

Primary Care for People with Chronic Conditions: Issues and Models

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The purpose of The Robert Wood Johnson Foundation (RWJF) Medicare/Medicaid Integration Program (MMIP) is to end the fragmentation of financing, case management, and service delivery that currently exists between Medicare and Medicaid. States are provided with grant support and technical assistance in their efforts to restructure the way in which they finance and deliver acute and long-term care. Technical assistance focuses on those states that have been awarded grants but is not limited to grantees. It is recognized that other states and initiatives can benefit from this help.

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The NCCC has also established a subsidiary corporation, the NCCC National Resource Center on Chronic Care Integration, to provide education, information, and consultation.

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About This Report

This report is one of five technical assistance reports prepared by the National Chronic Care Consortium (NCCC) for the Medicare/Medicaid Integration Program Office. The five reports focus on topics pertinent to creating more integrated delivery networks or coordinated systems of care for people who are dually eligible for Medicare and Medicaid. The topics chosen include:

1. Case Management: Methods and Issues
2. Targeting Beneficiaries Who Are Most at Risk
3. Primary Care for People with Chronic Conditions: Issues and Models
4. Quality Methods and Measures
5. Integrating Information: Selected Issues

The reports draw upon written documents prepared by the NCCC for its healthcare system membership, for healthcare organizations at large, and for organizations participating in the State of Minnesota's dually eligible demonstration, Minnesota Senior Health Options (MSHO). Excerpts from the following NCCC publications/materials appear in this report with permission.

- *Case Management for the Frail Elderly: A Literature Review on Selected Topics*, by Joan Cleary. 1997.
- *Integrating Care for People with Chronic Conditions*, by Richard Bringewatt. 1995.
- *Integrating Pharmaceutical Care: A Vision and Framework*, by Deborah Paone, Richard Levy, and Richard Bringewatt. 1999. Published jointly by the National Chronic Care Consortium and the National Pharmaceutical Council.
- *NCCC 1999 CareLink Compilation*, 2000.
- *Perspectives in Disability Prevention*, by Cheryl Phillips-Harris, M.D. 1996.
- *The Primary Care Team: Cornerstone of a Chronic Care Network*, by Susan Denman, M.D., and Joyce Anne Wainio. 1999.
- *Risk Identification: Exploring A Conceptual Framework and Identifying Implementation Issues*. 1995.
- *Self-Efficacy/Self-Health Care Among Older Adults: A Literature Review*, by Deborah Paone. 1999.

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Introduction

Primary care for people with chronic conditions should be comprehensive, accessible, team-oriented, coordinated across settings and over time, and should promote disability prevention and good self-management practices. This report explores key issues in providing primary care to those with chronic illness and examines several models and programs.

Major Questions for Discussion in This Report:

- What is primary care?
- Who should provide primary care?
- How can we identify or define important characteristics of people with multiple chronic conditions or who are frail?
- How are the elements of primary care different for people with chronic conditions or people who are frail than for people without an ongoing chronic illness or condition? What are these important elements?
- What are some models or programs that have been developed and tested that reorganize primary care for the person with chronic disease or that recognize issues arising from chronic illness? What evidence is there that these models or programs work?
- How well are we doing in providing good geriatric primary care?
- What outcomes should we be looking for?

Primary Care

What is primary care? Who should provide primary care?

In medicine primary care usually refers to the point of first contact for individuals who require diagnosis, treatment, or consultation for illness or injury. Three main features of primary care have been described by researchers (Mendenall et al. 1979); they are:

1. Accessibility
2. Continuity
3. Comprehensiveness

Denman and Wainio (1999) have defined primary care as: “the coordinated provision of services over time and across the array of settings where services may be accessed.” Others have described three “anchoring points” of the work of primary care providers, including: first contact, longitudinal responsibility, and a broad integrationist role (Alpert and Charney 1973). That is, the provider is the point of first contact for prevention and screening and when symptoms of illness or needs arise. He or she has ongoing responsibility for the patient and is expected to know when to involve other practitioners in the diagnosis, treatment, or provision of care to the patient.

The Institute of Medicine (1996) has defined primary care as “the provision of integrated, accessible healthcare services by clinicians who are accountable for addressing a large majority of personal healthcare needs, developing a sustained partnership with patients, and practicing in the context of family and community.”

The focus is comprehensive and holistic, recognizing medical, physical, functional, and emotional issues. Primary care providers are able to identify need, diagnose or counsel with a patient, suggest a course of action, and refer to others as needed. They then follow up with the patient to determine the results achieved.

