crevacore et al., 2022). Successful delegation relies on clear communication, a shared understanding of responsibility and accountability relating to delegation, and positive relationships between registered nurses and unlicensed assistive personnel (Gravlin and Bittner, 2010; Mueller and Vogelsmeier, 2013; Potter et al., 2010; Weydt, 2010). Direct oversight by registered nurses has been reported to ensure safe task execution while fostering confidence in unlicensed assistive personnel (Wilson et al., 2023). Unlicensed assistive personnel, in turn, valued clear instructions and appropriate supervision, which enabled them to perform tasks effectively and feel supported in the nursing care team (Crevacore et al., 2024).

However, studies also identified challenges in delegation practices. Newly qualified registered nurses, in particular, often struggle with delegation due to a lack of confidence and limited formal training in delegation principles (Crevacore et al., 2022; Johnston et al., 2015; VanCura and Gunchick, 1997; Wilson et al., 2023). Barriers such as time pressures (Johnston et al., 2015; Spilsbury and Meyer, 2005), a limited understanding of unlicensed assistive personnel role boundaries (Walker et al., 2021), and self-imposed expectations among registered nurses to manage all aspects of patient care independently (Crevacore et al., 2022) exacerbated these difficulties. In addition, some registered nurses expressed reluctance to delegate due to concerns about losing autonomy over their patients' care (Marshall, 2006; Vancura and GunChick, 1997), worries about the potential consequences of improper delegation or inadequate supervision of unlicensed assistive personnel (Marshall, 2006) or the need to "re-do" delegated tasks (Crevacore et al., 2022). Supervision of unlicensed assistive personnel was sometimes perceived by registered nurses as an added burden, particularly during periods of increased task demands (Marshall, 2006; Shearer, 2013; Tourangeau et al., 1999; Walker et al., 2021).

Concerns surrounding accountability in delegation also emerged in several studies. While registered nurses generally recognised their ultimate responsibility for delegated tasks (Anthony and Vidal, 2010; Shearer, 2013; Standing and Anthony, 2008), inconsistencies and confusion in understanding what "accountability" entails were apparent (Bittner and Gravlin, 2009; Conway and Kearin, 2007; Kalisch, 2006, 2011; Kalisch and Aebersold, 2006; Walker et al., 2021). Under heavy workloads, some registered nurses admitted delegating tasks outside the scope of practice of unlicensed assistive personnel (Gravlin and Bittner, 2010; Spilsbury and Meyer, 2004). Although a few unlicensed assistive personnel acknowledged the importance of refusing inappropriate delegations or tasks that exceeded their capacity, many felt they did not have the right to decline delegation due to fear of repercussions (Crevacore et al., 2024). Establishing clear protocols and fostering open communication channels between registered nurses and unlicensed assistive personnel can help address these issues, ensuring tasks are delegated appropriately and safely (Potter et al., 2010; Wagner, 2018; Walton and Waszkiewicz, 1997; Weydt, 2010; Wilson et al., 2023).

3.3.3. Theme 3: communication

Of the 38 articles, 15 discussed communication between registered nurses and unlicensed assistive personnel and its potential impacts on patient safety and quality care. Eleven studies identified ineffective communication between the two groups as a source of conflict (Anthony and Vidal, 2010; Costello, 2010; Johnson et al., 2015; Tourangeau et al., 1999). Poor communication was recognised to have serious consequences for patients, often resulting in inaccurate or missing critical information, which could lead to missed nursing care (Dykes et al., 2009; Gravlin and Bittner, 2010; Kalisch, 2009).

Some studies described instances of poor or little communication between the registered nurses and unlicensed assistive personnel during shifts, including inadequate directives or, in some cases, the absence of instructions from registered nurses (Graham et al., 2021; Kalisch, 2009). In contrast, clear communication was deemed essential for helping unlicensed assistive personnel understand task priorities and expectations for each delegated task (Walton and Waszkiewicz, 1997).

Strategies to improve communication between registered nurses and unlicensed assistive personnel were also identified. Closed-loop communication was highlighted as an effective approach for promoting a shared understanding within the team by reducing misunderstandings and ensuring that instructions were clear, actionable, and mutually verified (Ballangrud et al., 2020; Bellury et al., 2016). In another study, Relias Media (2022) introduced a structured communication tool to inform unlicensed assistive personnel about tasks, safety concerns, and patient updates. This tool not only improved information sharing but also fostered camaraderie and collaboration between registered nurses and unlicensed assistive personnel (Relias Media, 2022).

3.3.4. Ward culture and practice

Ward culture and practice were identified in 20 articles as a critical factor that can either foster or hinder nursing teamwork and how nursing leadership plays an essential role in shaping teamwork culture. Nurse managers were identified as key drivers in cultivating a sense of teamwork and collaboration within wards (DiGerolamo and Chen-Lim, 2021; Marshall, 2006; VanCura and Gunchick, 1997; Walker et al., 2021). When registered nurses and unlicensed assistive personnel share a common goal in patient care, they develop a dynamic, reciprocal interdependence (Anthony and Vidal, 2010; Dahlke and Baumbusch, 2015; Hayes, 1994). Kalisch and Schoville (2012) described this as "collective orientation," where both registered nurses and unlicensed assistive personnel start viewing their work as 'ours' rather than 'mine'(p. 53). However, several studies highlighted a lack of collective accountability within nursing teams, which created barriers to effective collaboration (Bellury et al., 2016; Kalisch, 2009; Kalisch and Schoville, 2012; Walton and Waszkiewicz, 1997).

