



Effective Partners:

**Home Health's Role in
Chronic Care Management**



Abstract

Today, seven out of 10 Americans die each year from chronic disease and, in Pennsylvania, more than 60 percent of the population suffers from chronic diseases such as diabetes, COPD and congestive heart failure. Treatment comes at a steep price with 78 percent of all health care costs traced back to about 20 percent of patients – who typically have chronic conditions.

In 2007, Pennsylvania Governor Edward G. Rendell established a Chronic Care Management, Reimbursement and Cost Reduction Commission charged with developing a strategic plan to implement a new primary care reimbursement model. The Commission embarked on a demonstration project, piloted in Southeastern Pennsylvania, involving 30 physicians. As additional demonstration projects move to all regions of the state, home health care providers seek to partner with physicians to effectively manage care for chronically ill patients.

This paper provides evidence that improving chronic care management is an organic focus and mission of the home health industry. For decades, home health nurses, therapists and aides have been caring for the chronically ill in their own homes and possess the qualifications that facilitate the overall goals of chronic care management.

Seventy-eight percent of all health care costs are traced back to about 20 percent of patients who typically have chronic conditions.

Chronic Care Management

In early May 2009, U.S. Health and Human Services Secretary Kathleen Sebelius urged Congress to enact a health care reform plan that shifts the nation's treatment paradigm from a sickness-based to a wellness-based system, not only keeping people healthy but enabling those with disabilities and chronic conditions to live full and independent lives.

Today, seven out of 10 Americans die each year from chronic disease and nearly 7.8 million Pennsylvanians, more than 60 percent of our state's population, suffer from chronic diseases such as heart disease and diabetes. This high incidence places Pennsylvania 45th in the nation for chronic diseases. Even more staggering is the economic impact of chronic disease on the Commonwealth due to productivity loss and treatments, which accounted for \$50.3 billion in economic loss in 2003. The cost of treatment alone, including the secondary health issues that occur with those diseases, totaled \$13.6 billion.ⁱ

Research findings published in the *New England Journal of Medicine* estimate that one half of patients readmitted to hospitals within 30 days had not seen a physician for follow-up care after discharge. A report from the Pennsylvania Health Care Cost Containment Council further emphasizes the need for follow-up care. In 2007, hospitals reported charges totaling \$4 billion for avoidable rehospitalizations of persons with chronic illnesses. If this population would have received appropriate community-based care, including assistance managing their chronic conditions, these hospitalizations may have been avoided.ⁱⁱ

In the July/August 2009 *Remington Report*, a publication for executives across the healthcare delivery system, five key factors were identified for improving the delivery of chronic care management: 1) comprehensive discharge planning 2) homecare intervention 3) use of evidence-based guidelines 4) patient education on disease management and self care and 5) collaboration and communication among health care providers.ⁱⁱⁱ

This paper provides evidence that those very five factors for improving chronic care management are already the core focus and mission of today's home health providers, who are integral partners with physicians in managing individuals' chronic conditions. For decades, home health nurses, therapists and aides have been caring for the chronically ill in patients' homes and possess unique qualifications that facilitate the overall goals of chronic care management. However, the chronically ill population requires different services and supports than are currently covered under the traditional acute care benefit structure of Medicare, Medicaid and other insurers. Without coverage for supportive, preventive and care management services, serious exacerbations of underlying illness will result in costly hospitalizations and emergency care.

Home health professionals can be the eyes and ears of the physician by ensuring care coordination, guidance and support with the ultimate goals of reducing hospitalizations and promoting self management of chronic illness.

Several physician-centered concepts of chronic care management are emerging. However, physicians frequently lack the infrastructure necessary to extend services outside their office practices such as home visitations, patient education, self management and ongoing monitoring. Here is where home health professionals can be the eyes and ears of the physician by ensuring care coordination, guidance and support with the ultimate goals of reducing hospitalizations and promoting self management of chronic illness.

