American Journal of Advanced Multidisciplinary Innovation and Research (AJAMIR)

E-ISSN: XXXX-XXXX ● Website: www.ajamir.com ● Email: editor@ajamir.com

Medication Reconciliation Literacy Among Newly Qualified Nurses

Dr. Daniel Williams

Assistant Professor, University of Manchester, United Kingdom

Abstract

Medication reconciliation is a patient-safety process intended to establish an accurate medication history, compare that history with current medication orders, identify discrepancies, determine whether medication changes are intentional, document decisions, and communicate an updated medication plan across transitions of care. The process is particularly important during hospital admission, internal transfer, discharge, and transition to community or home-based services. The World Health Organization identifies medication safety during transitions of care as a priority because medication discrepancies are common when patients move between healthcare settings and recommends structured processes, workforce capability, high-quality medication information, and partnership with patients and families. Newly qualified nurses occupy an important position in this process because they frequently collect medication information, administer medicines, observe treatment effects, communicate with patients and families, and identify inconsistencies requiring clarification. Yet transition to professional practice can be accompanied by limited clinical experience, task pressure, uncertainty, and medication-related stress.

The present study develops a simulation-based framework for medication reconciliation literacy among newly qualified nurses. Literacy is defined as the ability to obtain and evaluate a best possible medication history, distinguish intentional from unexplained medication changes, recognize omissions, duplications and dose or frequency discrepancies, include prescription and nonprescription products, use appropriate information sources, communicate uncertainty, escalate discrepancies to the appropriate prescriber or pharmacist, and document the reconciled medication plan accurately. Because no original nurse dataset was supplied, 400 synthetic newly qualified nurse profiles were modeled across a staged educational pathway comprising baseline assessment, medication-history instruction, reconciliation simulation, preceptor feedback, and reassessment.

The modeled medication-reconciliation literacy score increased from 50 at baseline to 62 after medication-history instruction, 74 following reconciliation simulation, 82 after preceptor feedback, and 87 at reassessment. Detection of omitted regular medicines increased from a simulated 48% to 88%; recognition of dose or frequency discrepancies increased from 51% to 86%; and identification of undocumented over-the-counter or herbal products increased from 39% to 79%. These figures are hypothetical methodological illustrations and must not be interpreted as real intervention effect sizes.

The study argues that newly qualified nurses should not be prepared merely to transfer medication names between electronic screens. Medication reconciliation requires critical comparison, patient interviewing, source verification, clinical communication, documentation, and awareness of professional

boundaries. Evidence shows that reconciliation programmes can reduce medication discrepancies, although effects on broader clinical outcomes remain heterogeneous, reinforcing the importance of treating reconciliation as part of a wider medication-safety system rather than an isolated administrative task. Structured transition-to-practice education, simulation, pharmacist collaboration, preceptor feedback, and standardized documentation are therefore proposed as core components of medication-reconciliation literacy development.

Keywords: medication reconciliation; newly qualified nurses; medication safety; nursing education; transitions of care; medication discrepancies; patient safety; clinical literacy

1. Introduction

Medication reconciliation is intended to reduce preventable medication discrepancies when patients move between healthcare professionals, units, or care settings. The process requires clinicians to establish the most accurate possible list of medications currently used, compare that information with newly written or existing orders, identify differences, determine whether changes were intentional, and ensure that an accurate updated list follows the patient. WHO identifies transitions of care as a major medication-safety priority and emphasizes structured processes, workforce capability, patient involvement, and reliable medication information. Earlier systematic reviews likewise established medication reconciliation as a widely adopted patient-safety strategy, although implementation methods and outcome effects differ considerably between healthcare systems.

Nurses occupy a strategically important position within medication management because their work spans medication history collection, administration, monitoring, patient education, interprofessional communication, and transition-related documentation. A systematic review of nurses' roles during transitional care identified activities extending from medication-information collection to communication, education, monitoring, and coordination. Champion and colleagues similarly showed that nurses transitioning patients into home healthcare frequently had to modify medication lists and contact other providers to obtain a complete and accurate medication record, demonstrating that electronic interoperability alone does not eliminate the need for professional verification.