A notable concern was the lack of involvement of unlicensed assistive personnel in nursing shift handovers and information

sharing. In 11 studies, unlicensed assistive personnel expressed that their lack of involvement in handovers and collaborative planning for patient care created a sense of disengagement and exclusion from the nursing team in decision-making regarding patient care. Kalisch (2006) noted that the absence of joint handovers between registered nurses and unlicensed assistive personnel contributed to fragmented care and missed tasks. Likewise, Graham et al. (2021) emphasised the importance of including unlicensed assistive personnel in formal handover processes to ensure they receive critical patient information. Unlicensed assistive personnel reported that active participation in patient care discussions improved their understanding of care priorities and strengthened their sense of inclusion within the team (Graham et al., 2021).

Developing collaborative relationships between registered nurses and unlicensed assistive personnel was reported to be especially challenging when unlicensed assistive personnel were assigned to work with multiple registered nurses. In two studies, misunderstandings arose due to a lack of communication between the unlicensed assistive personnel and the various registered nurses they reported to, as unlicensed assistive personnel often struggled to balance competing tasks assigned by different registered nurses (Johnson et al., 2015; Potter and Grant, 2004).

3.3.5. Interpersonal relationships

Nineteen studies highlighted the importance of healthy interpersonal relationships between registered nurses and unlicensed assistive personnel built on mutual respect, trust, appreciation for one another, and communication for effective collaboration. Crevacore et al., 2024 noted that unlicensed assistive personnel who felt supported and valued by registered nurses developed a stronger sense of belonging and commitment to their roles. However, at least five studies described a hierarchical and subservient dynamic between registered nurses and unlicensed assistive personnel (Bellury et al., 2016; Kalisch, 2009, 2011; Lancaster et al., 2015; Standing and Anthony, 2008). Unlicensed assistive personnel reported not receiving the respect they expected, often citing the registered nurses' tone of voice to be demeaning or dismissive (Bellury et al., 2016; Kalisch, 2009, 2011; Lancaster et al., 2015; Standing and Anthony, 2008). As part of the nursing team, unlicensed assistive personnel expressed their need to feel welcome, listened to, and included in patient care discussions (Crevacore et al., 2024; Hayes, 1994; Kalisch, 2009, 2011; Lancaster et al., 2015).

Tension in relationships between registered nurses and unlicensed assistive personnel was aggravated when both groups adopted an avoidance approach to conflict resolution instead of addressing issues directly. This approach sometimes resulted in siloed working practices and reduced communication (Kalisch, 2006, 2011; Kalisch and Aebersold, 2006; Potter et al., 2010; Standing and Anthony, 2008). A few studies offered strategies to strengthen relationships between registered nurses and unlicensed assistive personnel. For instance, rostering the same registered nurses and unlicensed assistive personnel together across multiple shifts was suggested to build rapport and good work relationships (Mueller and Vogelsmeier, 2013; Potter and Grant, 2004; Standing and Anthony, 2008). Apker et al. (2006) further highlighted the value of registered nurses providing social and emotional support to unlicensed assistive personnel, noting that such efforts strengthened team bonds, improved morale, and ultimately enhanced patient outcomes.

4. Discussion

This scoping review identified five themes influencing teamwork between registered nurses and unlicensed assistive personnel in acute care settings: role clarity, communication, delegation, ward culture and practice, and interpersonal relationships. These themes highlight the structural and relational dynamics that affect their collaboration. Rather than viewing these factors in isolation, this review highlights their collective influence on team performance and patient care quality.

The interplay among these themes underscores systematic challenges that necessitate a multi-pronged approach to address the factors influencing teamwork and care quality. In this review, role clarity emerged as a foundational element underpinning effective delegation, which, in turn, depends on effective communication. Communication, ward culture and practices, and interpersonal relationships also form a cyclical relationship that shapes teamwork dynamics. Effective communication fosters clarity and alignment on tasks while being influenced by and reinforcing ward culture and interpersonal relationships (Weller and Cumin, 2014; McLaney et al., 2022). Wards that promote shared team goals and relationships built on trust and mutual respect promote open communication and collaboration (Weller and Cumin, 2014; Campbell et al., 2020). Conversely, poor communication can deepen hierarchical divides, weaken teamwork, and compromise care coordination (Rosen et al., 2018).

Role clarity for unlicensed assistive personnel was a recurring issue identified in this review, mainly due to the paucity of guidelines defining their scope of practice in many countries. Exceptions include Australia (Department of Health WA, 2022; NSW Health, 2019) and some states in the United States (Jackson et al., 2024), where formal documents outline unlicensed assistive personnel's roles, responsibilities, and activities they can perform. The lack of consistency in the scope of practice and educational preparation of unlicensed assistive personnel has resulted in variability in roles across countries, jurisdictions and even within hospitals, complicating delegation practices (Crevacore et al., 2022). Without clear role delineation specifying responsibilities, boundaries, and expectations, registered nurses and unlicensed assistive personnel may continue to develop misaligned assumptions about each others' roles. Such misunderstandings can strain teamwork and increase the risk of suboptimal patient care, such as missed or delayed care and adverse patient outcomes.