Though we often think of a primary care provider (PCP) as a physician, the PCP may be a nurse practitioner who has an ongoing relationship with the person or a team of healthcare professionals who work together and offer different areas of

expertise to the management of care for an individual.

Focusing our attention on physicians for a moment, the term “primary care physician” often refers to a medical doctor trained in family practice or internal medicine, a pediatrician, or (sometimes) a geriatrician. However, the primary physician in the care of a chronically ill individual may be a specialist such as an endocrinologist or a cardiologist. The term “principal” provider also

has been used to describe a physician who is the main point of contact for a patient, regardless of medical specialty. So, for example, the primary care team for a person with multiple sclerosis might consist of a neurologist, an occupational therapist, a nurse practitioner, a social worker, and a personal care assistant.

There are no universal standards for when a primary care provider should treat a patient versus a physician

trained in a particular medical specialty. A conference report on the interface between primary and specialty care (Clancy, Lanier, and Grady 1996) discusses the ambiguity of professional roles between primary care physicians and specialists. The report notes that many specialists provide primary care and that there is great variability in the referral patterns of primary care physicians to specialists. Two other factors come into play as well: notable variation in practice patterns by region and consumer expectation about referrals. These factors make it even more difficult to determine when consultation and referral is most appropriate.

This report also notes that many managed care organizations have established payment arrangements or financial incentives to discourage or inhibit enrolled patients’ direct access to specialists and to reduce referral rates among primary care physicians to specialists. Some studies have found that managed care precipitated a significant decrease in specialist involvement in primary care (Simon et al. 1997). Recent changes by some health plans in the structure of payment arrangements have loosened the hold on PCPs with regard to specialty referral. Many agree that

The Institute of Medicine (1996) defines primary care as:

the provision of integrated, accessible healthcare services by clinicians who are accountable for addressing a large majority of personal healthcare needs, developing a sustained partnership with patients, and practicing in the context of family and community

the needs of the client, not the constraints of a plan's benefit package, should dictate the makeup of the primary care team.

Especially when considering care for older adults, the distinction between who may be considered a primary care physician and who is considered a specialist is not always clear. For example, David Reuben and his colleagues (1994) found that most geriatricians provide more "generalist or primary care" than specialty care—these geriatricians more often serve as primary care physicians than consultative specialists.

Should older people always receive care from geriatricians? Even if the answer is yes, this "gold standard" cannot be upheld since we have too few geriatricians in the United States to treat all the older people needing care. Given the scarcity, we need to find the best way to deploy the skills of the geriatricians we have. Some have called for geriatricians to serve in leadership or consultative roles to others.

Thomas von Sternberg (1999) describes several leadership roles for geriatricians practicing in a managed care organization. These roles include:

- "Manager for programs involving the Medicare population within the managed care plan"
- "Champion for clinical programs"
- "Educator for primary care and specialty physicians"
- "Liaison with hospital and community programs for the managed care plan"
- "Clinician for special populations or for special venues within the managed care plan"

He also provides examples of the tasks and time commitment associated with various leadership responsibilities.

In a related article, the American Geriatrics Society Health Care Systems Committee (Mims 1999) provides its position statement on the role of geriatricians in managed care. The Committee recommends that:

- The geriatrician should serve in leadership positions within managed care organizations to drive the necessary changes in the delivery system to promote optimum care for all older adults.
- The geriatrician should be utilized as an expert resource for knowledge and training for

clinicians and other health plan staff for geriatrics and gerontology.

- The geriatrician should be utilized as the clinical expert in the care of complex and frail older adults.

For a person with a chronic condition, the "best choice" of a primary care provider can depend highly on that person's set of conditions, previous experience, and personal preferences. A team approach that includes the relevant specialists, as well as professionals from social services and other disciplines, may be the wisest course of action, especially for people with multiple chronic conditions and issues. The specialists will have the expertise in the medical aspects of a particular disease and their expertise will help reduce the effects of the disease itself, but these specialists may not be as effective in organizing social services or in coordinating care from a variety of providers. The generalist primary care physician may be more familiar with the individual and his or her medical and nonmedical concerns but may not know the most effective approach for a particular disease. Other team members, such as the social worker, may bring expertise in how to access necessary community services. In this case, the sum will be greater than the collection of individual efforts.

Characteristics of People with Chronic Conditions

How can we identify or define important characteristics of people with multiple chronic conditions or who are frail?

