

Better medication management needed for older hospital patients, researchers conclude

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Ensuring older hospital patients receive specialized medication management could reduce their stay in hospital and potentially lower their risk of death, according to new research conducted by Flinders

University in collaboration with Flinders Medical Center.

One in 10 older people experience 'adverse drug reactions' (ADRs) to medications while in hospital, according to a paper, titled "The Clinical Impact of Hospital-Acquired Adverse Drug Reactions in Older Adults: An Australian Cohort Study," [published](#) in *The Journal of the American Medical Directors Association (JAMDA)*.

"As the population is getting older, patients have more chronic medical conditions and are taking a greater number of medications, so it's becoming increasingly important for health care systems to focus on preventing harm from medications," says Dr. Joshua Inglis, a researcher with the College of Medicine and Public Health, and Consultant Physician in Flinders Medical Center's Department of Clinical Pharmacology.

"We found that in [hospitalized patients](#) aged 65 years and older, [adverse reactions](#) to medication were associated with longer stays in hospital and a higher risk of death."

The findings have prompted calls for hospitals to take further steps to prevent medication-related harm.

"Currently, doctors review each patient's medications during their hospital stay, but there is an opportunity to establish multidisciplinary teams that take a hospital-wide approach to managing specific high-risk [medication](#) classes," says Dr. Inglis.

"[Medication stewardship programs](#) that monitor the use of high-risk medications, coordinate interventions and work with patients and practitioners can significantly protect older patients during their [hospital stay](#)."

"Stewardship programs have been successfully developed for antibiotics and shown to improve patient outcomes and the concept can also be applied to other high-risk medications such as opioids, anticoagulants and psychotropics," he says.

The study looked at more than 700 patients aged 65 and older admitted to Flinders Medical Center over three years and found that 72 of them (about 10%) had experienced an unwanted reaction to their medications.

It found that the number of adverse reactions a patient had was linked to how long they stayed in hospital and whether they died during admission.

The medicines most associated with ADRs include those used to treat [high blood pressure](#) and other cardiac conditions, strong painkillers such as oxycodone, and antibiotics such as penicillin.

Examples of unwanted side effects include kidney and liver injuries, [low blood pressure](#), sedation, nausea and vomiting, diarrhea and bleeding.

"For every reaction that occurred, patients stayed in hospital for longer and were at a higher risk of death during their hospital admission.

"To our knowledge, this is the first study to find an association between experiencing an ADR in hospital and serious consequences for patients.

"Importantly, it highlights the need for health care organizations to develop stewardship programs that prevent ADRs from occurring in the first place."

Dr. Inglis says further studies using other patient cohorts, such as older people living with dementia, could provide valuable insights into developing ways to improve [health outcomes](#) for the aged population and reduce ADRs.

More information: Joshua M. Inglis et al, The Clinical Impact of Hospital-Acquired Adverse Drug Reactions in Older Adults: An Australian Cohort Study, *Journal of the American Medical Directors Association* (2024). [DOI: 10.1016/j.jamda.2024.105083](https://doi.org/10.1016/j.jamda.2024.105083)

Provided by Flinders University

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