

Home Health Care and Diabetes Assessment, Care, and Education

Patricia Landi Linekin, RN, MSN, CDE

As hospitals, cognizant of the Diagnostic Related Groupings reimbursement criteria, continue to shorten patients' lengths of stay, home health care is increasingly relied upon to holistically address the needs of patients at home. From a more positive standpoint, health care in the home environment is more comfortable for patients, offers less risk of infection, saves health care dollars, and lends itself to the promotion of ongoing strategies to improve patients' quality of life.

Diabetes mellitus, whether type 1 or type 2, offers special challenges to home health care providers worldwide.

A study funded by the American Diabetes Association (ADA) found that "diabetes is rarely a focus of care for patients with diabetes when they require hospitalization for other conditions."¹ The diagnosis of diabetes may not even be included in the hospital records of people who have diabetes. According to Jeffrey B. Halter, MD, a professor of internal medicine and director of the Geriatric Center at the University of Michigan in Ann Arbor, "Treatment of high blood glucose levels is often ignored in older people or relegated to secondary importance because of perceived barriers that often do not exist."² A recent epidemiological study found that 42% of the diabetic population in the United States is 65 years or older. This proportion is projected to increase to 53% by 2025 and to 58% by 2050.³ That is of concern because people with diabetes and hyperglycemia face a greater risk of major cognitive decline or physical disability than do those without diabetes. In addition, hyperglycemia in the elderly

can cause poor sleep, nocturnal falls, incontinence, dehydration, impaired mobility, falls, and visual disturbances that interfere with self administration of insulin.⁴ Yet diabetes is often put on the back burner of elderly patient care.

Experts estimate that, in caring for the aging population, home health care providers are an increasingly essential segment of the health care system, especially in the United States.⁵⁻⁷

Diabetes as a Home Health Care Concern

The U.K. Prospective Diabetes Study (UKPDS)⁸ and the Diabetes Control and Complications Trial (DCCT)⁹ have shown that optimal control of blood glucose can make a difference in preventing diabetes-related complications. The question now is how health care providers can understand and use the UKPDS and DCCT to enhance diabetes management and health status. Rappaport et al.¹⁰ expressed the hope that these studies might encourage patients and providers to take glycemic control seriously "by creating plans to aggressively treat hyperglycemia and other risk factors and recognizing that at any point throughout the life span, patients can alter the appearance or progression of diabetes complications."

Many home health care patients have never achieved glycemic control and are found on admission to home care to have blood glucose levels well over 200 mg/dl, a level considered toxic¹¹ that impairs leukocyte function,¹² resulting in predisposition to infection. If diabetes is not identified as a home care concern, blood glucose

measurement may not even be included in initial or ongoing patient assessments. Again, most home health care patients in the United States are referred by hospitals to home health care for whatever comorbid condition led to their hospitalization; they are rarely referred for diabetes care itself.

Home Health Care: A Definition¹³

The term "home health care" encompasses a wide range of health and social services that are usually available 24 hours a day. Home health care is indicated when an individual needs post-hospitalization care or prefers to stay at home but needs ongoing care that cannot easily or effectively be provided by family and friends. Increasingly, older people are choosing to live independent, non-institutionalized lives. They are receiving home health care services as their physical capabilities decline or as there is a need for high-tech medical treatment (e.g., dialysis) to be carried out in their home environments. In the United States, home health care organizations include:

1. **Home health care agencies.** These organizations are Medicare-certified and meet minimum federal standards for patient care and management. The services they provide are highly regulated. Home health agencies organize and coordinate the activities of caregiving teams that may include a nurse (the primary provider), a physical therapist, an occupational therapist, a social worker, a registered dietitian (RD), a homemaker (an agency-provided individual who assists with cooking and housekeeping), and home care aides. Home health agencies also

arrange for their clients to obtain the durable medical equipment and supplies needed for their care at home.