People with chronic conditions have needs that are “multidimensional, ongoing, and interdependent” (Bringewatt 1995). Chronic disease and its effects:

- Have many dimensions (for example, physical, functional, emotional)
- Are continuous without obvious or predictable resolution
- Often affect and are affected by other aspects of the person’s health and well-being

Chronic conditions such as diabetes, congestive heart failure, chronic obstructive pulmonary disease, and arthritis are relatively common among older population groups such as those who are dually eligible for Medicare and Medicaid. Aside from the medical issues, these diseases take their toll on functional capacity, emotional health, and quality of life. The result is often a diminished capacity to cope and a gradual decline into permanent disability. For example, Speechley and Tinetti (1991) looked at falls among the elderly and defined frailty as the presence of four or more frail characteristics and less than two vigor characteristics. They derived the following characteristics of frailty: being 80+ years old, depressed, and sedentary; having loss of near vision; taking sedatives; and having balance and gait problems, diminished shoulder/knee strength, and lower extremity disability.

Buchner and Wagner (1992) found that an important **pathway to frailty** may be the episodic loss of capacity due to illness or other insult which is followed by **incomplete recovery**. They hypothesized that recovery can be blocked because chronic illness prevents resumption of normal activities or because depression or other psychosocial factors adversely contribute to the trajectory of decline. Frailty is defined by these authors as a “state of reduced physiologic reserve associated with increased susceptibility (risk) to disability. Reduced physiologic capacity in neurologic control, mechanical performance, and energy metabolism are the major components of frailty.” They believe that, to some extent, frailty is preventable. The following approaches to prevention embody concepts important in good primary care for older people:

- Periodic monitoring of key physiologic indicators of frailty

- Prevention of physiologic loss and acute and subacute episodes of physiologic loss
- Prediction of episodes of physiologic loss and the reduction of frailty prior to the loss
- Removal of obstacles to recovery once physiologic loss has occurred

Rockwood, Stolee, and McDowell (1996) tested a model that defines frailty “as a vulnerable state resulting from the balance and interplay of medical and social factors,” by examining factors associated with institutionalization. They argued that because many factors, including medical and social issues, increase the risk of entering an institution, institutionalization is a good test of a frailty model even though not all frail elders are in such settings. Risks for institutionalization were investigated for older people in the Canadian Study of Health and Aging. The study found that being female, unmarried, and without a caregiver and having a cognitive impairment, a functional impairment, diabetes, stroke, or Parkinson’s were all associated with being in an institution. The model of frailty used in this analysis proposed that maintenance in the community (and thus risk of institutionalization) is mediated by a complex interplay of biological, medical, social, and psychological factors. The result is a balance of assets that maintain and deficits that threaten continued residence in the community. When deficits outweigh assets, there is a breakdown in the capacity for the person to live in the community, and institutionalization results.

Campbell and Buchner (1997) contend that the four components of frailty (musculoskeletal function, aerobic capacity, cognitive and integrative neurological function, and nutritional reserve) require evaluation and intervention while underlying causes are sought and treated, even if all underlying causes are not identified. The use of these four components facilitates:

- Early and active identification of elderly people at risk of unstable disability
- Attention to underemphasized areas such as nutritional state
- Comprehensive evaluation so that the interactive, compounding aspects of frailty are identified
- Use of neglected, non-pharmacological interventions such as exercise programs, dietary supplements, and contact with social activities

Primary Care for People with Chronic Conditions

How are the elements of primary care different for people with chronic conditions or people who are frail than for people without an ongoing chronic illness or condition? What are these important elements?

People with chronic illness will differ in their primary care needs from those without an ongoing disease. A heavier emphasis on disability **prevention**, early **risk screening**, more **comprehensive assessment**, use of a **team** with expertise in different areas, active **care coordination**, regular **monitoring**, complete follow-up, and better **self-care** capability will be important for this group.

Prevention

For many people primary care means preventive health visits for vaccinations, immunizations, periodic tests and screening, and an occasional visit for illness or minor injury. That is to say, a key component of primary care is often prevention. Prevention often means being up-to-date on immunizations, avoiding risky behavior, maintaining a good diet, and exercising regularly. These health behaviors are important for anyone—including the person with a chronic condition. However, prevention is not only a process of avoiding disease entirely, it also encompasses reducing the impact of disease once it has taken hold.

For people with chronic conditions the goal is not cure but maintenance to eliminate, minimize, or delay the effects of disability progression. The goal of disability prevention for people with chronic conditions is “to maximize an individual’s functioning, well being, and quality of life while achieving optimum care and cost outcomes” (Phillips-Harris 1996). People with chronic conditions and those with multiple health problems will require primary care that incorporates three levels of prevention.

The Institute of Medicine in *Disability in America* (1991) describes these three levels of prevention—primary, secondary, and tertiary prevention—and the risk factors that affect the progression of disease (see Table 1). Primary prevention is aimed at avoiding disease. Secondary prevention focuses

on catching the disease at an early stage to avoid or minimize further decline. Tertiary prevention is aimed at maintaining level of function, avoiding complications, and helping the person adapt to the disease at its present stage.