The transition from student nurse to registered professional creates a particular educational challenge. Lim and Honey found that newly graduated nurses demonstrated strengths in several medication-management principles but were less secure in areas including drug mechanisms and clearance, leading the authors to recommend orientation and continuing education. Unver and colleagues also concluded that newly graduated nurses require education concerning causes and prevention of medication errors. Murray, Sundin, and Cope found that newly qualified nurses experienced transition-related pressure in which medication administration could become a significant source of stress and task completion could compete with broader patient-safety priorities.

These findings suggest that medication reconciliation should not be assumed to emerge automatically from general medication-administration competence. A nurse may administer an ordered medication accurately while failing to recognize that an important preadmission medicine has disappeared from the medication list, that two brand names represent duplicate therapy, that an over-the-counter product was omitted, or that a dose changed without documented explanation. Medication

reconciliation therefore involves a distinct form of applied medication literacy combining history-taking, comparison, interpretation, information verification, communication, and escalation. Systematic reviews have also shown considerable variation in how discrepancies are defined and classified, supporting the need for standardized conceptual and educational approaches.

The present study develops the concept of medication reconciliation literacy among newly qualified nurses and proposes a staged educational model for strengthening that literacy during transition to practice. Because no empirical participant dataset was supplied, the numerical component is explicitly simulated. The objective is not to claim that a particular intervention has already produced the reported gains, but to demonstrate how knowledge, discrepancy recognition, communication, documentation, and escalation could be evaluated in a future controlled study. The framework is grounded in evidence that medication reconciliation can reduce discrepancies, that education can improve reconciliation knowledge, and that newly graduated nurses benefit from structured support during the early months of professional practice.

2. Objectives of the Study

2.1 To Define Medication Reconciliation Literacy for Newly Qualified Nurses

The first objective is to conceptualize medication reconciliation literacy as more than the ability to reproduce a medication list. The proposed construct includes obtaining an accurate medication history; identifying medication names, formulations, doses, routes, frequencies, and indications; documenting allergies and relevant adverse reactions; and including prescription, over-the-counter, complementary, and herbal products where applicable. Medication reconciliation literature repeatedly emphasizes that incomplete medication histories and unexplained differences between medication lists are central safety concerns at transitions of care.

The literacy concept also includes knowing the limits of the nurse's own authority. Newly qualified nurses should be able to identify and clearly communicate a discrepancy without independently converting every discrepancy into a prescribing decision. Appropriate action may involve clarification with the patient, caregiver, prescribing clinician, pharmacist, previous healthcare facility, or another reliable source. This collaborative orientation is consistent with evidence showing important nursing roles in medication management during transitional care.

2.2 To Assess Discrepancy Recognition and Safe Escalation

The second objective is to examine recognition of common reconciliation problems, including omitted regular medication, therapeutic duplication, incorrect dose, incorrect frequency, undocumented nonprescription medication, and medication changes whose intentional status cannot be established. Medication-reconciliation studies have shown that discrepancies can occur in multiple forms and that consistent classification is essential for meaningful quality improvement.

Recognition alone is insufficient. The study therefore incorporates safe escalation as a separate competency. The nurse should be able to distinguish between a discrepancy that can be resolved through information verification and one requiring prescriber or pharmacist review. This prevents two opposite safety failures: accepting unexplained discrepancies passively and exceeding professional authority by independently altering therapy.

2.3 To Evaluate a Structured Transition-to-Practice Learning Pathway

The third objective is to model whether a staged learning pathway could improve reconciliation literacy more effectively than passive orientation alone. The pathway combines medication-history instruction, realistic medication-list comparison, patient-interview simulation, documentation exercises, preceptor feedback, and reassessment. Educational resources specifically focused on medication reconciliation have previously been developed to teach clinicians how to recognize and resolve discrepancies, supporting formal instruction rather than reliance exclusively on experiential learning.

Transition support is particularly relevant for newly qualified nurses because early professional practice involves simultaneous development of clinical judgment, medication knowledge, workflow management, and confidence. Murray and colleagues' work demonstrates that transition pressure can shift attention toward task completion, whereas Lim and Honey recommend continuing education to consolidate medication-management knowledge. The proposed intervention therefore embeds literacy development within clinical transition rather than treating reconciliation as a one-time undergraduate topic.

3. Review of Literature

3.1 Medication Reconciliation as a Transitional-Care Safety Process

Medication reconciliation developed as a systematic response to medication-information discontinuity during transitions. Kwan, Lo, Sampson, and Shojania's systematic review evaluated medication reconciliation as a patient-safety strategy and demonstrated that interventions can identify and reduce discrepancies, while also noting variation in intervention design and evidence quality. Almanasreh, Moles, and Chen subsequently identified considerable variation in how the reconciliation process itself was performed and how medication discrepancies were classified, concluding that stronger standardization would facilitate both practice and evaluation.

