Delivery Science Grants Program

A Randomized, Multi-Drug De-Prescribing Intervention did not Change Medication Use or Geriatric-Syndrome Diagnoses

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| Challenge | **Many older patients use large numbers of medications, which may increase the risk of adverse events without benefit. A proposed deprescribing intervention with pharmacists may help; however, its effectiveness is unknown, it is resource intensive, and it may create**  **unanticipated adverse events from stopping medications.** |
| Existing Evidence | Deprescribing has been implemented in numerous settings, including currently with Kaiser Permanente, but typically it involves only single drug classes. Using multiple single drug deprescribing efforts is inefficient, but little data exist on the potential beneficial or harmful impacts of “bundled” multi-drug deprescribing strategies. |
| Target Population | KPNC members aged ≥76 years using ≥10 prescription drugs, excluding those with a history of transplant; dialysis; hospice care; or a cancer diagnosis, oncology visits, or cancer treatment within a year |
| Intervention or Exposure | A randomized trial of bundled multi-drug deprescribing using integrated pharmacist review of >20 drug classes within a single workflow, developed with relevant medical specialists, and using random patient assignment |
| **Outcomes/Key Findings** | A large pragmatic clinical trial of pharmacist-directed  multi-medication evaluation and patient counseling/deprescribing  resulted in:  • no significant differences at 6-12 months in overall medication use (average within-person change, 0.4 medication, p=0.71)  • no beneficial reductions in geriatric syndrome conditions (difference-in-difference, 1.0, p=0.65)  • no increase in adverse effects from discontinuation These results indicate no likely beneficial effect, beyond current pharmacy programs, for this type of intervention. |
| **Resulting Action/Change** | **Informed value-based care to not proceed with a planned large, complex intervention that would have required >10 pharmacist equivalent positions and complex coordination between pharmacy and adult & family medicine for full implementation.** |
| Additional Recommendations | Pragmatic trials prior to full implementation are feasible and have clear benefit in understanding effectiveness and to evaluate for potential unanticipated harms. |
| Implementation Tools | Drug protocols, medication discontinuation/continuation guidelines for disease-specific essential conditions, monitoring protocols/variables for adverse effects |
| Implementation Measurement | Drug protocols, medication discontinuation/continuation guidelines for disease-specific essential conditions, monitoring protocols/variables for adverse effects |
| Reference | <https://pubmed.ncbi.nlm.nih.gov/37428504/>  A table with numbers and symbols  Description automatically generated |