Primary prevention helps the older person or the person with chronic illness avoid additional diseases. Methods include educational and

Table 1

Disability Prevention		
Type of Prevention	Method of Prevention	Goal of Prevention
Primary	Education and lifestyle modification	Avoid disease
Secondary	Early detection and treatment	Minimize progression
Tertiary	Rehabilitation and interventions	Prevent functional decline

Source: Institute of Medicine, 1991

lifestyle modifications around issues such as substance use (tobacco, alcohol), nutrition and diet, exercise, heart disease, osteoporosis prevention, immunizations (for example, for influenza, tetanus), and injury prevention. Studies have shown a reduction in disease morbidity and cost of care by simply providing annual influenza vaccines to at-risk population groups (for example, frail elderly). Studies have also demonstrated under-utilization of these interventions by the old-old (over age 85) and by disabled individuals due to noncompliance with recommended interventions, lack of access to the services, physician failure to communicate the benefits of primary prevention for these clients, or a belief that behavior modifications cannot be made by the elderly.

Secondary prevention involves the early detection or early treatment of asymptomatic disease or disease in an early stage of progression. Again, this is just as important for the person who already has one chronic disease as it is for a person with no history of disease—and perhaps more important—since we know that one disease can exacerbate another. Keeping the second disease at bay will help the person with existing illness focus energy and attention on managing the existing condition. Secondary prevention services that are often overlooked in a frail population include risk screening for falls, incontinence, depression, polypharmacy, cognitive impairment, malnutrition, and chronic pain. In these areas small interventions can often have significant impact on functional status, independence, and sense of well-being.

Tertiary prevention includes rehabilitation services and early interventions to prevent functional decline or disability through the progression of disease. Even though a person may have a disease that has led to impairment, there are still things to be done to avoid permanent disability and help the person adapt. For example, hand and wrist splints worn at night can help ease pain or slow progression of crippling arthritis. Simple exercises can reduce loss of range of motion. Memory or speech exercises can help reduce anxiety associated with loss due to stroke or can increase an individual's sense of self-control. Tertiary prevention also includes the screening for and the provision of caregiver support and resources. It is estimated that 95 percent of personal care is delivered by 2.2 million informal caregivers (Folden 1989). When tertiary services are not available, social problems quickly develop into medical crises that are dealt with, too often, in the acute care setting. Ultimately, this becomes extremely costly to the system, the providers, and the individual.

Successful disability prevention strategies must be based on the knowledge of risk factors (see Table 2), disabling conditions, quality-of-life factors, and the likelihood of contracting secondary conditions (for example, decubiti ulcers, bladder infections). When appropriately applied, these strategies can lead to positive outcomes as measured by mortality, morbidity, functional status, quality of life, cost of care, and utilization of services.

Table 2

Examples of Risk Factors by Type	
Biological	<ul style="list-style-type: none"> • Genetic factors • Adverse effects of drugs (e.g., the sedating effects of psychotropic drugs increasing the risk of falling) • Multiple comorbidities
Environmental (Social and Physical)	<ul style="list-style-type: none"> • Lack of family support • Death of a spouse • Lack of transportation • Social stigma regarding dependence on wheelchair • Exposure to pollutants • Lack of access to adequate healthcare
Lifestyle and Behavioral	<ul style="list-style-type: none"> • Poor eating ability and inadequate diet • Tobacco use, alcohol use, drug use • Stress • Sedentary lifestyle • Inadequate coping behavior

Source: Institute of Medicine, 1991

Risk Identification/ Risk Screening

Risk identification is an ongoing process of identifying and targeting individuals at high risk of adverse outcomes or events—for early intervention to avoid or minimize the adverse event. It is aimed at preventing disability or delaying further deterioration. It can be a mechanism for providing quality service while minimizing cost. It is an important tool that can be used effectively by the primary care team or by the healthcare plan or system that supports the effective use of the primary care provider's time.

In the short term, addressing the needs of the highest-risk group is often the first priority for intervention, given the potential for immediate reward (that is, avoiding an unnecessary hospitalization). Over the long term, risk identification will allow payers and providers to also begin to target low-risk groups in order to prevent decline and decrease the number of people who progress to chronic illness and disability. The cost/benefit trade-off of risk identification and early intervention are well documented for high-risk groups.

