An Examination of Case Management for Alzheimer’s Patients

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**Introduction**

The complex nature of the health care system greatly influences organizational decisions regarding patient care. Priorities in a climate of increasing health care costs and health care errors include fiscal responsibility, accountability to the consumer, and quality and safety outcomes (Huber, 2010). Thus, development of care delivery models for direct and indirect patient care functions must take into consideration all of these interrelated factors. Case management is a process and care delivery model that can effectively coordinate care in order to achieve specific client outcomes given the fiscal constraints of the health care system and the resource constraints of a particular patient situation. It is crucial that case management remain client-centered even when care occurs across an extensive health care continuum. For individuals with Alzheimer’s disease (AD) and related dementias appropriate case management to treat symptoms, maintain functional abilities, and prevent complications is important for meeting the needs of both these complex patients and their families.

**Process of Case Management**

The Case Management Society of America (CMSA) defines case management as “a collaborative process of assessment, planning, facilitation and advocacy for options and services to meet an individual’s health needs through communication and available resources to promote quality cost-effective outcomes (CMSA, 2002). Case management can occur inside or outside the hospital, extend across the health care continuum, or be linked to a population focus. While the case manager is a separate role from the bedside nurse, under this patient care delivery model the case manager can lead a collaborative effort within the multidisciplinary health care team to offer health assessment, planning, service coordination, and monitoring to meet the multiple needs of a specific patient. In an acute care setting, case management strives to meet client
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outcomes within appropriate time frames and resources by minimizing length of stay and maximizing cost-effective care. Care management plans (CMPs) or structured care methodologies (SCMs) are tools that help achieve these goals. They are “used to identify best practices, facilitate standardization of care, and provide a mechanism for variance tracking, quality enhancement, outcomes measurement, and outcomes research (Cole & Houston, 1999).” CMPs and SCMs include critical pathways, evidence-based algorithms, protocols, standards of care, order sets, and clinical practice guidelines that are tailored to a specific patient population (Huber, 2010).

The case management care delivery model relies heavily on the development of these CMPs to outline best practice (Tahan, 2002). A ten step process can be used to form one of these plans. In order to begin, professionals within an institution should form a steering committee that will offer ongoing expert and administrative support throughout the process as a designated team puts together a plan for a specific diagnosis or procedure. The steering committee is mainly responsible for overseeing the first four steps of the process. The first step is to design the format of the plan, which will guide its content. It should include all elements of patient care, from initial assessment and monitoring to discharge planning (Tahan, 2002). Next, the team should identify and select a target population. A population should be chosen based on its need for improvement regarding cost and quality, or one that presents a risk for financial loss, poor outcomes, or is a potential for revenue (Tahan, 2002). The third step is to create an interdisciplinary team, which should include individuals from various disciplines involved in patient care (medicine, nursing, case management, quality improvement, home care, social services, and nutrition). These members should then be trained and educated about case management systems by either a hired consultant or a full time employee that is an expert in the
area of case management (Tahan, 2002). In the fifth step, the team begins to examine current practice and works on the actual content of the plan. They should attempt to identify all of the quality barriers that exist in current practice and develop a flow chart to reflect the projected care of a patient population (Tahan, 2002). The next two steps include reviewing the available literature to validate the recommendations made in the CMP and then determining the length of the plan, focusing on minimizing length of stay for the population. Next the team writes the content of the plan to reflect the best practice that was agreed upon. They then conduct a pilot study to implement the CMP for a group of patients and evaluate it for quality, feasibility of use, appropriateness of its time line, length of stay, any delays or variations in care, practice patterns of physicians, and compliance (Tahan, 2002). The final step is to standardize and normalize the plan by developing policies and procedures regarding its use and sharing it with other health care providers. Successful CMPs help to contain health care costs, reduce lengths of stay, improve quality of care, streamline use of resources, and open communication lines among the health care team members (Tahan, 2002).