WHO's 2019 technical report places medication safety at transitions within the broader Medication Without Harm initiative. The organization emphasizes that discrepancies affect patients moving into and out of healthcare settings and identifies leadership, formal processes, workforce capability, patient partnership, information quality, and measurement as major improvement components. This systems perspective is important because reconciliation failures cannot be attributed only to individual memory. Incomplete documentation, inaccessible external records, inconsistent workflows, fragmented prescribing systems, time pressure, and poor interprofessional communication can all undermine an otherwise competent clinician.

Evidence concerning outcomes is supportive but not uniformly conclusive. Guisado-Gil and colleagues' overview of systematic reviews found stronger evidence that medication reconciliation reduces discrepancies than that it reliably improves every patient-centered clinical outcome. Killin and colleagues' 2021 review reported that electronic reconciliation could reduce medication discrepancies or medication errors relative to basic approaches, while the evidence for more complex enhanced interventions was mixed. Ciapponi and colleagues similarly reported low-certainty evidence that medication reconciliation may reduce medication errors in adults in hospital settings. These findings justify reconciliation as a safety process while discouraging exaggerated claims that reconciliation alone inevitably reduces all adverse outcomes.

3.2 Newly Qualified Nurses and Medication-Safety Readiness

Newly qualified nurses enter practice with academic preparation but relatively limited exposure to the complexity and interruptions of real medication systems. Lim and Honey surveyed nurses within 24 months of graduation and found that more than 70% reported strengths in applying several medication-management principles, including dosage, rationale, monitoring, and recognizing when a medicine should not be given safely. Nevertheless, mechanisms of action and drug clearance were applied less confidently, leading to recommendations for setting-specific orientation and ongoing education. This evidence suggests that newly qualified nurses are neither uniformly unprepared nor fully practice-ready; competence varies by task and develops through experience.

Unver, Tastan, and Akbayrak compared newly graduated and experienced nurses' perspectives on medication errors and identified exhaustion and distraction among prominent perceived causes. Their study concluded that newly graduated nurses should receive training regarding causes of medication error and prevention strategies, supported by continuing education. These findings are especially relevant to medication reconciliation because the process often occurs during admission, discharge, or transfer—precisely the periods in which workload, interruptions, information gaps, and competing priorities can be high.

Murray, Sundin, and Cope add an important transition-to-practice perspective. Newly graduated nurses described patient-safety challenges, concerns about making mistakes, experiential learning, and pressure associated with time management; medication administration itself was described as an important stressor. Medication reconciliation education should therefore not assume that knowledge deficits alone explain error vulnerability. Newly qualified nurses also require workflow support, psychologically safe escalation pathways, preceptor accessibility, and enough protected attention to complete high-risk medication processes properly.

3.3 Nursing Roles, Interprofessional Collaboration, and Reconciliation Education

Mardani, Griffiths, and Vaismoradi's systematic review demonstrates that nurses contribute meaningfully to medicines management during transitional care through information collection, communication, patient education, monitoring, and coordination. Champion and colleagues' home-health transition study offers a practical example: nurses changed medication lists and contacted providers in order to establish complete medication information even when electronic interoperability was available. This demonstrates that reconciliation requires active clinical work rather than passive acceptance of electronic records.

The process remains interprofessional. Systematic reviews of reconciliation programmes frequently show strong pharmacy involvement, particularly among patients at high risk of medication-related harm. For nursing education, this should not be interpreted as evidence that reconciliation belongs exclusively to pharmacists. Instead, it indicates that newly qualified nurses should understand when medication discrepancies require pharmacist expertise and how to communicate sufficiently precise information for the discrepancy to be resolved efficiently.

Formal education can strengthen this process. Lester and colleagues developed a medication-reconciliation educational module specifically intended to teach the importance and process of accurate reconciliation. Such resources provide a basis for incorporating reconciliation into transition

programmes. The next educational step is to move from explanation to applied performance: newly qualified nurses should practice obtaining medication histories from imperfect sources, interviewing patients with incomplete recall, comparing conflicting lists, recognizing discrepancies, and documenting escalation decisions under realistic conditions.