In the January 2009 JAMA article, *The Other Medical Home*, Steven H. Landers, MD, MPH, wrote: A promising way to strengthen and broaden the Medical Home initiative for high-risk Medicare beneficiaries may be to make their actual homes the central venue of primary health care. This could be accomplished through another reform agenda that specifically empowers family caregivers, home health and hospice nurses, social workers, therapists and personal aides.^{iv}

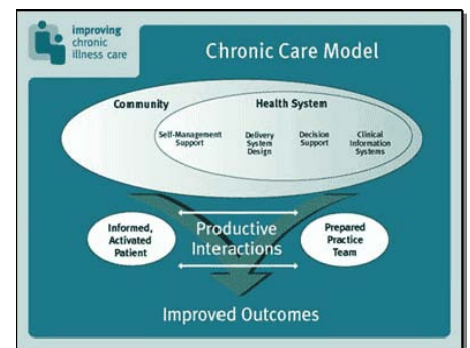
Pennsylvania Takes Action

Seventy-eight percent of the state's health care costs are expended for the care of just 20 percent of our population. To address this growing health problem, Governor Edward G. Rendell established the Chronic Care Management, Reimbursement and Cost Reduction Commission in 2007. Composed of 37 individuals representing health care providers, employers, insurance carriers, consumers and advocates, the Commission was charged with developing a strategic plan to implement a new primary care reimbursement model, which would achieve tangible and measurable improvement in the quality of care for chronically ill patients, and reduce the cost of providing care to ensure savings for those paying for health care.

After examining extensive data, the Commission announced its recommendations in February 2008, by adopting Wagner's Chronic Care Model and incorporating it in a demonstration project starting in southeastern Pennsylvania. This project now involves a network of more than 30 physician practices serving 230,000 patients.

The Wagner model has six key components:

- 1) Self-management support
- 2) Redesigning the delivery system to transform the practice from a reactive physician model to a proactive model using multidisciplinary care teams
- 3) Evidence-based care guidelines
- 4) Clinical information systems to monitor patients
- 5) Partnerships with community resources that encourage healthy living
- 6) Incentives for quality improvement among caregivers to ensure resources are available for data collection and patient monitoring systems^v



As implementation progresses, physicians will seek health professionals responsible for chronic care management in concert with the primary care physician. It is here that home health providers can provide a significant contribution.

Current World of Home Health

According to the Pennsylvania Department of Health's *Annual Data Collection Report, Pennsylvania Home Health Agencies 2007*, 379 licensed home health agencies provided care to nearly 389,000 individuals. The report also indicated that diseases such as hypertension, congestive heart failure, arthritis and COPD were the most frequently reported primary diagnoses of home health patients.^{vi}

However, under the current Medicare home health benefit, patients are typically referred for services after an acute event such as a hospitalization and must meet the CMS mandate of being homebound and requiring "skilled and intermittent care." Despite these constraints, home health agencies are still evaluated on a myriad of indicators, one being hospitalizations, which are publicly reported on CMS' website, www.Medicare.gov. Pennsylvania home health agencies' outcomes are slightly better than the national average, with 73 percent of home health patients successfully staying out of the hospital and remaining at home, while the national rate is 71 percent. By retooling home health agencies' short-term plan of care to reflect a more long-term care management model, patients will benefit from the one-to-one care and support offered by in-home professionals.

Physicians and Homecare Partnerships – A New Alliance

Lillian Wald once said, “Nursing is love in action and there is no finer manifestation of it than the care of the aged and disabled in their own homes.” Wald established the visiting nurse model which, in as early as 1916, provided preventive, acute and long-term health care services in the home.

Chronic care management is an organic component of home health. The home health model directly addresses the division of labor in Wagner’s model, whereby a multidisciplinary team of RNs, CRNPs, LPNs, therapists and social workers provide coordinated medical and non-medical care and support to the chronically ill in a high-touch, face-to-face, one-on-one home setting. “Home health can be viewed as an entire ‘army’ of healthcare professionals already in place” to meet the challenges of chronic care management and is “uniquely positioned to work with patients who have chronic diseases in the most comfortable of all environments – the patient’s home.”^{vii}

Delivering care in the home is also cost-effective. It’s a win-win for both Medicare/Medicaid and other payers because it’s cheaper than institutional care; and home is where people want to be. Thanks to technological advances, especially telehealth, people with more complex diseases can be safely cared for in their own home, with face-to-face visits and remote vital signs monitoring.

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The patient’s home is the place where chronic disease management can succeed or fail because “the patient can undo a month’s worth of expensive and intensive care by just going home and going about their normal routines.”^{viii} With a physician overseeing the care plan, homecare nurses are welcomed into the patient’s home and soon develop strong relationships that will guide and support patients as they learn to manage their condition.