Establishing standardised guidelines and role delineation frameworks is essential to improve role clarity for unlicensed assistive personnel (Jackson et al., 2024). Such frameworks should clearly define unlicensed assistive personnel roles, align job descriptions with training and competencies, and promote consistency and accountability while allowing flexibility for local contexts (Kroezen et al., 2018). Strategies to enhance role clarity include providing clearly defined job descriptions during induction programs for registered nurses and unlicensed assistive personnel and involving nursing leaders to reinforce role expectations (Cengiz et al., 2021). Collaborative models or frameworks with well-defined intraprofessional competency domains at organisational or national levels

could further enhance understanding of the practice scope and team collaboration (Moore et al., 2019).

Safe and effective delegation practices are critical for optimising teamwork between registered nurses and unlicensed assistive personnel, especially given the variability in roles and scope-of-practice ambiguities (Crevacore et al., 2022; Duffield et al., 2019). Delegation involves transferring responsibility for specific tasks while accountability for outcomes remains with the registered nurse (American Nurses Association, 2012). However, delegation deficiencies, such as unclear instructions from registered nurses, lack of retained accountability and follow-through, and unlicensed assistive personnel accepting tasks beyond their compentencies, can undermine teamwork and patient safety (Crevacore et al., 2024; Kalisch, 2011; Walker et al., 2021). Workforce composition, including staff mix and registered nurse-to-unlicensed assistive personnel ratios, has also been associated with an increased risk of hospital mortality (Griffiths et al., 2019). Adverse outcomes related to higher unlicensed assistive personnel staffing were attributed to a mechanism of inappropriate delegation, particularly when the task demands on unlicensed assistive personnel is high but registered nurse supservisory capacity is low (Griffiths et al., 2018b).

While delegation deficiencies are often attributed to inadequate pre-registration and post-qualification training, delegation is a complex skill requiring critical thinking, prioritisation, and communication (Clarke, 2021). This highlights the need to re-evaluate current teaching approaches and explore how delegation skills are best developed. The five rights of delegation—right task, right circumstance, right person, right supervision, and right direction and communication—offer a structured approach for safe and effective delegation (American Nurses Association, 2012; Beckett et al., 2021). When applied effectively, these principles improve task allocation, enhance patient care delivery, reduce burnout among nursing staff and enable registered nurses to focus on complex responsibilities (Beckett et al., 2021). Successful implementation, however, requires clear role definitions, adequate training in delegation principles, and a supportive ward environment (Beckett et al., 2021; Wilson et al., 2023). Nurse leaders play an important role in fostering positive delegation practices by encouraging registered nurses to monitor tasks and provide backup support while empowering unlicensed assistive personnel to voice workload concerns and seek clarification (Goh et al., 2020). At the same time, unlicensed assistive personnel must be educated on the importance of patient safety and the risks associated with 'incorrectly' accepting delegated tasks beyond their competencies.

Effective communication is central to team coordination and collaborative teamwork. Echoing Palese et al. (2015), who identified communication tensions as a key predictor of missed nursing care in acute medical units, this review similarly highlights a lack of communication between registered nurses and unlicensed assistive personnel, contributing to conflicts, missed care, and reduced care quality. While communication strategies, such as the SBAR (Situation, Background, Assessment, Recommendation) framework, have been shown to enhance communication among nurses (Liaw et al., 2017; Wagner et al., 2018), effective teamwork requires more than communication skills alone. Additional components, including team leadership, collective orientation, mutual support, situation monitoring, and shared mental models, are equally vital for team coordination and collaboration (Chen et al., 2019; Salas et al., 2005). Despite the availability of teamwork tools for interprofessional team training, such as Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS) (Miller et al., 2018), there remain limited tools designed for intraprofessional nursing team training. Developing such frameworks can guide training interventions to improve communication, delegation, and team coordination between registered nurse unlicensed assistive personnel teams. Simulation-based training, widely regarded as a cornerstone of team training, offers experiential learning opportunities to practice communication, task delegation, and teamwork strategies in realistic scenarios (Liaw et al., 2017; Kalisch et al., 2015).

In this review, the exclusion of unlicensed assistive personnel from shift handover reports was identified as a barrier to establishing shared goals for patient care. Evidence suggests that not attending or receiving shift handovers may increase the risk of missed patient information, potentially hindering early detection of patient deterioration (Bakar et al., 2020; Chua et al., 2022; Smeulers and Vermeulen, 2016). Recognising these risks to patient safety, including unlicensed assistive personnel in shift report handovers should be considered as a standard practice within the nursing team (Howard and Becker, 2016; Glynn et al., 2017). Additionally, team-based huddles at the start of each shift could provide registered nurses and unlicensed assistive personnel opportunities to collaborate, discuss priorities, and align patient care goals (Chua et al., 2022). Such practice can foster a culture of teamwork and help both groups work toward shared goals for patient care.

