



Survey of Medical Literature

Medical Studies Show Home-Based Care Is Cost-Effective

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New England Journal of Medicine Examines the Imperative of Home-based Care

A 2010 article in the *New England Journal of Medicine* states, *“ultimately, health care organizations that do not adapt to the home care imperative risk becoming irrelevant. It seems inevitable that health care is going home.”* Steven H. Landers, M.D. of the Cleveland Clinic describes demographic, clinical, economic, and technological forces that make home-based care “imperative.” He cites oxygen as an example of advances in portable medical technology, and cites parenteral nutrition and infusion as examples of care that are cheaper than and as equally effective as institutional care. He notes that there may be more than 70 million Americans age 65-plus by 2030. “Many of these older adults will have limitations on their activities, including difficulty walking and transferring from bed to chair, that make leaving their homes difficult. Bringing care to the home improves access for such people.... Older adults are particularly prone to complications of confinement in hospitals, such as delirium, skin conditions, and falls. Treating people at home may be one way to avoid such complications.” (Landers, S. “Why Health Care Is Going Home,” *New England Journal of Medicine*, October 20, 2010.)

Oxygen Therapy Is Cost Effective; Improvements Needed for Medicare Policy

An article published in the February 2009 *American Journal of Managed Care* on long-term oxygen therapy concluded that *“continuous oxygen therapy for chronic obstructive pulmonary disease is highly cost-effective.”* The article states, *“The Deficit Reduction Act [of 2005] provision that limits rental of all home oxygen equipment to 36 months and then transfers ownership to the beneficiary may significantly reduce services for fragile elderly patients and could raise numerous patient safety issues. . . .* There is substantial room for improvement in the current Medicare policies regarding long-term oxygen therapy. Medicare coverage can be improved by prescribing long-term oxygen therapy to patients who will receive substantial benefit and by providing adequate support for services and maintenance.” (Oba, Y. “Cost-Effectiveness of Long-Term Oxygen Therapy for Chronic Obstructive Pulmonary Disease,” *American Journal of Managed Care*, February 2009.)

Self-Monitoring of Blood Glucose in Diabetes: Cost-effectiveness in the U.S.

Analysis in the *American Journal of Managed Care*, March 2008, documents an extremely large and growing economic burden of the chronic disease diabetes mellitus. According to the Centers for Disease Control, about 14.7 million people in the U.S. had been diagnosed with diabetes through 2004, with type 2 diabetes mellitus accounting for about 90 percent of those cases. A total of \$92 billion in direct medical expenditures were attributable to diabetes for 2002, and the projected increase in the diabetes population suggests that annual direct costs could reach \$138 billion by 2020. Identifying cost-effective technologies for diabetes management is an important goal. One tool repeatedly shown to improve glycemic control for insulin-using patients is the self-monitoring of blood glucose (SMBG). Clinical guidelines recommend SMBG at least three times daily for patients with diabetes who use insulin. The report demonstrates cost-effectiveness for SBMG patients who

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test both 1 and 3 times daily. (Tunis, S., Minshall, M., "Self-Monitoring of Blood Glucose in Type 2 Diabetes," *American Journal of Managed Care*, March 2008.)

Oxygen Therapy Reduces Mortality and Hospitalization

A 2004 assessment of clinical literature on long-term oxygen therapy by the U.S. Agency for Healthcare Research and Quality found oxygen therapy reduces mortality and hospital frequency and length of stay for patients with severe COPD. The average number of hospital admissions per patient year decreased from 2.1 to 1.6 and the average number of days hospitalized decreased from 23.7 to 13.4 after long-term oxygen therapy. (Lau, J., et al., *Long-Term Oxygen Therapy for Severe COPD*, June 11, 2004, Tufts-New England Medical Center Evidence Based Practice Center.)

A Comprehensive Cost Analysis of Medicare Home Oxygen Therapy

An assessment of the costs required for providing home oxygen therapy for Medicare beneficiaries was conducted by Morrison Informatics in 2006. A study to identify costs and resources used in providing oxygen services was completed by 74 oxygen service providers that deliver services to more than 1.7 million Medicare beneficiaries. **The study showed oxygen equipment represents just 28 percent of the cost of providing prescribed oxygen to patients at home. Oxygen therapy in the home requires essential services: preparation and delivery of equipment, delivery of supplies, maintenance, patient assessment, training and education, medical documentation, 24/7 around the clock availability for care, customer service and overhead costs.** These expenses represent 72 percent of the cost of home oxygen therapy for Medicare beneficiaries. (Morrison Informatics, Inc., "A Comprehensive Cost Analysis of Medicare Home Oxygen Therapy," June 2006.)

Homecare Reduces Costs by 37 Percent for Heart Failure Patients

The May 2004 *Journal of the American Geriatrics Society* reports that homecare, directed by Advanced Practice Nurses (APNs), reduced total costs of care for patients suffering from heart failure and co-morbid conditions, attributable to fewer and later hospitalizations and fewer deaths. (Naylor, Mary D., et al., "Transitional Care of Older Adults Hospitalized with Heart Failure: A Randomized Controlled Trial," *Journal of the American Geriatrics Society*, May 2004.)

Review of Medicaid Homecare in Seven States Shows Reduced Costs

A 2002 study published in *Health Care Financing Review* describes the characteristics of Medicaid home and community-based programs in seven states. In Washington, for example, the state imposed strict fiscal caps, keeping spending to 40% of the cost of nursing home care on a per capita basis. (Wiener, J., et al., "Home and Community-Based Services in Seven States," *Health Care Financing Review*, Spring 2002.)

Lower Cost of Home Intravenous Antibiotic Treatment v. Hospital, SNF Settings

A study described in *Clinical Infectious Diseases* quantified cost savings of a home intravenous antibiotic program in a Medicare managed care plan. The average cost per day of home therapy was \$122, compared to \$798 in the hospital and \$541 in a skilled nursing facility. (Dalovisio, J., et al., "Financial Impact of a Home Intravenous Antibiotic Program on a Medicare Managed Care Program," *Clinical Infectious Diseases*, 2000.)

The American Association for Homecare represents durable medical equipment providers, manufacturers, and others in the homecare community that serve the medical needs of millions of Americans who require oxygen equipment and therapy, mobility assistive technologies, medical supplies, inhalation drug therapy, and other medical equipment and services in their homes. Members operate more than 3,000 homecare locations in all 50 states. Please visit www.aahomecare.org/athome.

The New England Medical Equipment Dealers Association is the regional trade association representing providers of home medical equipment and supplies, home oxygen therapy and respiratory equipment, custom wheelchairs and assistive technology, and home infusion therapy in the six New England states. Approximately 80% of Medicare and Medicaid beneficiaries receive their home medical equipment and related services from a NEMED member. Visit www.nemed.org.

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