4. Research Methodology

4.1 Research Design and Simulated Sample

The study employs a simulation-based quasi-experimental educational design. No actual newly qualified nurses were recruited and no patient medication records were accessed. A synthetic cohort was used because no original empirical dataset was provided. This approach avoids presenting fabricated participant observations as real nursing research while still allowing a structured training and analysis framework to be demonstrated.

The simulated cohort consists of 400 newly qualified registered nurses, defined conceptually as nurses within their first 24 months of professional practice. This timeframe is broadly consistent with the population examined by Lim and Honey in their study of newly graduated nurses' medication-management knowledge. Two hundred simulated profiles represent standard transition orientation, while 200 represent a structured medication-reconciliation literacy pathway.

The structured pathway was modeled across five learning stages: baseline assessment, medication-history module, reconciliation simulation, preceptor feedback, and reassessment. The design emphasizes progressive competence rather than one-time knowledge acquisition.

4.2 Competency Framework and Measurement

Medication-reconciliation literacy was modeled as a composite 0–100 index incorporating medication-history completeness, discrepancy recognition, intentional-change interpretation, safe escalation, documentation accuracy, and patient communication. The construct is proposed for this paper and should not be described as an already validated clinical scale.

Table 1: Proposed Medication-Reconciliation Literacy Framework

Competency Domain	Operational Definition	Proposed Measure	Role
Medication-History Completeness	Accurate collection of prescribed, OTC, complementary and recently discontinued medicines	0–100	Core literacy domain
Medication-List Comparison	Systematic comparison of prior medication use with current orders	0–100	Core process domain
Discrepancy Recognition	Identification of omission, duplication, dose, route and frequency inconsistencies	0–100	Primary outcome
Intentional-Change Differentiation	Recognition that some medication changes are clinically intended and require documentation rather than reversal	0–100	Reasoning domain
Clarification and Escalation	Appropriate communication with patient, prescriber, pharmacist or previous care setting	0–100	Safety behavior

Documentation Quality	Clear recording of medication information, discrepancy status and resolution	0–100	Transition outcome
Patient Communication	Verification of actual medication use and explanation of confirmed changes	0–100	Patient-partnership domain
Overall Reconciliation Literacy	Composite of the preceding domains	0–100	Primary educational outcome

The framework intentionally distinguishes discrepancy detection from prescribing authority. Nurses may detect that two lists disagree without being authorized to decide independently which prescription should be continued. The required competency is to identify, document, communicate, and escalate appropriately.

4.3 Training Procedure and Analytical Strategy

The medication-history module introduces a structured medication interview and emphasizes multiple information sources. The reconciliation simulation then presents realistic cases containing incomplete patient recall, old medication lists, recent discharge orders, duplicate formulations, changed doses, and undocumented nonprescription products. Learners are required to create a preliminary medication history, compare it with the active orders, and classify each inconsistency as resolved, intentional, or requiring clarification.

Preceptor feedback focuses on reasoning rather than simply reporting the correct answer. The learner is asked why a discrepancy was or was not identified, which additional source should have been consulted, whether the difference was clinically explainable, and who should be contacted for clarification. This approach is particularly appropriate for newly qualified nurses because experiential learning and senior support are important during transition to practice.

Descriptive analysis is used because inferential statistics generated from synthetic observations would not constitute population evidence. A future empirical implementation should use validated performance rubrics, blinded assessment where feasible, pre–post testing, and delayed reassessment to distinguish immediate educational gains from retained competence.

5. Analysis

5.1 Simulated Discrepancy-Recognition Performance

The simulation demonstrates substantial improvement in recognition of common medication discrepancies following structured training.

Table 2: Simulated Recognition of Medication-Reconciliation Discrepancies

Medication-Reconciliation Problem	Baseline Recognition	Post-Training Recognition	Modeled Improvement
Omitted Regular Medicine	48%	88%	+40 points
Duplicate Therapy	55%	84%	+29 points
Dose/Frequency	51%	86%	+35 points