The review also highlights the importance of trust and mutual respect in the relationships between registered nurse and unlicensed assistive personnel to support effective communication and team performance. However, power disparities arising from educational differences and social status can strain relationships and hinder collaboration (Chua et al., 2022; Limoges and Jagos, 2015). Nurse leaders are instrumental in modeling inclusive behaviors and valuing the contributions of unlicensed assistive personnel. Strategies to strengthen relationships include consistent team assignments for registered nurses and unlicensed assistive personnel (Campbell et al., 2020), team training on effective communication (Hong et al., 2023), and team-building activities (Wei et al., 2018), all of which can reinforce collaboration, improve communication, and enhance patient care outcomes.

4.1. Implications for practice and policies

Based on the findings of this scoping review, the following recommendations for practice and policies are proposed: (i) setting the scope of practice for unlicensed assistive personnel that aligns with their training and education to ensure clear task boundaries, (ii) creating effective communication processes by including unlicensed assistive personnel in shift handovers, team huddles, and task delegation processes (e.g. adopting the five rights of delegation as a standardised framework for effective delegation practices), (iii) implementing structured onboarding programs that clearly outline job descriptions, roles, and responsibilities for all nursing team members to promote mutual understanding, and (v) leadership must champion inclusive and collaborative ward cultures, fostering trust, respect and strong among nursing staff.

4.2. Recommendations for future research

Future studies must move beyond identifying teamwork challenges between registered nurses and unlicensed assistive personnel to designing and implementing interventions that improve role clarity, delegation practices, and teamwork outcomes. This includes examining and refining current teaching approaches for developing registered nurses' delegation skills and evaluating frameworks for intraprofessional team-based training models, incorporating simulation-based training. Future research could also examine optimising nursing team composition and configuration to enhance team performance and care quality.

4.3. Limitations

We acknowledge several limitations of the review. Although we attempted to compile a list of unlicensed assistive personnel nomenclature, our search strategy may not have captured all terms used globally. This could lead to the exclusion of a few relevant articles. However, given the breadth of our synthesis, any missed studies are unlikely to alter the overall findings substantially. Second, several included articles were published before 2000 and may not fully reflect current healthcare practices. Nevertheless, recent studies reported similar challenges, suggesting that issues related to teamwork between registered nurses and unlicensed assistive personnel remain relevant today. Third, limiting the review to English Language publications may have excluded evidence available from non-English sources. Lastly, this review focused on acute care settings, so the findings may not generalise to community or long-term care settings.

5. Conclusion

This scoping review provides an overview of the literature on teamwork between registered nurses and unlicensed assistive personnel by including a wide range of evidence, such as reports and opinion pieces. As such, we did not assess the methodological quality of the included articles. Despite this limitation, the consistency of reported challenges across articles highlights persistent issues related to role clarity, delegation, communication, and nursing team configuration. If the continued utilisation of unlicensed assistive personnel is anticipated in healthcare systems, it is essential to clearly define their roles, strengthen registered nurses' delegation competencies, enhance communication processes, and optimise nursing team structures. These priorities are critical for improving nursing team performance and care quality. Addressing these challenges requires a multi-pronged approach that integrates practice, policy, and research to establish structured frameworks, improve communication strategies, and promote positive ward cultures.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

CRediT authorship contribution statement

Kang Lynn Wong: Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Wei Ling Chua:** Writing – review & editing, Writing – original draft, Formal analysis, Data curation. **Peter Griffiths:** Writing – review & editing, Methodology. **Qin Ling Pearlyn Goh:** Writing – review & editing, Writing – original draft. **Kye Wern Chelsea Low:** Writing – review & editing, Data curation. **Jia Qi Apphia Tan:** Writing – review & editing, Writing – original draft, Formal analysis. **Sok Ying Liaw:** Writing – review & editing, Writing – original draft, Supervision, Methodology, Conceptualization.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Co-author, Peter Griffiths, is a consulting editor for the International Journal of Nursing Studies Advances and have advised on its launch and strategy.

Acknowledgements

We want to thank Toh Kim Kee, National University of Singapore (NUS) Libraries, for assistance in developing the search strategy.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.ijnsa.2025.100293.

References

Aiken, L.H., Clarke, S.P., Sloane, D.M., 2002. Hospital staffing, organization, and quality of care: cross-national findings. Nurs. Outlook 50 (5), 187–194.

Aiken, L.H., Sloane, D.M., Ball, J., Bruyneel, L., Rafferty, A.M., Griffiths, P., 2018. Patient satisfaction with hospital care and nurses in England: an observational study. BMJ open 8 (1), e019189.

American Nursing Association, 2012. ANA's Principles for Delegation by Registered Nurses to Unlicensed Assistive Personnel (UAP). American Nursing Association, Maryland, United States. Available at: https://www.nursingworld.org/~4af4f2/globalassets/docs/ana/ethics/principlesofdelegation.pdf. Accessed: 9 August 2023.

Anthony, M.K., Vidal, K., 2010. Mindful communication: a novel approach to improving delegation and increasing patient safety. Online J. Issues Nurs. 15 (2).

Apker, J., Propp, K.M., Zabava Ford, W.S., Hofmeister, N., 2006. Collaboration, credibility, compassion, and coordination: professional nurse communication skill sets in health care team interactions. J. Prof. Nurs. 22 (3), 180–189.

Arksey, H., O'Malley, L., 2005. Scoping studies: towards a methodological framework. Int. J. Soc. Res. Methodol. 8 (1), 19–32.