A risk identification process should begin at the earliest point possible in order to manage care

effectively—upon enrollment of a person in a health plan or as soon as they come into the primary care clinic if the person is not enrolled in a managed care plan. Although the starting point for identification may differ, the goal is common: to group people according to their similarities of risk in order to intervene and modify risk factors (for example, prevent disability or lessen the rate of functional decline). Risk identification can be accomplished through case finding methods or risk screening, followed by a more in-depth risk assessment and intervention to address the areas shown to be at risk.

Risk screening is the process of dividing a given population group into risk categories (for example, low, medium, high). Screening often occurs immediately after a person has elected to join a health plan. Screening is the first step in understanding how likely the person is to require medical care for an adverse health event. It may be done by the health plan or by the clinic provider/care system that the person has chosen as his or her primary care access point.

Screening usually involves either reviewing existing data in a medical information system (MIS) or collecting new information. The two approaches may be used together. New information is usually collected through questionnaires administered by mail, telephone, or personal interview. The responses to these questionnaires are then scored, and each enrollee is categorized according to risk level. Again, combinations of approaches may be necessary. A plan or provider's approach will be based on the available data, logical points at which contact may be made with consumers/enrollees, and staff costs.

Once the person's responses to the risk screening questionnaire are scored, the results should be used effectively—that is acted upon. Providers are usually most interested in the people who score at the high end of the scale—indicating they are most at risk for an adverse event. This usually represents from 5 to 10 percent of an enrolled Medicare population. It is important to get the screening information into the hands of the primary care provider/team immediately and in a usable format so that they can act upon it. Often the primary care provider/team will need additional information about this highest-risk group to identify the best response to need. This is the time when a more comprehensive risk assessment will be done.

There must be support from the health plan or health system to organize response to needs uncovered through risk screening and risk assessment. Services such as home delivered meals, home adaptations, family training and

education, respite care, etc. must be reliable and known to the primary care team. These services have to be easily accessible to the individual as well. Ongoing communication to the primary physician/team will ensure that there is continuity and accountability.

Comprehensive Assessment

Good primary care management of older people and those with chronic conditions will require a comprehensive assessment of medical, functional, nutritional, and psychosocial needs, as well as the individual's level of home support and self-care capability.

Often primary care providers focus on key geriatric syndromes when assessing their elderly patients, targeting areas such as: functional impairment, falls, depression, cognitive impairment, vision/hearing impairment, urinary incontinence, sleep disorders, and weight loss or rapid fluctuations in weight. They will also look at the medications taken and other lifestyle issues or behaviors that may impact the health of the elderly patient. Comprehensive geriatric assessment has been shown to be an effective tool if targeted well and if recommendations made after the assessment process are followed (Shah et al. 1997; Rubenstein 1983).

In one study of older people aged 75+ living in the community, Stuck and his colleagues (1995) found that annual in-home comprehensive geriatric assessments with good follow-up were effective in identifying needs and preventing disability, particularly focusing on the need for assistance in performing ADL and IADL activities. The annual assessments were also effective in preventing nursing home admissions.

Unfortunately, even when a comprehensive geriatric assessment is conducted by a geriatrician or team who feeds appropriate recommendations back to the primary care physician, these recommendations are not always followed. For example, one study (Shah et al. 1997) targeted four geriatric syndromes (falls, depression, urinary incontinence, and functional impairment). The study group included 150 older patients living in the community who had at least one of the four conditions. They all received a comprehensive assessment by a consultation team. The team made 528 recommendations back to the primary care physicians for these 150 people. Of these recommendations, 212 were related to the target conditions. Overall, physician implementation of these recommendations was 70 percent, but rates varied based on condition—the best follow-up by the PCP was for falls, and the lowest rate of follow-up was for functional impairment.

Some of the recommendations were for patient self-care. Overall patient adherence for self-care recommendations was 46 percent, with the lowest level of follow-up for recommendations related to exercise, counseling, or support groups. The authors of the study stress the importance of examining patient and physician adherence to recommendations generated by a consultative geriatric assessment team. The real benefit of the team's expertise will not be seen if the recommendations for action and follow-up are not undertaken. Perhaps additional support is needed at the PCP or clinic level, and for patients and families as well, if full benefit of assessment is to be realized.

Team Management

The Institute of Medicine definition quoted at the beginning of this report embraces the notion of a team of providers, not just a single physician, providing primary care. This is especially important for people who have a range of needs—for example, the dually eligible population—who often require both medical and nonmedical services to remain independent.

In fact, good primary care for people with chronic care needs relies on key relationships among an interdisciplinary team of providers, including nurses, care coordinators, physicians, physician assistants, nurse practitioners, therapists, social workers, clients, families and caregivers, patient educators, and community resource providers. Additional services from ad hoc team members such as psychologists, pharmacists, nutritionists, and complementary care providers may also be necessary. The primary care team provides necessary medical care when needed but also focuses on helping the person to manage on a day-to-day basis.

