



## Medication Reconciliation at a Glance

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The preparation and distribution of medicines have been traditionally defined as the major responsibilities of pharmacists. However, in recent decades, this role has evolved into a more patient-centered approach. Pharmacists are now expected to provide pharmaceutical care in hospital wards and ambulatory settings (1). Besides the potential threats to the field of pharmacy, there are also professional opportunities for pharmacists to promote their role and perform therapeutic interventions. Medication reconciliation (MR) is an evolving area for pharmacists' intervention and provision of specialized services in Iran.

MR has been implemented widely to prevent the occurrence of adverse drug events (ADEs) and medication errors (MEs). ADEs are a major cause of patient morbidity and mortality. European studies have revealed that five percent of hospital admissions are due to ADEs which result in 197,000 deaths annually (2). Some ADEs are the result of MEs. The errors may occur at different stages of patient care including the time of medication history taking, order transcribing, medication administration, ward transition, and patient discharge. The transition of patients between different care settings is a major point for the occurrence of ME (3). These errors could potentially result in hospital readmission, the occurrence of ADEs, or death. Of note, poor communication between different healthcare providers (HCP) or between HCPs and patients/caregivers is an obvious cause of patient harm (4). Therefore, a comprehensive strategy is needed to compare the medication orders between two different care settings (3). As defined by the Institute for Healthcare Improvement (IHI), MR is the process of recognition of all the medications that a patient is taking. The medication list should include drug name, dosage, frequency, and route of administration. This list is compared against the physician's orders at the time of patient admission, transfer, and discharge. Subsequently, any discrepancy between the lists is diagnosed

and treatment plans are refined (5). Optimally, MR should be performed within 24 hours of admission for all patients, but in real practice, resource limitations may preclude this target. Therefore, patient screening could be recommended at admission, and depending on the available resources, MR is performed for high-risk patients such as those with a higher number of medications, older ages, those who have been admitted to intensive care units, etc.

A question was raised that which group of HCPs is most qualified to provide the MR? Noteworthy, a wide variety of pharmaceutical products with various brand names are used by the patients. Moreover, there are various supplement products, often with the same vitamin, mineral, or herbal ingredients which further complicates the process of history taking. Therefore, in the best way, the MR service conducted by an HCP familiar with marketed medicinal products is essential to prevent MEs. Although various HCPs such as physicians and nurses have performed MR, pharmacists are the most qualified ones because they have sufficient knowledge in the therapeutic use of medicines. Nevertheless, MR is a team-based service that requires close communication between different HCPs. This communication is essential for the reduction of the possibility of discrepancies (3).

Another issue that should be considered is that depending on the provider's knowledge and skill, the MR can be performed at different care levels. The most basic form of MR is the "bronze" level which includes medication history plus MR at admission. The bronze level plus discharge MR by the prescriber comprises the "silver" level. The "gold" service includes the silver plus prescriber and pharmacist cooperation at the time of patient discharge. In the same fashion, sequential addition of patient education at discharge and post-discharge follow-up comprises the "platinum-" and "diamond-" level MR (6). Therefore, in some cases, it may be difficult to define the border between MR and drug

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consultation performed by clinical pharmacy specialists. Many factors determine the appropriate level of MR for each specific institute or ward. These include but are not limited to the number of MR providers, their knowledge and skill, and financial support. Another point to consider is that every step taken by the institutes to implement MR is valuable, irrespective of the care levels. Undoubtedly, the level of the service can be upgraded over time. To be effective, the MR should be integrated into the patient care plans and not conducted as an isolated service.

## References

1. Coe AB, Choe HM. Pharmacists supporting population health in patient-centered medical homes. *Am J Health Syst Pharm* 2017;74(18):1461-6.
2. Bouvy JC, De Bruin ML, Koopmanschap MA. Epidemiology of adverse drug reactions in Europe: a review of recent observational studies. *Drug Saf* 2015;38(5):437-53.
3. Fernandes O. Medication Reconciliation in the Hospital: What, Why, Where, When, Who and How? *Healthc Q* 2012;15 Spec No:42-9.
4. The High5s Project – Standard Operating Protocol for Medication Reconciliation. Version 3, September 2014.
5. National Institute for Health and Care Excellence (NICE) Guideline. Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes. 4 March 2015
6. Baker M, Bell CM, Xiong W, et al. Do Combined Pharmacist and Prescriber Efforts on Medication Reconciliation Reduce Postdischarge Patient Emergency Department Visits and Hospital Readmissions? *J Hosp Med* 2018;13(3):152-7.