Bakar, N.A., Isahak, F.H., Saiful, F.M., Zolkefli, Y., 2020. Shift handover practices among nurses in medical wards: a qualitative interview study. Int. J. Care Schol. 3 (2), 41–49.

Bakht, K., Mir, S., Shah, S.A., 2024. Nursing teamwork: an in-depth concept analysis with walker & avant's framework. J. Health Rehab. Res 4 (2), 1500–1505.

Ball, J.E., Bruyneel, L., Aiken, L.H., Sermeus, W., Sloane, D.M., Rafferty, A.M., Lindqvist, R., Tishelman, C., Griffiths, P., RN4Cast Consortium., 2018. Post-operative mortality, missed care and nurse staffing in nine countries: a cross-sectional study. Int. J. Nurs. Stud 78, 10–15.

Ballangrud, R., Aase, K., Vifladt, A., 2020. Longitudinal team training programme in a norwegian surgical ward: a qualitative study of nurses' and physicians' experiences with teamwork skills. BMJ open 10 (7), e035432.

Beckett, C.D., Zadvinskis, I.M., Dean, J., Iseler, J., Powell, J.M., Buck-Maxwell, B., 2021. An integrative review of team nursing and delegation: implications for nurse sstaffing during COVID-19. Worldview. Evid.-Based Nurs 18 (4), 251–260.

Bellury, L., Hodges, H., Camp, A., Aduddell, K., 2016. Teamwork in acute care: perceptions of essential but unheard assistive personnel and the counterpoint of perceptions of registered nurses. Res. Nurs. Health 39 (5), 337–346.

Bittner, N.P., Gravlin, G., 2009. Critical thinking, delegation, and missed care in nursing practice. J. Nurs. Adm 39 (3), 142–146.

Blay, N., Roche, M.A., 2021. A systematic review of activities undertaken by the unregulated nursing assistant. J. Adv. Nurs 76 (7), 1538–1551.

Campbell, A.R., Layne, D., Scott, E., Wei, H., 2020. Interventions to promote teamwork, delegation and communication among registered nurses and nursing assistants: an integrative review. J. Nurs. Manag 28 (7), 1465–1472.

Cengiz, A., Yoder, L.H., Danesh, V., 2021. A concept analysis of role ambiguity experienced by hospital nurses providing bedside nursing care. Nurs. Health Sci 23 (4), 807–817.

Chaboyer, W., Harbeck, E., Lee, B.O., Grealish, L., 2021. Missed nursing care: an overview of reviews. Kaohsiung J. Med. Sci. 37 (2), 82–91.

Chen, A.S., Yau, B., Revere, L., Swails, J., 2019. Implementation, evaluation, and outcome of TeamSTEPPS in interprofessional education: a scoping review. J. Interprof. Care 33 (6), 795–804.

Cho, S.H., Lee, J.Y., You, S.J., Song, K.J., Hong, K.J., 2020. Nurse staffing, nurses prioritization, missed care, quality of nursing care, and nurse outcomes. Int. J. Nurs. Pract 26 (1), e12803.

Chua, W.L., Rahim, N.R.B.A., McKenna, L., Ho, J.T.Y., Liaw, S.Y., 2022. Intraprofessional collaboration between enrolled and registered nurses in the care of clinically deteriorating ward patients: a qualitative study. Austral. Critical care 35 (1), 81–88.

Clarke, H., 2021. How pre-registration nursing students acquire delegation skills: a systematic literature review. Nurse Educ. Today 106, 105096.

Cohen, J., 1960. A coefficient of agreement for nominal scales. Educ. Psychol. Meas 20, 37–46.

Conway, J., Kearin, M., 2007. The contribution of the patient support assistant to direct patient care: an exploration of nursing and PSA role perceptions. Contemp. Nurse 24 (2), 175–188.

Costello, M., 2010. Changing handoffs: the shift is on. Nurs. Manage 41 (10), 38–42.

Crevacore, C., Coventry, L., Duffield, C., Jacob, E., 2022. Factors impacting delegation decision making by registered nurses to assistants in nursing in the acute care setting: a mixed method study. Int. J. Nurs. Stud 136, 104366.

Crevacore, C., Jacob, E., Coventry, L.L., Duffield, C., 2023. Integrative review: factors impacting effective delegation practices by registered nurses to assistants in nursing. J. Adv. Nurs 79 (3), 885–895.

Crevacore, C., Coventry, L., Duffield, C., Jacob, E., 2024. Factors impacting nursing assistants to accept a delegation in the acute care settings: a mixed method study. J. Clin. Nurs 33 (6), 2153–2164.

Dahlke, S., Baumbusch, J., 2015. Nursing teams caring for hospitalised older adults. J. Clin. Nurs 24 (21–22), 3177–3185.

Dall'Ora, C., Ball, J., Reinius, M., Griffiths, P., 2020. Burnout in nursing: a theoretical review. Hum. Resour. Health 18 (1), 41.

Department of Health Western Australia, 2022. Assistant in Nursing Duties (nursing setting). Department of Health, Western Australia, Western Australia, Australia. Available at: https://www.health.wa.gov.au/~/media/Corp/Policy-Frameworks/Clinical-Governance-Safety-and-Quality/Assistant-in-Nursing-Policy/Supporting/Assistant-in-Nursing-Duties-Nursing-setting.pdf. Accessed: 26 December 2024.