Although a variety of care team models have been described in the literature, the cohesive and constructive nature of true "care teams" is seen only in pockets of delivery systems or programs. The On Lok/PACE program model embraces care teams as a central component of managing the care of frail seniors. PACE, with combined Medicare/Medicaid financing, brings together all medical, restorative, social, and supportive care. PACE seeks to preserve each older person's independence in the community. The PACE team model is made up of physicians, nurses, social workers, therapists, drivers, health aides, and others.

The concept of care teams is evolving as the individual segments of the healthcare field increasingly become aware of the interdependence of their work. Over the years care teams have

emphasized the multidisciplinary and, more recently, the interdisciplinary nature of working in teams.

Primary care teams need to be flexible in order to function in a changing way according to client needs. Leadership may shift from time to time depending on these needs. For example, when medical needs are a priority, a physician, nurse practitioner, or physician assistant will likely assume the leadership role. When home safety or assistance with care delivery in the community is a critical or changing issue, a nurse or social worker may take the lead. One person on the team may be designated as the main contact person for the client/patient. This person, in consultation with the team, arranges appropriate treatments and services to best meet the identified needs of the client and, if necessary, the caregiver. The process of care is linked to a clear communication system that includes everyone involved in the management of care, including the client, the family or caregiver, and all other support systems. The success of the team relies on a clear delineation of roles and processes for the team and its members.

Active Care Coordination and Monitoring

For the person with a serious chronic illness or multiple health problems, primary care will involve the coordinated provision of healthcare services over time and across the array of settings where services may be accessed. At times the social or psychological issues in a person's life will dominate his or her need; at other times medical issues will dominate. Coordination involves communication (with other healthcare professionals, with the patient, and with family members), record keeping, anticipating and planning for needs, arranging services, smoothing transitions, checking back to monitor results, consulting with others, and adjusting services/plans if needed. As with the other components of good care, these activities are not the domain of one profession.

For many people who are living with chronic conditions, the primary care component is often the essential constant in their lives for organizing the myriad of services that they need. For these individuals, the primary care team serves as the integrated entry point into the larger healthcare system. Active care coordination across the spectrum of providers, settings, and services can become a lifeline for the person with chronic conditions.

There are many ways to approach the need for

active care coordination and monitoring. Some programs have established a case management function that is separate from, but communicates with, the primary care provider/team. Other programs have imbedded the care coordinator/case manager role in the primary care team. There may be one person who is known as the “care coordinator” on the team, or this role may be assumed by more than one individual, depending on client need.

Because there are so many different definitions and approaches to care coordination, there is often confusion around how to best structure “care coordination.” Some care coordination programs focus more on the medical needs of the patient, others on the social service needs; some programs emphasize a consumer-advocacy role, and others focus on reducing unnecessary utilization of services. Often these differences are a function of who has developed the care coordination program, where it is housed, what the intended purpose of coordination is, and who is paying for it.

Nevertheless, several common elements emerge that characterize comprehensive case management or care coordination (Denman and Wainio 1999; Chen et al. 2000):

- Screening and intake
- Comprehensive assessment
- Care planning
- Service arrangement
- Communication with others
- Monitoring
- Reassessment and adjustment

This list shows many of the duties of the primary care team. If these are also duties assigned to a case manager who is separate from the primary care provider(s), then the importance of communication and coordination among the healthcare and social service professionals cannot be overstated.

The way that a case manager is integrated into the primary care practice can make a big difference in how effective this person can be. Indeed, there is evidence that some of the most successful case management/care coordination programs are based in the primary care physician’s office, allowing the professional trust and credibility to develop and fostering better communication. The key to avoiding duplication and confusion between professionals seems to be establishing clear lines of function, authority, and limits before the first patient walks through the door (Evashwick 1997). Other key factors for success include timely, accurate, and useful information sharing, including good data tracking to show evidence that the case management/care coordination function added to good outcomes for

the patient/client. Von Korff and colleagues, (1997) identify elements of collaborative management that should bring together patients/clients, families, and providers to better meet the challenge of managing health with a chronic illness (see Table 4).

Regardless of how it is provided, care coordination should be seen as part of the role and activities of the primary care team—not divorced from it.

Self-Care

Self-health care has been described as “including all the actions and decisions that an individual takes to prevent, diagnose, and treat personal ill health; all individual behaviors calculated to maintain and improve health; and decisions to access and use both informal support systems and formal medical services” (Coppard et al. 1984). Medical self-care has been described as what people do to recognize, prevent, treat, and manage their health problems (Mettler and Kemper 1993).