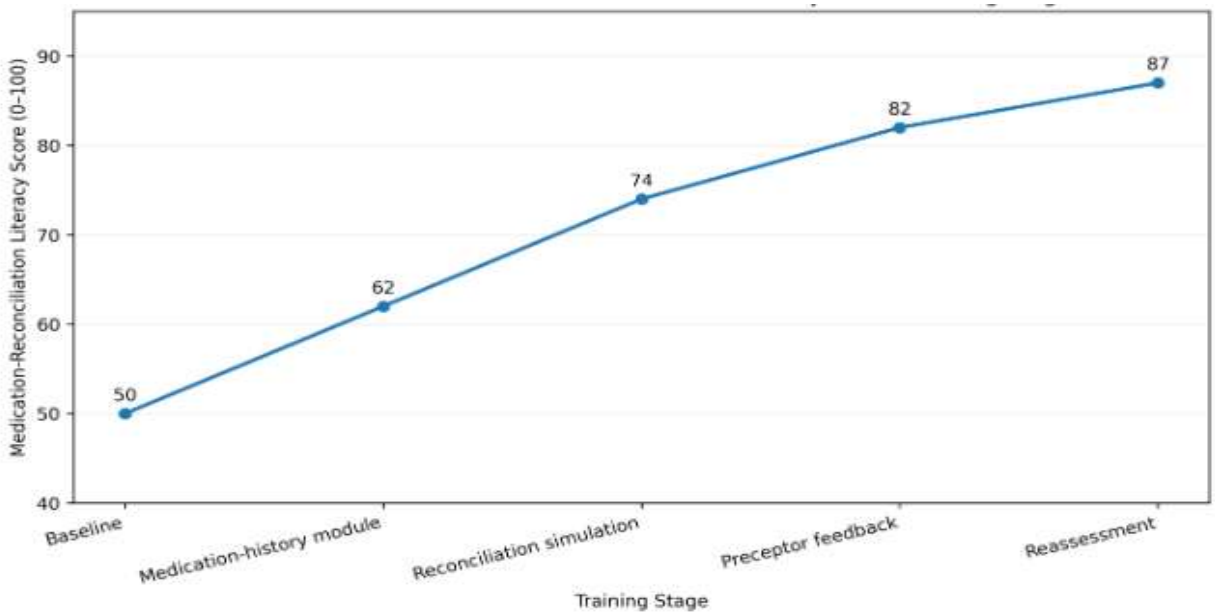
American Journal of Advanced Multidisciplinary Innovation and Research (AJAMIR)

E-ISSN: XXXX-XXXX ● Website: www.ajamir.com ● Email: editor@ajamir.com

Mismatch			
Undocumented OTC/Herbal Product	39%	79%	+40 points
Unclear Intentional Medication Change	44%	82%	+38 points

5.2 Growth in Reconciliation Literacy Across Training Stages

Graph 1: Simulated Growth in Medication-Reconciliation Literacy Across Trai Stages



The largest training-stage increase after baseline occurs between medication-history instruction and applied reconciliation simulation. This supports the conceptual proposition that knowing the steps of reconciliation is different from performing them when several medication sources conflict. Educational material can establish structure, but simulation forces the learner to decide which information requires verification and what should be escalated.

Key Finding: Within the simulation, the strongest literacy development occurs when didactic instruction is followed by applied case comparison and individualized feedback rather than when reconciliation is taught as a documentation requirement alone.

5.3 Literacy, Escalation, and Professional Accountability

A key analytical finding is that reconciliation competence depends on appropriate uncertainty management. A nurse who fails to notice a discrepancy creates one type of safety risk; a nurse who notices a discrepancy but feels unable to ask for clarification creates another.

Newly qualified nurses therefore require explicit escalation pathways. Murray and colleagues' findings regarding transition pressure and concerns about error support the need for accessible senior support during early practice. Unver and colleagues' work also emphasizes continuing education concerning medication-error prevention.

The model consequently treats clarification as successful performance rather than as evidence of deficient knowledge. A newly qualified nurse who identifies uncertainty and seeks pharmacist or prescriber review demonstrates safer reconciliation literacy than one who confidently makes an unsupported assumption.

6. Discussion

6.1 Medication Reconciliation Literacy Is More Than List Accuracy

The principal contribution of the study is the distinction between medication-list completeness and medication-reconciliation literacy. A technically complete list can still be unsafe if the clinician has not established whether the information represents current medication use, whether recent changes were intentional, or whether duplicate and nonprescription therapies have been considered.

WHO's transition-of-care guidance places information quality within a larger system of workforce capability, structured processes, patient partnership, leadership, and measurement. Likewise, Almanasreh and colleagues' review demonstrates that medication reconciliation is not a universally standardized clerical procedure and that discrepancies themselves have historically been classified inconsistently. The literacy construct developed here therefore emphasizes interpretive reasoning as well as documentation.