2. **Homemaker and home care aide agencies.** These organizations are usually licensed by the state. They recruit, train, and supervise personnel who serve as homemakers, home care aides, and companions and assist patients with meal preparation, bathing, dressing, and housekeeping.
3. **Staffing and private-duty agencies.** These groups provide nurses, homemakers, home care aides, and companions. They are not required to be licensed or to meet any regulatory requirements. They recruit their own personnel and are responsible for the care rendered.
4. **Registries.** These are employment agencies for nurses and aides. They are usually not licensed or regulated. They are not required to screen or do background checks on caregivers they hire and send into patients' homes.
5. **Independent providers.** This includes nurses, therapists, RDs, aides, homemakers, and companions whom patients hire privately.

Additional information about home health care can be obtained at the NAHC website: www.nahc.org.

Home Health Care: The Stress Reliever

Home health care organizations provide mental and physical stress relief for patients at home. This is particularly important for people who have diabetes. Most stressors can cause increases in counter-regulatory hormones. This can exacerbate insulin resistance and lead to release of glucose from the liver, resulting in elevated blood glucose levels.¹⁴ The therapeutic presence and care of home health care nurses can help reduce these stress responses. They can also help reduce external environmental stressors by arranging for other needed service, such as those provided by a home health aide, physical therapist, social worker, or community program (e.g., Meals on Wheels) when indicated.

Patients and their caregivers often also feel stress related to their respon-

sibilities for diabetes management tasks. Patients and their caregivers need to understand and accept their roles in the self-management of diabetes. Buse¹⁵ has proposed that "the selection of initial therapy should be based on mutually (patient and provider) recognized priorities." He offers seven options to guide goal-setting with diabetic patients: 1) minimal cost strategy, 2) minimal weight gain strategy, 3) minimal injection strategy, 4) minimal circulating insulin strategy, 5) minimal patient effort strategy, 6) hypoglycemia avoidance strategy, and 7) postprandial targeting strategy. Home health care nurses can assist in realistic goal selection through interaction with patients and caregivers in their home setting, thereby providing yet another means of stress relief.

Home Health Care: Who Pays?

In the United States, Medicare pays for a limited amount of home health care for Medicare recipients who are homebound, under a physician's care, and in need of medically necessary skilled nursing services or therapy programs. Medicaid covers almost unlimited home health care for individuals receiving federally assisted income maintenance payments (e.g., Aid to Families With Dependent Children, Social Security disability income, or the "categorically needy," such as aged, blind, or disabled individuals). Several "Medigap" insurance plans as well as some long-term care insurance plans also cover home care. In countries with cradle-to-grave health care systems, home health care agencies are often able to give free care when there is an assessed and documented need. Individuals without insurance coverage for home care must pay for these services out of pocket.

In the United States, the Center for Medicare and Medicaid Services (CMS, formerly the Health Care Financing Administration) implemented in 2000 a new Prospective Payment System (PPS) and new conditions of participation for home health agencies that have forced home health care agencies to focus on cost containment and quality improvement. Many agencies have had to redesign their methods of care delivery to remain viable.¹⁶

The PPS, implemented in all home

care agencies on October 1, 2000, was the greatest change in the Medicare home health care benefit since Medicare was originally enacted in 1965. Its single greatest goal is to maximize effective patient outcomes while minimizing costs and continuing to deliver high-quality patient care. Before the PPS, home care agencies were paid for each patient visit, and supplies needed to care for the patient were reimbursed separately. Now, under the PPS, Medicare gives home health care agencies a standard flat fee to care for and provide necessary supplies for each patient for a 60-day period.

Home care is covered under Medicare Part A. The national standard payment rate for a 60-day episode of home health care is approximately \$2,274 and includes services of all disciplines, all nonroutine medical supplies the patient may need during the episode, and any Medicare Part B outpatient therapy costs the patient may incur during that time. For clients with diabetes, home health care agencies must absorb the cost of insulin needles and syringes and blood testing supplies if clinicians are administering or teaching the administration of insulin or performing or teaching blood glucose testing.