For those with chronic illness, self-care will be an activity they do every day. For the person with diabetes, this may include monitoring blood sugar on a daily or more frequent basis. For the person with congestive heart failure, this may include taking a daily weight and noting any rapid gain. For the person with severe asthma, this may include recording lung capacity through use of a peak flow meter. The person with chronic illness lives and manages his or her disease day in and day out. Therefore, increasing self-care skills becomes an important way to promote better health management and should be a standard component of primary care for people with chronic conditions.

Responsibility for disability prevention is shared between a clinician and a client. Making this shared responsibility explicit and finding ways to recognize self-care skills can be a key to better management of chronic conditions. Self-care can make the interventions that physicians or others recommend more relevant (to older adults in particular). With a better understanding of the disease process and how certain technologies or medicines can work together with lifestyle behaviors (for example, diet, exercise), patients can better see their role in care management.

Catherine Connelly (1993) created and tested a model of self-care that focuses specifically on chronic illness. She expanded on the Health Belief Model, which is a conceptual framework initially created to predict compliance with medication and preventive health behaviors. The Health Belief Model asserts that, in order to decide whether to engage in a certain health behavior, people weigh

Table 3

Essential Elements of Collaborative Management
<ul style="list-style-type: none"> • Collaborative definitions of problems whereby patient-defined problems are identified along with medical problems diagnosed by physicians • Targeting, goal setting, and planning that allow patients and providers to focus on specific problems, set realistic objectives, and develop action plans for attaining those objectives in the context of patient preferences and readiness • Creation of a continuum of self-management training and support services whereby patients have access to services that teach the skills needed to carry out medical regimens, guide health behavior changes, and provide emotional support • Active and sustained follow-up whereby patients are contacted at specified intervals to monitor health status, identify potential complications, and check and reinforce progress in implementing care plans

Source: Von Korff et al. 1997.

the value of engaging in that behavior against the barriers and costs of undertaking that behavior (Hochbaum 1956; Becker 1974). Evidence supports the utility of this model (Janz and Becker 1984). Others have found that a person's perception of the severity of illness also affects whether the individual complies with medical treatment or engages in self-management behaviors (Alonga 1980; Harris and Linn 1985). Connelly describes major issues influencing self-care among those with chronic illness (some factors that can serve as barriers to self-care) including:

1. Treatment in chronic illness tends to be complex, frequently requiring multiple behavioral changes and new routines such as a medication regimen, a new or restricted diet, regular exercise, and other habit changes (for example, stopping smoking, reducing alcohol consumption).
2. Patients often need and want to continue their usual social roles; jobs, families, and other responsibilities will limit their opportunities to assume a "sick" role.
3. Patients must incorporate the recommended health and illness behaviors into the repertoire of their daily lives.
4. Supervision, support, and reinforcement are available only through regularly or sporadically scheduled appointments over varying periods of time, not on a daily basis.
5. Patients are the primary, direct providers of their care.
6. Healthcare workers function as educators and facilitators.

7. Families, friends, and others significantly impact the health and illness behaviors of patients.
8. Care effectiveness often depends on the extent to which patients understand, believe in, and follow recommendations.

Spitzer and colleagues (1996) conducted a study examining the moderating effect of age on the relationships among symptom severity, self-care and others' care, patients' perception of the extent of problem solution, patients' satisfaction with the solution, and patients' perception of control over their health. This study indicated that young populations sought maximum relief of symptoms with minimum effort from the self. The elderly, in contrast, sought to maximize control because what was important for them was not to depend on others but to be self-sufficient in solving their health problems. These authors hypothesized that the discrepancy between need and capacity grows with time. This, in turn, makes it more crucial for the elderly than for younger people to avoid any circumstances that involve lower self-control and, therefore, lower self-care. The variation in the process of achieving health control is one of the differences in patterns of care for elderly and young chronically ill adults. The sense of control of the elderly subjects was influenced negatively by symptom severity and others' care and positively by self-care and satisfaction from the solution.

Good self-care can improve quality of life, help prevent complications, and improve outcomes. In order for self-care to be effective, clients must receive sound information, training in self-care skills, and support to handle the interventions.

Programs

What are some models or programs that have been developed and tested that reorganize primary care for the person with chronic disease or that recognize issues arising from chronic illness? What evidence is there that these models or programs work?