Homecare’s Chronic Care Model

The mechanics of how home health providers can serve as chronic care managers in conjunction with physicians is built on four pillars known as the Home-Based Chronic Care Model, developed by Baptist Health Home Health Network and can be the delivery system redesign called for in Wagner’s model. The four components are:

1. High Touch Delivery System
2. Theory-Based Self Management & Support
3. Specialist Oversight
4. Technology

Face-to-face visits are augmented with pre-planned telephonic visits to check in with the patient and to continue with goal progression assessments. Positive reinforcement and encouragement is also provided by the home health team, which may include nurses and home health aides.

1. High Touch Delivery System

Face-to-face visits form the basis of trust that facilitates a partnership between the patient and the homecare clinician. Home health professionals are accustomed to treating and caring for individuals in their own homes. As such, they see first-hand a patient’s daily routines, physical environment, family dynamics and behavior. Over a period of time, these encounters build relationships that lead to trust and support. The patient’s goals and aspirations are paramount. High touch care begins with a comprehensive, holistic assessment that is critical to understanding the patient’s needs and barriers to chronic care management. Face-to-face visits are augmented with pre-planned telephonic visits to check in with the patient and to continue with goal progression assessments. Positive reinforcement and encouragement is also provided by the home health team, which may include nurses and home health aides.

2. Theory-Based Self-Management Support

Self-management support is one of the essential elements in Wagner’s model and in the home-based model it is re-enforced by face-to-face encounters in the patient’s home. According to the Wagner model, chronic care management is under the control of the patient. Therefore, self-management support must be a collaborative process. The goal is to help patients and their families acquire skills and confidence in managing their chronic illness. Again, encounters in the home and by observing every day activities including meal preparation is essential for effective chronic care management. Providing health information alone such as dietary guidelines and exercise is not enough. The home health team focuses on behavior change such as proper meal planning and patient understanding of how foods impact chronic conditions.

3. Specialist Oversight

Evidence-based clinical practice guidelines must be integrated into care delivery. Nurse practitioners and other nurse specialists must oversee care to ensure evidence-based protocols are being followed. In a 2006 study by the Pennsylvania Homecare Association and the University of Pennsylvania that analyzed the impact of using both telehealth and telephonic contact with chronically ill patients, homecare nurses followed evidence-based protocols established by David Horowitz, M.D., for patients with congestive heart failure and diabetes. Nurse specialists employed by home health agencies are experienced and oversee the clinical field staff by monitoring patient care and outcomes.^{ix}

4. Telehealth Supplements Care Oversight

Home health providers have been pioneers in using telehealth to assist them in managing chronic conditions. Pennsylvania is a leader among all states in the number of telehealth units being used by home health agencies in people’s homes. Studies estimate that nearly 9,000 units are currently in use to assist providers in promoting self management and complementing the high touch of home health professionals. Having the ability to remotely monitor vital signs including pulse/ox, weight and blood pressure enables nurses to monitor patients’ conditions more frequently and promotes early identification of exacerbations that will prevent hospitalizations.

Data can be used to determine whether patients are adhering to their management plans and can serve as a basis for demonstrating cause and effect relationships.

Telehealth data can also be used to reinforce self-management skills and facilitate physician access to patient data to improve decision making and coordination of care. Other technologies, such as medications compliance units and activity sensors can be used by the home health team to keep people safe and at home.

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“The effectiveness of telehealth, combined with skilled nurse management and evidence-based best practices, is demonstrated by a dramatic decrease in the number of hospitalizations and emergency room visits and in reduced hospital length of stay.”^x

Proven Record and Return on Investment

The positive attributes of home health providers as chronic care managers are reflected in several recent studies. A report conducted by Avalere evaluated the relationship between post-hospital home health use and Medicare spending and hospital admissions. The study compared Medicare beneficiaries that had home health following a hospital stay to beneficiaries using other non-home health post acute care for the following conditions: diabetes, chronic obstructive pulmonary diseases and congestive heart failure.