For newly qualified nurses, this distinction has educational value. Medication administration training often focuses appropriately on the right patient, medicine, dose, route, time, and related safety checks. Reconciliation asks an additional question: Should this medication order exist in this form at this transition point at all? That question requires comparison with prior therapy and the clinical transition rather than verification of a single medication order.

6.2 Transition-to-Practice Support Should Normalize Clarification

The second implication concerns the professional transition itself. Newly qualified nurses may be reluctant to expose uncertainty in environments where competence is interpreted as independence. Yet medication reconciliation frequently involves incomplete or contradictory information, making appropriate clarification a normal component of safe care rather than an exceptional failure.

Murray and colleagues found that transition shock, time pressure, experiential learning, and fear of errors influence newly qualified nurses' early patient-safety experience. Lim and Honey similarly recommend continuing medication education during orientation and early professional practice. These findings suggest that preceptors should explicitly model language for escalation rather than merely instruct new nurses to “ask if unsure.”

For example, a new nurse should be able to communicate that a patient reports taking a medicine that does not appear on the admission list, that the dose differs across sources, or that a discharge medicine appears to duplicate existing therapy. The objective is not to transfer responsibility indiscriminately but to communicate the discrepancy precisely enough for rapid clinical resolution.

6.3 Interprofessional and System-Level Implications

Medication reconciliation should also be protected from becoming a nursing-only safety burden. Pharmacy-led reconciliation programmes have demonstrated effectiveness in identifying and resolving

discrepancies, particularly in high-risk patients, and the broader evidence supports interprofessional reconciliation models. Nurses should therefore be educated to recognize when pharmacy expertise can improve reconciliation rather than being expected to independently resolve complex pharmacological questions.

Electronic systems can support the process but do not eliminate professional reasoning. Champion and colleagues showed that even with interoperability, nurses still needed to modify medication lists and contact providers to establish accuracy during transitions to home healthcare. Killin and colleagues found benefits from electronic medication reconciliation but also noted heterogeneity across interventions and outcomes. Technology should therefore make discrepancies easier to identify and communicate rather than create an assumption that the electronic list is automatically correct.

Finally, evaluation should focus on both process and safety outcomes. A training programme may improve test scores without producing better medication histories in clinical practice. Future research should therefore measure actual discrepancy detection, escalation quality, documentation accuracy, time required for reconciliation, patient participation, pharmacist or prescriber interventions, and medication-related events after transitions.

7. Conclusion

Medication reconciliation literacy is an important but distinct dimension of medication-safety competence for newly qualified nurses. It requires more than knowing medicines and more than accurately administering an existing order. Newly qualified nurses must learn how to obtain a meaningful medication history, compare multiple information sources, recognize unexplained differences, distinguish intentional changes from unresolved discrepancies, communicate uncertainty, and document the confirmed medication plan.

The simulation presented in this study demonstrates how this competency might develop through structured transition-to-practice education. The modeled literacy score increases from 50 at baseline to 87 after medication-history instruction, reconciliation simulation, preceptor feedback, and reassessment. Simulated discrepancy recognition also improves markedly across omissions, duplication, dose and frequency differences, nonprescription products, and unclear intentional changes. These figures are hypothetical and must not be treated as empirical findings.

Evidence published through 2021 nevertheless provides a strong rationale for such training. Newly graduated nurses experience medication-related and broader patient-safety challenges during transition to practice, nurses undertake substantial medicines-management responsibilities during care transitions, and medication reconciliation is internationally recognized as an important strategy for reducing medication discrepancies. Educational resources also demonstrate that reconciliation can be taught explicitly rather than left entirely to informal workplace learning.

The strongest transition-to-practice model would therefore combine structured medication-history education, realistic reconciliation cases, interprofessional learning, accessible pharmacist and prescriber support, preceptor feedback, standardized documentation, and delayed competency reassessment. The objective is not to make newly qualified nurses independently responsible for every prescribing decision. It is to ensure that they are sufficiently literate in medication reconciliation to

recognize when medication information does not make sense and sufficiently supported to act on that recognition before the discrepancy reaches the patient.