**Patient Population and Health Need**

Alzheimer's disease and related dementias are increasingly recognized as important causes of impaired cognition, function, and quality of life, as well as excess medical care utilization and costs in the elderly (Fillit et al., 2006). In the United States, at least 5 million people aged 65 years and older have Alzheimer's disease (AD) (Sparks, 2008). By 2050 the number of individuals with AD could range from 11.3 million to 16 million (Alzheimer’s Association, 2004). It is the third most costly illness in U.S. society, exceeded only by cardiovascular disease and cancer (Fillit et al., 2006). The direct and indirect costs to society and affected families are massive, with estimates as high as $148 billion annually (Christensen &
Lin, 2007). The non-economic toll is incalculable. The average lifetime cost of care for an individual with Alzheimer’s disease is $170,000 (Alzheimer’s Association, 2004). Costs are increased further by the complications of the disease, such as impaired function, which lead to the need for caregiver support. Excess and avoidable hospitalizations may occur, in part as a result of medication noncompliance caused by cognitive impairment, which interferes with the management of common medical illnesses suffered by elderly patients (including heart failure and diabetes) (Fillet et al., 2006). A person with Alzheimer’s disease will live an average of eight years and up to as many as 20 years from the onset of symptoms depending on age at diagnosis and severity of other medical conditions (Alzheimer’s Association, 2004). While these patients cost the federal and state governments huge amounts of money, remaining costs of care for these individuals fall on the client and family.

In 2010 the University of Virginia (UVA) Medical Center saw 306 patients with a diagnosis of Alzheimer’s disease, and a total of 449 cases were reported for the year (Clinical Data Repository [CDR], 2010). Of those 449 cases, 445 included inpatient admissions (CDR, 2010). The average length of stay for these patients was 6.5 days with the total hospital costs for the year for this population reaching $2,895,080 (CDR, 2010). Nearly all patients admitted with a diagnosis of Alzheimer’s disease were older than 65 years of age (CDR, 2010). With the aging of the baby boom generation, the total number of individuals aged 65 and older is expected to reach 70.2 million, or 20.1% of the population by 2030. The overall prevalence of dementia is estimated at 5% to 10% among persons 65 years or older (Smith, 2002). Thus, hospital costs for these clients will undoubtedly reach profound levels in the near future both nationally and on a local level. Effective case management services are greatly needed to manage the complex care of Alzheimer’s clients and control the financial burden on hospitals and families. This
population requires appropriate treatments and referrals so that the clients and their caregivers can maintain quality of life outside the hospital and avoid frequent admissions.

Case Management Plan for Alzheimer’s Patients

Because the deficits associated with early-stage dementia are often attributed to the consequences of normal aging, Alzheimer’s disease often goes unrecognized and misdiagnosed in older adults. New medical treatments that have been developed are most effective in the early stages of the disease, so it is imperative that case managers assist practitioners in detecting and correctly managing clients with dementia as early in the disease process as possible (Smith, 2002). Whether a patient in an acute care hospital setting is first diagnosed with Alzheimer’s disease or he/she is admitted for an issue unrelated to the disease, these individuals must receive case management in order to address care issues that go beyond their hospital stay. The University of Virginia Medical Center does not have fully established case management roles in every practice area, and the hospital has no explicit case management plans outlined for patients with Alzheimer’s disease. Therefore, introduction of such a plan in the acute care setting could assist with the holistic assessment and treatment of these patients that may keep them out of the hospital in the future, thus saving the health care system significant costs. Management of a patient with Alzheimer’s disease should include measurement of cognitive function and assessment of behavior, function, medical status, nutrition, safety, and caregiver status both immediately and in the long-term (Herrmann & Gauthier, 2008). Case managers using managed care plans should be trained in the specific elements of Alzheimer’s disease care management, including early detection, non-pharmacologic behavior management, referral coordination, caregiver and family support, placement assistance, and social supports, including home care and adult day care as appropriate (Fillit et al., 2006). All of these factors should be incorporated into
a blueprint for standardized care to decrease practice variability when it comes to managing these patients.

If a patient in an acute care setting has not yet been diagnosed with Alzheimer’s but presents with specific risk factors and early signs of the disease then a physician should perform a formal assessment to determine cognitive status. Risk factors include increased age (nearly 50% of people over the age of 85 have AD); family history of dementing disorders, especially first-degree biologic relatives of individuals with early onset AD; and a lack of education or illiteracy (Smith, 2002). Clinical practice guidelines for the recognition and assessment of Alzheimer’s have been set forth by the U.S. Public Health Services and can help direct physicians. The Mini-Mental State Exam (MMSE) and Global Deterioration Scale can gauge overall severity of cognitive decline. The MMSE is particularly useful because of the familiarity of many physicians with it, its ease of administration, requirements by many provincial drug formularies to document its score as criteria for reimbursement and the ability to compare this measure with outcome measures in trials of severe dementia (Herrmann & Gauthier, 2008). Initial screening is also recommended to rule out other possible causes of dementia. Neuro-imaging should follow in order to make a definitive diagnosis of Alzheimer’s disease.

