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# A Study of the Cost Effects of Daily Multivitamins for Older Adults

## Fact Sheet

### A. Background and Summary Results

- Surveys of dietary intake and physical and laboratory data reveal that the typical American diet does not always provide a sufficient level of vitamins and/or minerals.
- Evidence from numerous sources indicates that a significant number of older adults fail to get the amounts and types of food necessary to meet essential energy and nutrient needs. Physiological, psychological and economical factors in the later years all contribute to poor nutrition among older adults.
- A recent article in the *Journal of the American Medical Association* authored by Drs. Fletcher and Fairfield at Harvard University found that suboptimal intake of some vitamins (above levels causing classic vitamin deficiency) is a risk factor for chronic diseases and common in the general population, especially the elderly. Fletcher and Fairfield call multivitamin dosages “safe and inexpensive,” and directly “recommend that all adults take one multivitamin daily.”<sup>1</sup>
- The Lewin Group study found that daily use of a multivitamin by older adults is a relatively inexpensive yet potentially powerful way to improve one’s health. The study found that the health effects were particularly important for cardiovascular health and improved immune functioning. From the perspective of a payer, the encouragement of the daily use of a multivitamin could be cost beneficial.

### B. Purpose of the Study

The Lewin Group, Inc. was commissioned by Wyeth Consumer Healthcare to develop estimates of the costs and potential savings that could result from older adults taking a daily multivitamin within the context of Medicare or other national payer. Current sentiment among policymakers in health care emphasizes disease prevention, making this study an important contribution to the discussion. Disease conditions examined included infection, coronary artery disease (CAD), colorectal cancer, diabetes, osteoporosis and prostate cancer.

### C. Key Study Findings

- **The Lewin Group’s comprehensive review of existing research literature found positive health effects associated with multivitamin use (e.g., improved immune functioning and reduced relative risk of heart disease.)**
- **Within a health insurance context, the five-year estimate of potential net savings resulting from daily multivitamin intake for adults over 65 is approximately \$1.6 billion.**

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<sup>1</sup> Robert H. Fletcher, MD, MSc and Kathleen M. Fairfield, MD, DrPH. Vitamins for Chronic Disease Prevention in Adults: Clinical Applications. *JAMA*.2002; 287(23): 3127-3129.

Our systematic literature review examined the health effects of multivitamin use among adults over age 65. Only the most rigorous clinical studies available were used to model costs and savings. The available evidence most strongly supports the beneficial effects of multivitamins in improved immune functioning and a reduction in the relative risk of heart disease. Analyses of Medicare claims files for 2001 were used to determine the specific costs and potential savings.

Using Congressional Budget Office cost accounting rules, gross and net costs to a payer were determined for a five-year period (2004 - 2008). Potential savings would be achieved through a reduction in hospitalizations for infection and heart attacks, a reduction in Medicare nursing home stays for infection, and a reduction in home health care associated with infection (pneumonia).

**Costs and Potential Savings from Improved Immune Function and Reduced Relative Risk of CAD among Adults over 65**

	2004	2005	2006	2007	2008	Total
<b>Gross Cost of Providing Daily Multivitamin for Adults over 65 (in millions)</b>						
Total cost of daily multivitamins for new users (adults over 65 not currently taking multivitamins) and current users paid for by payer over time	\$149	\$232	\$406	\$632	\$920	\$2,339
<b>Potential Savings from Improved Immune Functioning (in millions)</b>						
Cost offset due to avoided hospitalizations, SNF stays, and home health associated with infection (pneumonia, cellulites, kidney and urinary tract infection, and septicemia) for population most at risk	\$83	\$129	\$180	\$236	\$296	\$924
<b>Potential Savings from a Reduction in Relative Risk of CAD (in millions)</b>						
Cost offset due to avoided hospitalizations associated with fatal and non-fatal myocardial infarction for population most at risk	\$215	\$314	\$469	\$636	\$818	\$2,452
<b>Premium Offset (in millions)</b>						
Premium offset (25% of additional program spending)	\$37	\$58	\$101	\$158	\$230	\$585
<b>Net Cost of Providing Daily Multivitamin for Adults over 65 (in millions)</b>						
Net cost of daily multivitamins for adults over 65 (savings)	-\$187	-\$269	-\$344	-\$398	-\$424	-\$1,622