References

1. Mueller, S. K., Sponsler, K. C., Kripalani, S., & Schnipper, J. L. (2012). Hospital-based medication reconciliation practices: A systematic review. *Archives of Internal Medicine, 172*(14), 1057–1069.
2. Mekonnen, A. B., McLachlan, A. J., & Brien, J. A. E. (2016). Pharmacy-led medication reconciliation programmes at hospital transitions: A systematic review and meta-analysis. *Journal of Clinical Pharmacy and Therapeutics, 41*(2), 128–144.
3. Mekonnen, A. B., McLachlan, A. J., & Brien, J. A. E. (2016). Effectiveness of pharmacist-led medication reconciliation programmes on clinical outcomes at hospital transitions: A systematic review and meta-analysis. *BMJ Open, 6*, e010003.
4. Kwan, J. L., Lo, L., Sampson, M., & Shojania, K. G. (2013). Medication reconciliation during transitions of care as a patient safety strategy: A systematic review. *Annals of Internal Medicine, 158*(5 Pt 2), 397–403.
5. Gleason, K. M., McDaniel, M. R., Feinglass, J., Baker, D. W., Lindquist, L., Liss, D., & Noskin, G. A. (2010). Results of the Medications at Transitions and Clinical Handoffs study: An analysis of medication reconciliation errors and risk factors at hospital admission. *Annals of Internal Medicine, 153*(10), 649–658.
6. Schnipper, J. L., Hamann, C., Ndumele, C. D., Liang, C. L., Carty, M. G., Karson, A. S., & Bates, D. W. (2009). Effect of an electronic medication reconciliation application and process redesign on potential adverse drug events. *Archives of Internal Medicine, 169*(8), 771–780.
7. Boockvar, K. S., Santos, S. L., & Martin, M. A. (2011). Medication reconciliation: Barriers and facilitators from the perspectives of resident physicians and pharmacists. *Journal of Hospital Medicine, 6*(6), 329–337.
8. Coleman, E. A., Smith, J. D., Raha, D., & Min, S. J. (2005). Posthospital medication discrepancies: Prevalence and contributing factors. *Archives of Internal Medicine, 165*(16), 1842–1847.
9. Cornish, P. L., Knowles, S. R., Marchesano, R., Tam, V., Shadowitz, S., Juurlink, D. N., & Etchells, E. E. (2005). Unintended medication discrepancies at the time of hospital admission. *Archives of Internal Medicine, 165*(4), 424–429.
10. Tam, V. C., Knowles, S. R., Cornish, P. L., Fine, N., Marchesano, R., & Etchells, E. E. (2005). Frequency, type and clinical importance of medication history errors at admission to hospital: A systematic review. *CMAJ, 173*(5), 510–515.
11. Pippins, J. R., Gandhi, T. K., Hamann, C., Ndumele, C. D., Labonville, S. A., Diedrichsen, E. K., Carty, M. G., & Bates, D. W. (2008). Classifying and predicting errors of inpatient medication reconciliation. *Journal of General Internal Medicine, 23*(9), 1414–1422.
12. Gleason, K. M., Groszek, J. M., Sullivan, C., Rooney, D., Barnard, C., & Noskin, G. A. (2004). Reconciliation of discrepancies in medication histories and admission orders of newly hospitalized patients. *American Journal of Health-System Pharmacy, 61*(16), 1689–1695.
13. Vira, T., Colquhoun, M., & Etchells, E. (2006). Reconcilable differences: Correcting medication errors at hospital admission and discharge. *Quality and Safety in Health Care, 15*(2), 122–126.

14. Wong, J. D., Bajcar, J. M., Wong, G. G., Alibhai, S. M. H., Huh, J. H., Cesta, A., Pond, G. R., & Fernandes, O. A. (2008). Medication reconciliation at hospital discharge: Evaluating discrepancies. *Annals of Pharmacotherapy*, *42*(10), 1373–1379.
15. Greenwald, J. L., Halasyamani, L., Greene, J., LaCivita, C., Stucky, E., Benjamin, B., Reid, W., Griffin, F. A., Vaida, A. J., & Williams, M. V. (2010). Making inpatient medication reconciliation patient centered, clinically relevant and implemented well: A consensus report from the Society of Hospital Medicine. *Journal of Hospital Medicine, 5*(8), 477–485.
16. Institute for Healthcare Improvement. (2007). *Medication reconciliation review*. Institute for Healthcare Improvement.
17. World Health Organization. (2014). *The High 5s Project: Standard Operating Protocol for Medication Reconciliation*. World Health Organization.