Immediately after a physician makes this initial diagnosis, implementation of a case management plan should begin with a referral for counseling and geriatric care management for the patient and family. Physicians, private medical management programs, and public service organizations (such as the Alzheimer’s Association) can provide such counseling (Fillit et al., 2006). Other initial Alzheimer’s care management should include discussions of advanced directives, proxy assignment, and durable power of attorney, as well as referrals for financial planning for long-term care and medical assistance. Other important issues that must be
addressed early on are depression and behavior problems. Thus, case managers need to offer education to patients and families about ways to manage these possible complications as the disease progresses (Fillit et al., 2006).

Although AD is a slowly progressing and complex disease that affects every individual differently, case management goals can be established to address the estimated stage of Alzheimer’s that a patient is experiencing. In the early stage of Alzheimer’s (the first three to five years) care management for these clients must include administration of medications to improve cognitive function; prevention of injury to self or others; health maintenance; referral to a psychosocial therapeutic program, management of depression and anxiety; reduction of symptoms causing personal, social, and employment disability; a possible family conference to communicate the treatment plan and their roles in treatment; and family supportive services and therapy (Smith, 2002). All of these priorities can be managed by a collaborative effort by physicians, nursing staff, physical and occupational therapists, nutritionists, and social workers while an AD patient is in the hospital. A case management plan for this stage would include a checklist to ensure that all of the above factors are considered and addressed appropriately prior to discharge and that sufficient referrals are made. For early symptoms of AD, home care, crisis observation, outpatient treatment, primary care provider’s or psychiatrist’s offices, and memory disorder clinics are used. Acute hospitalization is usually not required unless the person experiences delirium (Smith, 2002). However, if a person with AD is hospitalized for another reason then a CMP for AD should still be used to evaluate current management of the disease.

The middle or maintenance stage of Alzheimer’s disease, which includes the next seven to ten years, in addition to continually addressing the above issues should also consider respite or day care for family support; education on creating a safe and secure environment, setting limits,
and securing the home to prevent injury; managing agitation, aggression, wandering, and sleep disorders; and teaching caregivers about the possible need for step-by-step instructions in activities of daily living and in performing daily tasks (Smith, 2002). The end stage, or the last three to five years of life, should include management of bowel and bladder incontinence, treatment of delusional behavior, obsessive symptoms, and anxiety; and consideration of placement in a secure environment with 24-hour care (Smith, 2002). Therefore, when a person with Alzheimer’s presents to the hospital, a case manager can begin to evaluate the patient’s current status based on a formulated needs checklist for each stage of the disease. From there, the other appropriate health care team members will be called in to further evaluate the patient’s specific needs and the case manager will initiate referrals for disease management outside of the hospital setting.

For a patient admitted to the hospital who has been living with Alzheimer’s for any period of time under the care of someone else in the home, assessment of a patient situation in any stage should also include the caregiver. More than 7 out of 10 people with Alzheimer’s disease live at home, where family and friends provide almost 75 percent of their care (Alzheimer’s Association, 2010). Thus, an acute care Alzheimer’s CMP should also evaluate caregiver needs in addition to the needs of the patient. Also, as a part of regular monitoring of Alzheimer’s patients outside of the hospital setting, health professionals should assess the degree of stress experienced by caregivers. The heavy and continuous burden of care can have important psychological consequences (depression, feelings of hopelessness and anxiety), physical consequences (loss of sleep, social isolation), and financial strains because of direct costs of care and possible loss of income (Herrmann & Gauthier, 2008). If any concerns arise during evaluation, the caregiver should be directed to support services in the community,
including those provided by daycare programs, respite care, and home care. Education about the common features of dementia may provide some relief to friends and family. Caregivers may be guided to educational material from such agencies as the national Alzheimer’s Association. However, if depressive symptoms are identified in caregivers, then they should be screened for risk of self-harm and directed toward support programs for individual, family, and group counseling (Herrmann & Gauthier, 2008).