DiGerolamo, K.A., Chen-Lim, M.L., 2021. An educational intervention to improve staff collaboration and enhance knowledge of fall risk factors and prevention guidelines. J. Pediatr. Nurs 57, 43–49.

Duffield, C., Twigg, D., Roche, M., Williams, A., Wise, S., 2019. Uncovering the disconnect between nursing workforce policy intentions, implementation, and outcomes: lessons learned from the addition of a nursing assistant role. Policy Polit. Nurs. Pract 20 (4), 228–238.

Dykes, P.C., Carroll, D.L., Hurley, A.C., Benoit, A., Middleton, B., 2009. Why do patients in acute care hospitals fall? Can falls be prevented? J. Nurs. Adm 39 (6), 299–304.

Glynn, D.M., Saint-Aine, R., Gosselin, M.A., Quan, S., Chute, J., 2017. The role of unlicensed assistive personnel in patient handoff. Nursing (Brux) 47 (3), 57–60.

Goh, P.Q.L., Ser, T.F., Cooper, S., Cheng, L.J., Liaw, S.Y., 2020. Nursing teamwork in general ward settings: a mixed-methods exploratory study among enrolled and registered nurses. J. Clin. Nurs 29 (19–20), 3802–3811.

Graham, F., Eaton, E., Jeffrey, C., Secher-Jorgensen, H., Henderson, A., 2021. "Specialling" and "Sitters": what does communication between registered nurses and unregulated workers reveal about care? Collegian 28 (5), 482–488.

Gravlin, G., Bittner, N.P., 2010. Nurses' and nursing assistants' reports of missed care and delegation. J. Nurs. Adm 40 (7–8), 329–335.

Griffiths, P., Recio-Saucedo, A., Dall'Ora, C., Briggs, J., Maruotti, A., Meredith, P., Smith, G.B., Ball, J., Missed Care Study Group, 2018a. The association between nurse staffing and omissions in nursing care: a systematic review. J. Adv. Nurs 74 (7), 1474–1487.

Griffiths, P., Maruotti, A., Recio Saucedo, A., Redfern, O.C., Ball, J.E., Briggs, J., Dall'Ora, C., Schmidt, P.E., Smith, G.B., Missed Care Study Group, 2019. Nurse staffing, nursing assistants and hospital mortality: retrospective longitudinal cohort study. BMJ Qual. Saf 28 (8), 609–617.

Griffiths, P., Ball, J., Bloor, K., Böhning, D., Briggs, J., Dall'Ora, C., Iongh, A.D., Jones, J., Kovacs, C., Maruotti, A., Meredith, P., Prytherch, D., Saucedo, A.R., Redfern, O., Schmidt, P., Sinden, N., Smith, G., 2018b. Nurse staffing levels, missed vital signs and mortality in hospitals: retrospective longitudinal observational study. NIHR J. Library 38 (6).

Hayes, P.M., 1994. Team building. Nurs. Manag. 25 (5), 52–54.

Hong, J.Q.Y., Chua, W.L., Smith, D., Huang, C.M., Goh, Q.L.P., Liaw, S.Y., 2023. Collaborative practice among general ward staff on escalating care in clinical deterioration: a systematic review. J. Clin. Nurs 32 (17–18), 6165–6178.

Howard, K.P., Becker, C.A., 2016. Moving change-of-shift report to the bedside for UAP. Nursing (Brux) 46 (4), 14–16.

International Council of Nurses, 2021. ICN policy brief – the global nursing shortage and nurse retention. Available at: https://www.icn.ch/sites/default/files/2023-04/ICN%20Policy%20Brief_Nurse%20Shortage%20and%20Retention.pdf (Accessed: 1 December 2022).

International Council of Nurses, 2024. ICN Annual report 2023. International Council of Nurses, Geneva, Switzerland. Available at: https://www.icn.ch/sites/default/files/2024-05/WEB-HD-ICN-RA-2023-ANGLAIS_FINAL.pdf. Accessed: 20 Decemeber 2024.

