Patterns of Multimorbidity in Elderly Veterans

RESEARCH HIGHLIGHTS:

- Much is still unknown about the best strategies for managing older patients with multiple concurrent diseases, where treatment of one disease can have unintended negative consequences for a person's other diseases. This study analyzes the patterns of multimorbidity in elderly veterans, and investigates the extent to which these patterns differ between men and women and by the age of the patient.

- Older male veterans had an average of 5.5 concurrent chronic conditions, and older female veterans an average of 5.1. In older men, the most common three-way combination of conditions was hypertension, hyperlipidemia and coronary heart disease (together present in 37% of men). In older women the most common combination was hypertension, hyperlipidemia and arthritis (25%).

- Better understanding common patterns of multimorbidity can help clinicians and policymakers develop treatment pathways that account for the multiplicity of diseases that can occur within an individual. Clinicians should consider the occurrence of specific disease clusters when treating elderly veterans in order to reduce negative interactions.

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ABSTRACT:

"*Objectives*: To determine patterns of co-occurring diseases in older adults and the extent to which these patterns vary between the young-old and the old-old.

Design: Observational study.

Setting: Department of Veterans Affairs.

Participants: Veterans aged 65 years and older (1.9 million male, mean age 76 ± 7; 39,000 female, mean age 77 ± 8) with two or more visits to Department of Veterans Affairs (VA) or Medicare settings in 2007 and 2008.

Measurements: The presence of 23 common conditions was assessed using hospital discharge diagnoses and outpatient encounter diagnoses from the VA and Medicare.

Results: The mean number of chronic conditions (out of 23 possible) was 5.5 ± 2.6 for men and 5.1 ± 2.6 for women. The prevalence of most conditions increased with advancing age, although diabetes mellitus and hyperlipidemia were 11% to 13% less prevalent in men and women aged 85 and older than in those aged 65 to 74 ($P < .001$ for each). In men, the most common three-way combination of conditions was hypertension, hyperlipidemia, and coronary heart disease, which together were present in 37% of men. For women, the most common combination was hypertension, hyperlipidemia, and arthritis, which co-occurred in 25% of women. Reflecting their high population prevalence, hypertension and hyperlipidemia were both present in 9 of the 15 most common three-way disease combinations in men and in 11 of the 15 most common combinations in women. The prevalence of many disease combinations varied substantially between young-old and old-old adults.

Conclusions: Specific combinations of diseases are highly prevalent in older adults and inform the development of guidelines that account for the simultaneous presence of multiple chronic conditions."

Implications

FOR PRACTICE

Elderly veterans should be mindful of their diagnosed diseases and, when possible, ask their medical team questions on newly prescribed medications and procedures to prevent harmful interactions between medications. Clinicians should be aware of multimorbidity in elderly veterans, remembering that different age cohorts often have different sets of diseases. Clinicians should work to customize medical approaches that are unique to each individual's health needs, keeping in mind that aggressive treatment might not be the best option for some elderly veterans with several chronic conditions. Family members of elderly veterans should also remain informed on relevant diseases and medications for their family members, and schedule appointments with primary physicians to ask questions and raise any immediate concerns.

FOR POLICY

The Veterans Health Administration (VHA) should consider providing regular training for VA and non-VA clinicians who work with veterans on multimorbidity. Currently, the VA has a suite of services and specialists in geriatrics and extended care which are designed to care for elderly veterans and treat conditions that are common in this population. Elderly veterans often have unique health concerns that vary by age and sex; therefore, policy makers should be cognizant of these differences when creating healthcare policies, especially in terms of health insurance coverage for prescription drugs and consultations. Policymakers should consider implementing programs that increase available knowledge on multimorbidity in elderly veterans to clinicians, veterans and the general population. The VA should also develop additional programs that educate veterans on the prevention and treatment of multiple, simultaneous diseases.

FOR FUTURE RESEARCH

As the veteran population ages, more research is needed on disease prevalence, severity and treatment in this population. Because data was collected solely from patients who use VA hospitals and other VA health services, the study results do not account for any differences between veterans who use VA health services and those who do not. Researchers should include veterans who do not use VA health services in future studies, as well as those who receive care in multiple locations. The majority of the data analyzed in this study was from medical records, limiting researchers' ability to understand the complexity of diseases from patient perspectives. Future researchers should use analytical approaches such as in-depth interviews, which capture the full complexity of diseases and use frameworks that allow for the analysis of more than three multimorbidity concerns at once. Researchers can also perform more in-depth studies of less common chronic diseases among elderly veterans in the future, as this study analyzed 22 of the most commonly found medical diseases. It might be beneficial to compare multimorbidity in elderly veteran populations to multimorbidity in elderly civilian populations, as well. Finally, because this study was overwhelmingly male, researchers should include more women veterans in future studies, oversampling them to collect extensive data on disease patterns most common in women veterans.

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