Outcome based evaluation criteria for the standards of care set forth by a CMP would have to be included in follow-up assessment after an AD patient is discharged from the acute care setting. Family physicians should consider scheduling visits for these patients at least every four months, or three months if pharmacotherapy is used (Smith, 2002). Monitoring should involve assessment of the patient’s cognition, function, behavior, and medical and nutritional status to determine if the initial case management referrals were sufficient. The effectiveness of standards of care could also be evaluated based on how early AD was detected and treated; delay in dependence on others for daily activities and functions; elimination or reduction of suicide and violence risk; lack of falls; absence or marked decrease in alcohol or substance abuse; appropriate and timely utilization of resources; maintenance of skin integrity; dignified end of life care; and caregiver well-being (Smith, 2002). Ideally, with more effective case management, hospitals will see fewer admissions of AD patients who might have experienced complications from poor management, thus decreasing hospital costs and benefiting patients’ families.

Although the University of Virginia Medical center does not yet have explicit pathways established for management of AD patients in the hospital, both the health care system and surrounding community already have in place some important resources for effective case management. In Virginia there are 130,000 people living with Alzheimer's and that number is
expected to grow to as many as 160,000 by 2025 (Alzheimer’s Association, 2010). Approximately 42,000 people suffer from Alzheimer’s disease and dementia in the central Virginia and western Virginia area (Alzheimer’s Association, 2010). The University of Virginia Medical Center is the largest and most renowned tertiary care center in the area. While interdisciplinary health care team members (such as physical and occupational therapists, nutritionists, and social workers) are readily accessible in the acute care setting, solid community resources are also crucial for the continual well-being of AD patients, their families, and caregivers after discharge. Effective case management would include referrals to such resources.

In 1990 UVA developed the Memory Disorders Program dedicated to helping people cope with challenges brought on by an impaired memory and related complications. The program provides comprehensive treatment of memory disorders through a multidisciplinary team of neurologists, neuropsychologists, and neuroradiologists. They offer diagnostic services, treatment, support, and education for patients and their families related to Alzheimer’s disease and other memory disorders. Therefore, this can act as a primary locale for referral for AD patients and families after being discharged from acute care. The Alzheimer’s Association Central and Western Virginia Chapter is also a valuable resource dedicated to helping those in the area who have been diagnosed with Alzheimer’s disease or related dementias, as well as their caregivers and families. This assistance comes in the form of Memory U, a toll-free Help Line, support groups and care consultation in each region, lending libraries, MedicAlert+Safe Return, an annual education conference as well as many other programs and services (Alzheimer’s Association, 2010).

The development and implementation of a CMP for AD patients at UVA would require collaboration between the inpatient areas, ambulatory, outpatient facilities, long term care
facilities, and community organizations. Ideally, a case manager position should be created to lead the collaborative effort, and a team should be formed to put together the written plan and checklists for the CMP. Grants are needed to continue to fund AD research to maintain up to date evidence based practice guidelines for interventions that offer the best possible outcomes for these patients. The Alzheimer’s Association of America offers grants to support non-profit organizations dedicated to aiding individuals with Alzheimer’s disease, so this could be a valuable source of funding for implementation of a case management plan for this patient population.

**Conclusion**

Alzheimer’s disease represents a significant clinical and economic burden to individuals and society. There is evidence that appropriate use of dementia therapy and case management can help achieve quality of life and care for dementia patients and their caregivers and for managing the excess costs of Alzheimer’s disease (Fillit et al., 2006). It is vitally important that this management begin immediately after diagnosis and that the health care team employs a standardized method of addressing the many issues surrounding this complex disease for any patient diagnosed with AD that is admitted to the hospital. A CMP can provide the blueprint for ensuring that all of the appropriate referrals are made and that consideration is taken for the needs of the patient, family, and caregiver at each stage of the disease. Follow-up post-discharge is crucial to maintaining continuum of care and evaluating whether acute care case management programs reduce utilization and medical costs in the long-term. Successful implementation of CMPs for patients with Alzheimer’s could help control the economic and non-economic impact of this disease. This management will be especially significant as prevalence of the disease increases with the aging of the nation’s population.
References