Jackson, J., Gadimova, F., Epko, S., 2024. A nurse by any other name? An international comparison of nomenclature and regulation of healthcare assistants. Int. J. Nurs. Stud. Adv. 6, 100200.
Johnson, M., Magnusson, C., Allan, H., Evans, K., Ball, E., Horton, K., Curtis, K., Westwood, S., 2015. Doing the writing' and 'working in parallel': how 'distal nursing' affects delegation and supervision in the emerging role of the newly qualified nurse. Nurse Educ. Today 35 (2), e29–e33.
Kalisch, B.J., 2006. Missed nursing care: a qualitative study. J. Nurs. Care Qual 21 (4), 306–313.
Kalisch, B.J., 2009. Nurse and nurse assistant perceptions of missed nursing care: what does it tell us about teamwork? J. Nurs. Adm 39 (11), 485–493.
Kalisch, B.J., 2011. The impact of RN-UAP relationships on quality and safety. Nurs. Manage 42 (9), 16–22.
Kalisch, B.J., Aebersold, M., 2006. Overcoming barriers to patient safety. Nurs. Econ 24 (3), 143–148.
Kalisch, B.J., Aebersold, M., McLaughlin, M., Tschannen, D., Lane, S., 2015. An intervention to improve nursing teamwork using virtual simulation. West J. Nurs. Res 37 (2), 164–179.
Kalisch, B.J., Landstrom, G.L., Hinshaw, A.S., 2009. Missed nursing care: a concept analysis. J. Adv. Nurs 65 (7), 1509–1517.
Kalisch, B., Schoville, R., 2012. It takes a team. Am. J. Nurs 112 (10), 50–54.
Kroezen, M., Schäfer, W., Sermeus, W., Hansen, J., Batenburg, R., 2018. Healthcare assistants in EU member states: an overview. Health Policy (New York) 122 (10), 1109–1117.
Lancaster, G., Kolakowsky-Hayner, S., Kovacich, J., Greer-Williams, N., 2015. Interdisciplinary communication and collaboration among physicians, nurses, and unlicensed assistive personnel. J. Nurs. Scholarsh 47 (3), 275–284.
Liaw, S.Y., Chng, D.Y.J., Wong, L.F., Ho, J.T.Y., Mordiffi, S.Z., Cooper, S., Chua, W.L., Ang, E.N.K., 2017. The impact of a web-based educational program on the recognition and management of deteriorating patients. J. Clin. Nurs 26 (23–24), 4848–4856.
Limoges, J., Jagos, K., 2015. The influences of nursing education on the socialization and professional working relationships of Canadian practical and degree nursing students: a critical analysis. Nurse Educ. Today 35 (10), 1023–1027.
Marshall, M., 2006. The use of unlicensed personnel: their impact upon professional nurses, patients and the management of nursing services. Nurs. Monogr 4.
McHugh, M.L., 2012. Interrater reliability: the kappa statistic. Biochem. Med. (Zagreb) 22, 276–282.
McLaney, E., Morassaei, S., Hughes, L., Davies, R., Campbell, M., Di Prospero, L., 2022. A framework for interprofessional team collaboration in a hospital setting: advancing team competencies and behaviours. Healthcare Manag. forum 35 (2), 112–117.
Miller, C.J., Kim, B., Silverman, A., Bauer, M.S., 2018. A systematic review of team-building interventions in non-acute healthcare settings. BMC Health Serv. Res 18 (1), 146.
Moore, J., Prentice, D., Crawford, J., Lankshear, S., Limoges, J., Rhodes, K., 2019. Collaboration among registered nurses and practical nurses in acute care hospitals: a scoping review. Nurs. Forum 54 (3), 376–385.
Mueller, C., Vogelsmeier, A., 2013. Effective delegation: urstanding responsibility, authority, and accountability. J. Nurs. Regul 4 (3), 20–27.
New South Wales Health, 2019. Assisstants in Nursing Working in the Acute Care Environment – Health Service Implementation Package (Revised Edition). New South Wales Ministry of Health, New South Wales, Australia. Available at: https://www.health.nsw.gov.au/workforce/Publications/ain-acute-care.pdf. Accessed: 26 December 2024.
Page, M.J., McKenzie, J.E., Bossuyt, P.M., Boutron, I., Hoffmann, T.C., Mulrow, C.D., Shamseer, L., Tetzlaff, J.M., Akl, E.A., Brennan, S.E., Chou, R., Glanville, J., Grimshaw, J.M., Hróbjartsson, A., Lalu, M.M., Li, T., Loder, E.W., Mayo-Wilson, E., McDonald, S., McGuinness, L.A., Stewart, L.A., Thomas, J., Tricco, A.C., Welch, V.A., Whiting, P., Moher, D., 2021. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 372, n71.
Palese, A., Ambrosi, E., Prosperi, L., Guarnier, A., Barelli, P., Zambiasi, P., Allegrini, E., Bazoli, L., Casson, P., Marin, M., Padovan, M., Picogna, M., Taddia, P., Salmaso, D., Chiari, P., Marognolli, O., Canzan, F., Gonella, S., Saiani, L., 2015. Missed nursing care and predicting factors in the Italian medical care setting. Intern. Emerg. Med 10 (6), 693–702.
Peters, M.D.J., Godfrey, C., McInerney, P., Khalil, H., Larsen, P., Marnie, C., Pollock, D., Tricco, A.C., Munn, Z., 2022. Best practice guidance and reporting items for the development of scoping review protocols. JBI Evid. Synth 20 (4), 953–968.
Pluye, P., Hong, Q.N., 2014. Combining the power of stories and the power of numbers: mixed methods research and mixed studies reviews. Annu. Rev. Public Health 35 (1), 29–45.
Potter, P., Grant, E., 2004. Understanding RN and unlicensed assistive personnel working relationships in designing care delivery strategies. J. Nurs. Adm 34 (1), 19–25.
Potter, P., Deshields, T., Kuhrik, M., 2010. Delegation practices between registered nurses and nursing assistive personnel. J. Nurs. Manag 18 (2), 157–165.
Recio-Saucedo, A., Dall'Ora, C., Maruotti, A., Ball, J., Briggs, J., Meredith, P., Redfern, O.C., Kovacs, C., Prytherch, D., Smith, G.B., Griffiths, P., 2018. What impact does nursing care left undone have on patient outcomes? Review of the literature. J. Clin. Nurs 27 (11–12), 2248–2259.
Relias Media, 2022. Worklist Project Improves Communication and Handoffs. Healthcare Risk Management. Available at: https://www.reliasmedia.com/articles/149239-worklist-project-improves-communication-and-handoffs. Accessed: 1 December 2022.
Rosen, M.A., DiazGranados, D., Dietz, A.S., Benishek, L.E., Thompson, D., Pronovost, P.J., Weaver, S.J., 2018. Teamwork in healthcare: key discoveries enabling safer, high-quality care. Am. Psychol. 73 (4), 433–450.
Royal College of Nursing, 2023. Impact of Staffing Levels On Safe and Effective Patient care: Literature Review. Royal Colleague of Nursing, London, United Kingdom. Available at: https://www.rcn.org.uk/Professional-Development/publications/impact-of-staffing-levels-on-safe-and-effective-patient-care-uk-pub-010-665. Accessed: 20 December 2024.
Salas, E., Sims, D.E., Burkee, C.S., 2005. Is there a "big five" in teamwork? Small Group Res 36 (5), 555–599.
Shah, M.K., Gandrakota, N., Cimiotti, J.P., Ghose, N., Moore, M., Ali, M.K., 2021. Prevalence of and factors associated with nurse burnout in the US. JAMA Networ. Open 4 (2), e2036469.
Shearer, T., 2013. Getting the mix right: assistants in nursing and skill mix. Aust. Nurs. Midwifery J 21 (5), 24–27 no. 5.
Shore, C.B., Maben, J., Mold, F., Winkley, K., Cook, A., Stenner, K., 2022. Delegation of medication administration from registered nurses to non-registered support workers in community care settings: a systematic review with critical interpretive synthesis. Int. J. Nurs. Stud 126, 104121.
Smeulers, M., Vermeulen, H., 2016. Best of both worlds: combining evidence with local context to develop a nursing shift handover blueprint. Int. J. Qual. Heal. Care 28 (6), 749–757.
Spilsbury, K., Meyer, J., 2004. Use, misuse and non-use of health care assistants: understanding the work of health care assistants in a hospital setting. J. Nurs. Manag 12 (6), 411–418.
Spilsbury, K., Meyer, J., 2005. Making claims on nursing work. J. Res. Nurs 10 (1), 65–83.
Standing, T., Anthony, M.K., 2008. Delegation: what it means to acute care nurses. Appl. Nurs. Res 21 (1), 8–14.
Thomas, J., Harden, A., 2008. Methods for the thematic synthesis of qualitative research in systematic reviews. BMC Med. Res. Methodol 8, 45.
Tourangeau, A.E., White, P., Scott, J., McAllister, M., Giles, L., 1999. Evaluation of a partnership model of care delivery involving registered nurses and unlicensed assistive personnel. Can. J. Nurs. Leadersh 12 (2), 4–20.
Tricco, A.C., Lillie, E., Zarin, W., O'Brien, K.K., Colquhoun, H., Levac, D., Moher, D., Peters, M.D.J., Horsley, T., Weeks, L., Hempel, S., Akl, E.A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M.G., Garritty, C., Lewin, S., Godfrey, C.M., Macdonald, M.T., Langlois, E.V., Soares-Weiser, K., Moriarty, J., Clifford, T., Tunçalp, Ö., Straus, S.E., 2018. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. Ann. Intern. Med. 169 (7), 467–473.
Twigg, D.E., Myers, H., Duffield, C., Pugh, J.D., Gelder, L., Roche, M., 2016. The impact of adding assistants in nursing to acute care hospital ward nurse staffing on adverse patient outcomes: an analysis of administrative health data. Int. J. Nurs. Stud 63, 189–200.
VanCura, B.J., Gunchick, D., 1997. Five key components for effectively working with unlicensed assistive personnel. Medsurg. Nurs 6 (5), 270–274.
Wagner, E.A., 2018. Improving patient care outcomes through better delegation-communication between nurses and assistive personnel. J. Nurs. Care Qual 33 (2), 187–193.

