



Caring that Feels Right at Home



Medical Literature Survey

Home-Based Care Is Cost-Effective, And Delivers Value for Patients & Taxpayers

Studies published in medical journals document the value and cost-effectiveness of homecare.

Cost-Effectiveness of Oxygen Therapy for Chronic Obstructive Pulmonary Disease (COPD)

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 Type 2 Diabetes: Cost-effectiveness in the United States

Analysis in the *American Journal of Managed Care*, March 2008, states that there is an extremely large and growing economic burden of the chronic disease diabetes mellitus. According to the Centers for Disease Control and Prevention, about 14.7 million people in the U.S. had been diagnosed with diabetes through 2004, with type 2 diabetes mellitus (T2DM) 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 aid in the improvement of glycemic control for insulin-using patients is the self-monitoring of blood glucose (SMBG). Increased SMBG frequency has been linked to lower blood glucose levels for this population. 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 test both 1 and 3 times daily. (Tunis, S., Minshall, M., *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.)

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 percent 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.)

A Comprehensive Cost Analysis of Medicare Home Oxygen Therapy

A June 2006 assessment of the costs required for providing home oxygen therapy for Medicare beneficiaries was conducted by Morrison Informatics. Seventy-four oxygen services providers delivering services to more than 1.7 million Medicare beneficiaries and more than 600,000 beneficiaries receiving medical oxygen at home, completed a detailed survey, which identified the costs and resources used in providing oxygen services. Survey findings showed that oxygen systems (equipment) alone represent only 28 percent of the cost of providing medically necessary oxygen to beneficiaries. Oxygen therapy in the home requires a number of essential services: preparation and delivery of equipment, delivery of supplies, maintenance of the equipment, assessment, training and education of patients, obtaining required medical documentation, customer service for beneficiaries, related services, and operating and overhead costs. Together, these expenses represent 72 percent of the cost of home oxygen therapy for Medicare home oxygen beneficiaries. (Morrison Informatics, Inc., "A Comprehensive Cost Analysis of Medicare Home Oxygen Therapy," June 2006.)

Homecare Saves 65 Percent in Post-Acute Care

A 1999 study reported in the *Journal of the American Medical Association* reported savings of about 65 percent in a randomized-controlled trial of post-acute home-based management by advanced practice nurses. (Naylor, M.D, et al, "Comprehensive discharge planning and home follow-up of hospitalized elders," *JAMA* 281:613-620, 1999.)

Cost of Home Intravenous Antibiotic Treatment Much Lower than Hospital, SNF Settings

A 1998 study 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 (SNF) setting. (Dalovisio, J., et al., "Financial Impact of a Home Intravenous Antibiotic Program on a Medicare Managed Care Program," *Clinical Infectious Diseases*, 2000.)