The study examined post-hospital period-of-care costs and odds of readmissions for two years – 2005 and 2006 – using Medicare claims data. It showed that the early use of home health care services following a hospital stay by patients with at least one chronic disease saved Medicare \$1.71 billion in the two year period. The report also showed an additional \$1.77 billion would have been saved in the same period if all Medicare beneficiaries with similar chronic diseases had accessed home health care. Nearly 13 percent of the savings was attributed to reductions in hospital readmission, and it is presumed that the remaining savings accrued from avoiding more costly institutional settings.^{xi}

Other studies have proven the ROI of providing in-home services to reduce hospitalizations and emergency room use. A 2007 study was conducted by Carnegie Mellon University for Blue Shield of California. It consisted of more than 750 HMO members who were diagnosed with late-stage illnesses. The study demonstrated that a patient-centered case management program resulted in a 38 percent decrease in hospital admissions; a 30 percent reduction in emergency room visits; and, a savings of \$18,000 per patient. These savings were realized even though home health usage was increased by 22 percent.^{xii}

According to findings from the Pittsburgh Regional Health Initiative, a consortium of medical, business and civic leaders who address healthcare safety and quality improvement, improved patient education and self-management can result in a 40 percent reduction in admissions. The dramatic impact can be realized with simple interventions from case managers (nurses or respiratory therapists), two months of teaching at home for one hour per week and weekly follow-up phone calls for two months.

Home Health + Technology = Improved Outcomes

According to a University of Pittsburgh report, nearly 40 percent of home health agencies in Pennsylvania are using telehealth, which has been shown to decrease the re-hospitalization rate for CHF patients from 37 percent to 27 percent over the last three years. The VNA of Western PA, an early adopter of telehealth, serves individuals in Butler and Armstrong counties and currently has monitors that measure patients' daily vital signs in approximately 300 homes. These medical readings are transmitted to a central location, evaluated by a nurse and acted upon as appropriate.^{xiii}

The Department of Veterans Affairs is another pioneer in using technology in patients' homes. It has been testing telehealth units in the homes of patients with diabetes, lung diseases and heart failure and has found a 35 percent reduction in readmissions and a 60 percent drop in emergency visits.”

The Veterans Integrated Services network of Florida launched a homecare program several years ago, which incorporates a variety of telehealth technologies. An evaluation of that program shows the following:

- A six-month cost comparison of 600 patients found a total cost savings of \$26 million, an overall cost reduction of 74%.
- One group of 87 patients decreased its number of hospitalizations from 135 to 31, its total days hospitalized from 1,286 to 285 and its number of walk-in emergency room visits from 268 to 114.
- Besides reducing costs, patient surveys indicate that patients feel better and had a high degree of satisfaction with the program.^{xiv}

A 2007 study by the Iowa Chronic Care Consortium and the Iowa Medicaid Enterprise found the use of technology-based remote monitoring reduced healthcare utilization and cost. The Iowa Medicaid Congestive Heart Failure Population Disease Management Demonstration used phone and internet lines and software to monitor weight and other symptoms that signaled early warning signs of worsening heart failure in 266 Iowa Medicaid members. Results of the year-long study included:

- 24% reduction in hospital admissions, compared to a 22% increase for the matched cohort.
- 22% total bed days decrease, compared to a 33% increase for the matched cohort.
- Nearly \$3 million savings from reduced healthcare services utilization, compared to \$2 million increase for the matched cohort.^{xv}

Home health agencies also utilize electronic medical records. More than 80 percent of homecare nurses are using laptops to assess and provide clinical notes during their home visits. In fact, several agencies use evidence-based clinical practice guidelines that can be integrated into electronic documentations systems whereby a nurse ensures that the guidelines are individualized.

Home Health's Chronic Care Services

As chronic care managers, home health agencies provide the following services and support that compliment and enhance the overall care of individuals with chronic conditions:

- **Evidence-based Patient Centered Plan of Care** - Evidence-based clinical practice guidelines which are specific to the chronic disease and are individualized to meet the patient's needs and goals
- **Telehealth** - Daily remote monitoring of vital signs and other clinical indicators that provide early identification, trending and intervention when needed
- **Telephonic Intervention** - Standardized questioning by clinician over the phone customized to patient's plan of care
- **Face-to-Face Encounters** - Allows for the development of a strong relationship between the patient and healthcare provider in which the provider and patient work together to identify patient's goals, develop course of action, assess barriers, facilitate self management, provide lifestyle coaching and evaluate progress
- **Specialist Oversight** - Nurse practitioners or nurse specialists are responsible for care coordination, consultation for clinical management and outcome monitoring and analysis