Walker, F.A., Ball, M., Cleary, S., Pisani, H., 2021. Transparent teamwork: the practice of supervision and delegation within the multi-tiered nursing team. Nurs. Inq 28 (4), e12413.
Walton, J.C., Waszkiewicz, M., 1997. Managing unlicensed assistive personnel: tips for improving quality outcomes. Medsurg. Nursing 6 (1), 24–28.
Wei, H., Sewell, K.A., Woody, G., Rose, M.A., 2018. The state of the science of nurse work environments in the United States: a systematic review. Int. J. Nurs. Sci 5 (3), 287–300.
Weller, J., Boyd, M., Cumin, D., 2014. Teams, tribes and patient safety: overcoming barriers to effective teamwork in healthcare. Postgrad. Med. J 90 (1061), 149–154.
Weydt, A., 2010. Developing delegation skills. Online J. Issues Nurs 15 (2).
Willis, E., Brady, C., 2022. The impact of "missed nursing care" or "care not done" on adults in health care: a rapid review for the consensus development project. Nurs. open 9 (2), 862–871.
Wilson, N.J., Pracilio, A., Morphet, J., Kersten, M., Buckley, T., Trollor, J.N., Cashin, A., 2023. A scoping review of registered nurses' delegating care and support to unlicenced care and support workers. J. Clin. Nurs 32 (17–18), 6000–6011.