The case mix-adjusted rate is calculated using the Home Health Resource Group (HHRG). The HHRG is a point system that combines assigned points for clinical, functional, and service utilization to reflect the intensity and cost of care required by a typical patient with a given group of diagnoses with nursing assessment scores on the 23-item Home Health Care Outcome and Assessment Information Set (OASIS) Questionnaire, which determines resource utilization for different types of patients and measures the intensity of care and services required for each patient. The HHRG score for an individual client is then multiplied by the standardized payment rate for the 60-day episode of home health care (approximately \$2,274) to determine the agency's rate of payment for the 60-day episode. Nearly half of all HHRG scores are less than 1, resulting in payments less than the stan-

Continued on p. 220

Continued from p. 218

dardized flat rate.¹⁷ Although CMS recognized that patients/clients with diabetes require greater resource utilization, and therefore a higher reimbursement rate for Home Health Care, there is no question in the OASIS that evaluates the quality of diabetes intervention. The author has published a diabetes assessment tool that CMS could add to the OASIS.¹⁸

Diabetes-Related Problems for Home Care¹⁹

In the current health care environment, there will be no administrative movement toward improving quality of diabetes care unless there is a related profit incentive or a care deficit-related penalty. Evidence-based improved methods and tools for achieving optimal glycemic control are now available. It is ironic that barriers exist simultaneously to prevent the delivery of state-of-the-art diabetes assessment, care, and self-management education to this population of patients in the most cost-effective care-delivery setting: the home. An analysis of the current dilemma follows:

1. There is, at present, no regulatory or accreditation mandate, and thus no incentive, to provide state-of-the-art diabetes care and education. Although the diagnosis of diabetes results in a higher reimbursement for home health care, there is no regulatory agency that evaluates the quality of home health interventions for patients with diabetes. If diabetes is not the primary diagnosis, documentation of patients' blood glucose level is not required by CMS or any other agency that reviews home care standards.

Many home care agencies do not permit nurses to carry blood glucose meters. If patients do not have a blood glucose meter and test strips that are quality controlled with glucose control solution, there is no valid way to assess their glycemic control. Blood glucose testing for patients with diabetes is as important a component of home health care nursing visits as assessment of blood pressure, temperature, weight, heart sounds, and lung sounds.

2. Many physicians of home health care patients are not concerned about hyperglycemia. In fact, many prefer to have patients' blood glucose levels high rather than risk them running serious low blood glucose, because hypoglycemia is regarded as a significant change in condition (SCIC) and is implicated in mental status changes. A SCIC must be reported to CMS.
3. Physicians may not routinely order hemoglobin A_{1c} or fructosamine tests or follow any ADA standards of care²⁰ with their home care patients with diabetes. Home health care nurses have the potential to assist physicians to comply with such standards if their agencies consider such goals a priority. It is clear, however, that elderly patients (the largest percentage of home health care clients) with diabetes do not appear to be receiving optimal diabetes care.²¹

The Future

The role of registered nurses (RNs) is of primary importance in home health care. RNs formulate patients' plans of care and coordinate the implementation of those plans with all health care team members. Home care agencies should have a clinical nurse specialist (CNS) or nurse practitioner who is also a certified diabetes educator (CDE) available as a resource to help staff nurses keep their diabetes knowledge updated and to assist in assessment, care, and teaching²² of home health care patients with diabetes to meet the care standards of ADA and the American Association of Diabetes Educators. Home care agencies should also develop updated patient and professional diabetes teaching materials and policies specific to the needs of their patient population.

The Visiting Nurse Service of New York (VNSNY) has taken the lead in providing innovative home health services to people with diabetes. VNSNY employs three diabetes CNSs who are CDEs in a model diabetes program that is part of the Diabetes Management Center of Excellence. The VNSNY website is www.vnsny.org.

Because home care agencies receive a higher level of reimbursement from CMS for patients with diabetes, the highest quality of intervention for

these patients should be expected. Therefore, there should be a mandate from CMS to support the direction for this type of care. Without some regulatory mandate, however, it is unlikely that most U.S. home health care agencies will provide state-of-the-art diabetes assessment, care, and education—and especially adequate self-management education—for this greatly at-risk population of patients.