Additionally, today's home health delivery system has many of the same elements of the Wagner Model that provide a strong foundation for chronic care management. These components would easily transition and work well with a physician practice and include the following:

Care planning and evidence-based care delivery

- Comprehensive standardized assessment is part of normal operations (OASIS).
- Use of evidence-based protocols
- Extensive experience caring for complex patients with chronic conditions
- Physicians' order initiates and oversees plan of care

Participation in Continuous Quality Improvement

- Standardized home health assessment, OASIS, facilitates focus and quality improvement efforts
- Patient outcomes available to public since 2004- www.Medicare.gov
- 2008 CMS National Acute Care Hospitalization Reduction Campaign included ongoing best practices symposiums and web-based seminars.

Information Technology/Telehealth Promotes Communication and Education

- 81 percent of home health providers use electronic medical records
- Clinical pathways and evidenced-based protocols in use via software
- Nearly 9,000 telehealth units in people's homes remotely monitoring vital signs.
- Telephony software offers real-time confirmation of visits and supports back up if needed.
- Other technologies including activity sensors and medication compliance devices are also used and reimbursed under the state's Aging Waiver program.
- 24-hour coverage in place if needed
- Compliments ongoing patient education in self management, care transition and end of life care

Conclusion

Experience in relationship building, teaching, medication management and care coordination make the teams of home health providers valuable partners with physicians as our system shifts its emphasis to prevention, consumer empowerment and self management. Home health providers are positioned to bridge the gaps in care and are now ready with technology and a corps of seasoned professionals who have worked in the community and who embrace the goal of keeping people healthy at home.

To further enhance chronic care management skills, the Pennsylvania Homecare Association has teamed up with Baptist Health Home Health and Hospice and the Arkansas Homecare Association to offer training and certification in chronic care management. This advanced training demonstrates the interest and commitment of home health providers who recognize the value and embrace the goals of chronic care management.

Home health providers who embrace the goal of keeping people healthy at home are positioned to bridge the gap in care necessary to deliver quality management of chronic conditions.

In the document, *Healthcare Promise, A Blueprint to Deliver the Promise of Healthcare Reform*, the authors emphasize the benefits of chronic care management: Aligning incentives for coordinated care with physicians, a proactive practice team and patient-centered goals will result in remarkable improvement in health outcomes and a welcomed decline in healthcare costs. It will also foster a culture of shared responsibility among providers and patients.

Home health providers recognize their role in the practice team and look forward to a renewed commitment to improving the lives of individuals with chronic conditions. With a focus on home, in which technology and advanced information systems, and a new, more team-oriented medical approach that encourages individuals to manage their illnesses, our health care system will be on right track to improving lives and efficiencies.

ⁱ *The Economic Burden of Chronic Disease on Pennsylvania*. Milken Institute. October 2007.

ⁱⁱ *The Pennsylvania Chronic Care Initiative*. Office of the Governor. March, 2009.

ⁱⁱⁱ Zabell, P. *Positioning Your Agency with Value and Collaboration for Chronic Care Models*. Remington Report. July/August 2009.

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^{vi} Annual Data Collection Report. Pennsylvania Home Health Agencies in 2007. Pennsylvania Department of Health.

^{vii} Suter, P., Hennessey, B. et al (2008). *Home-Based. An Expanded Integrated Model for Home Health Professionals*. Home Health Nurse Online.

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^{ix} *Managing Chronic Illness: Telemonitoring Versus Telephone Intervention*. University of Pennsylvania. September 2005.

^x *Push to Adopt Telehealth in Home Health Will Continue in 2006*. Medical News Today. January 15, 2006.

^{xi} *Medicare Spending and Rehospitalization for Chronically Ill Medicare Beneficiaries: Home Health Use Compared to Other Post-Acute Care Settings*. Avalere Health LLC. May 11, 2009.

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^{xiii} *The State of the Homecare Industry in Pennsylvania: Bringing Care Home*. University of Pittsburgh. 2006.

^{xiv} *VHA Home Telemedicine Study Results in a Savings of \$23 million*. The Remington Report. September/October, 2001.

^{xv} *Study Validates Use of Technology-Based Remote Monitoring Platform to Reduce Healthcare Utilization and Cost*. Iowa Chronic Care Consortium. 2007.