

The Impact of Educational Intervention for Improving Physicians' Knowledge in Potentially Inappropriate Medications Use among Geriatric Inpatients

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Abstract:

Background: Saudi Arabia's older population is growing fast and may reach 18 to 25 percent by 2050. Hospitalized older adults face high exposure to potentially inappropriate medications. Many physicians lack formal training in geriatric pharmacotherapy and underuse tools such as the 2023 AGS Beers and STOPP criteria. This gap fuels adverse drug reactions, drug interactions, and avoidable harm. We tested whether focused education could strengthen physicians' knowledge and readiness to use these tools in routine care.

Methods: We conducted a quasi-experimental pretest posttest study at King Abdulaziz Medical City in Riyadh. Seventy-four physicians from the Department of Medicine who prescribe for geriatric inpatients participated. They completed a validated 18 item questionnaire on Beers and STOPP criteria before and after a structured educational program. We compared paired knowledge scores using SPSS 26 with significance set at 0.05.

Results: Knowledge improved clearly after training. Median scores increased from 7.0 to 11.0 out of 18 with p less than 0.001. Physicians with good knowledge rose from 21.6 percent to 63.5 percent. Correct understanding of Beers criteria increased from 43.2 percent to 63.5 percent. Still, practice lagged behind awareness. Only 33.8 percent knew Beers criteria were available in the hospital formulary, and just 16.2 percent used them routinely. Awareness of STOPP criteria remained low at 8.1 percent. Consultants and physicians who relied on clinical pharmacists achieved higher scores.

Discussion: Education shifted knowledge quickly but did not automatically change habits. Simply having guidelines in the system did not drive use. Seniority, CME exposure, and pharmacist collaboration predicted better performance. These findings align with recent evidence that structured training reduces inappropriate prescribing in hospitals.

Conclusion: Targeted education improves physicians' knowledge of safer geriatric prescribing. Hospitals must embed Beers and STOPP directly into daily workflows.

Keywords:

Inappropriate medications, geriatric, education, Knowledge, Saudi Arabia.