References

- ¹Roman SH, Chassin MR: Windows of opportunity to improve diabetes care when patients with diabetes are hospitalized for other conditions. *Diabetes Care* 24:1371–1386, 2001
- ²Halter JB: Diabetes mellitus in older adults: underdiagnosis and undertreatment. *J Am Geriatr Soc* 48:340–341, 2000
- ³Boyle JP, Honeycutt AA, Narayan KMV, Hoerger TJ, Geiss LS, Chen H, Thompson TJ: Impact of changing demography and disease prevalence in the U.S. *Diabetes Care* 24:1936–1940, 2001
- ⁴Fonseca V: Rationale for good glycemic control in the elderly. Presentation at an Institute for Postgraduate Medicine seminar conducted in conjunction with the American Association of Diabetes Educators Annual Meeting in Louisville Ky., August 2001
- ⁵Bauerhaus P, Staiger D: Future of the nurse labor market according to health executives in high managed care areas of the United States. *Image* 29:313–319, 1997
- ⁶Mitchell P: Protests force U.S. government to postpone home-care surveillance scheme. *Lancet* 353:1423, 1999
- ⁷Schoen M, Koenig R: Home healthcare nursing: past and present. *Med Surg Nurs* 6:230–233, 1997
- ⁸U.K. Prospective Diabetes Study (UKPDS) Group: Intensive blood glucose control with sulfonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes. *Lancet* 352:837–853, 1998
- ⁹The Diabetes Control and Complications Trial Research Group: The effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-dependent diabetes mellitus. *N Engl J Med* 329:977–986, 1993
- ¹⁰Rappaport WS, Cohen RT, Riddle MC: Diabetes through the lifespan: psychological ramifications for patients and professionals. *Diabetes Spectrum* 13:201–208, 2000
- ¹¹DeFronzo RA, Bonadonna RC, Ferrani E: Pathogenesis of NIDDM: a balanced overview. *Diabetes Care* 15:318–368, 1992
- ¹²Pozilli P, Leslie R: Infections and diabetes: mechanisms and prospects for prevention. *Diabet Med* 11:935–941, 1994

Continued on p. 222

Continued from p. 220

¹³Retrieved from the National Association of Homecare website, www.nahc.org

¹⁴Illness and surgery. In *A Core Curriculum for Diabetes Education: Diabetes Management Therapies* 4th edit. Franz MJ, Kulkarni K, Polonsky W, Yarborough P, Zamudio V, eds. Chicago, American Association of Diabetes Educators, 2001, p. 261–279

¹⁵Buse J: Progressive use of medical therapies in type 2 diabetes. *Diabetes Spectrum* 13:211–220, 2000

¹⁶St Pierre M: Home care in the new millennium: major home health regulatory changes in 2000. *Home Healthcare Nurse* 18:27–31, 2000

¹⁷Sienkiewicz J: Have you mastered PPS? *Home*

Healthcare Nurse 20:308–318, 2002

¹⁸Linekin PL: How the OASIS could include diabetes. *Home Healthcare Nurse* 19: 659, 2001

¹⁹Linekin PL: The challenge of diabetes as a secondary diagnosis. *Home Healthcare Nurse* 19:712–719, 2001

²⁰American Diabetes Association: Standards of medical care for patients with diabetes mellitus (Position Statement). *Diabetes Care* 26 (Suppl. 1):S33–S50, 2003

²¹Weiner JP, Parente ST, Garnick DW, Fowles J, Lawthers AG, Palmer RH: Variation in office-based quality: a claims-based profile of care provided to Medicare patients with diabetes. *JAMA* 273:1503–1508, 1995

²²American Nurses Association and American Association of Diabetes Educators: *Scope and*

Standards of Diabetes Nursing Practice. 2nd edit. Washington, D.C., American Nurses Publishing, 2003

Patricia Landi Linekin, RN, MSN, CNS, CDE, was chairperson of the Home Healthcare Specialty Practice Group of the American Association of Diabetes Educators from 2001 to 2002. She is in private practice as a home health care nurse, lecturer, and diabetes consultant to home health care agencies in New York City, Nassau County, and Suffolk County in New York.