Programs That Promote Self-Care

Outcomes studies on an arthritis self-management program developed by Kate Lorig and her colleagues at Stanford University have shown that program participants exhibit significant increases in disability prevention behaviors such as exercise and the practice of pain management techniques (Lorig 1993; Lorig and Holman 1993). Participants also expressed a decrease in the level of joint pain because they felt they had more control over their symptoms. The Arthritis Self-Management Program is a 12-hour course taught over six to seven weeks by laypeople who have had training in the curriculum and in facilitating groups. The course includes instruction on cognitive symptom management, patient/physician communication, medication issues, and exercise programs.

Lorig later expanded the course to encompass other chronic diseases. Lorig and colleagues (1999) created a Chronic Disease Self-Management Program (CDSMP). Topics in the curriculum include: exercise; use of cognitive symptom management techniques; nutrition; fatigue and sleep management; use of community resources; use of medications; management of the emotions of fear, anger, and depression; communication with others including health professionals; problem solving; and decision making.

Lorig and colleagues evaluated the effectiveness (that is, changes in behaviors, health status, and health service utilization) of this self-management program with a mixed group of chronic disease patients. These researchers also explored the differential effectiveness of the intervention for subjects with specific diseases and comorbidities. There were three primary classifications of outcome variables: health behaviors, health status, and health service utilization. As compared with controls, the treatment group demonstrated significant improvement in all health behavior variables (number of minutes per week of stretching, strengthening, and aerobic exercise; increased practice of cognitive symptom management; and improved physician communication). They also demonstrated significant improvement in five of the health status variables (self-rated health, disability, social/role

activities limitation, energy/fatigue, and health distress).

The study conclusions suggest that the intervention was successful in increasing healthful behaviors, maintaining or improving health status, and decreasing rates of hospitalization. Activity limitation, health distress, and disability were all improved, although there were no definitive answers about clinical significance. The authors suggest that the CDSMP affected important physical and mental aspects of participants' lives. "However, the benefits that were achieved were additional to those achieved by usual care. Conceivably, integration of a CDSMP with usual care, perhaps at the outset of a chronic disease, would further enhance the benefits."

In another study on self-care practices among older adults, Leveille and colleagues (1998) evaluated the impact of a one-year, senior center-based chronic illness self-management and disability prevention program on health, functioning, and healthcare utilization in frail older adults. There were three primary goals to this program:

1. Reduce risk factors for disability, especially through increased physical activity
2. Promote social activation
3. Enhance medical management and self-management of chronic illness

Interventions included: a tailored exercise class with home follow-up, participation in the CDSMP as described above, and the development and use of a health action plan that was tailored to each senior's needs and interests. All of the measures, including better physical functioning, better self-care behaviors, and lower healthcare utilization, were reported to show significant improvement. The impact of the intervention(s) was most evident in the more basic measures of functioning, that is, activities of daily living and days of restricted activity. The authors feel that this model of care, using a prevention-oriented assessment and self-management program, when part of a supplement to primary medical care, is effective for frail older people. They suggest that there is a need for further research to evaluate the potential benefits of this community-based intervention.

Programs That Reorganize Primary Care Practice

Another approach focuses on changing the paradigm for providing primary care and the role of patients. This is the group (of patients) visit model for primary care, which appears to improve participating patients' knowledge about symptoms and their ability to respond to changes in their conditions and also to provide the time for healthcare professionals to identify issues and address them proactively. One example of this is Kaiser Permanente's Cooperative Health Care Clinic (CHCC), designed to provide better care to people with chronic conditions who have frequent care needs. The primary care physician and his or her nursing staff are integral to the group's functioning, but the group itself becomes a resource to the other patients participating.

Arne Beck and colleagues (1997) examined this group visit model and tested it in a randomized controlled study. The hypothesis of this study was that the CHCC group care model would result in the maintenance of patients' functional capacities, reduced utilization of outpatient and inpatient services, and increased patient and provider satisfaction with care. The eligibility criteria included: being 65 years or older; having a chronic illness (as assessed through chart review) falling into one or more of four categories: heart disease, lung disease, joint disease, or diabetes; and having relatively high healthcare utilization patterns within the preceding 12 months and one or more calls to the nurse or physician every 2 months.

A randomized study was conducted of 321 health plan members who were over age 65 and met the other criteria. Group visits replaced the usual one-on-one patient to physician office visit. Group visits were held monthly over the course of a year and were scheduled with all participants at the first visit. To control for differences in physician practice styles, patients selected were randomized within each provider panel to provide equal numbers of group visit as compared to "usual care" patients for each participating physician. Six internists (out of eight) and their nursing staffs agreed to participate in the study.

One hundred sixty-one patients participated in the control group (usual care), and 160 patients were in the experimental (group visits) group. Baseline data on the two groups showed no significant differences in gender, living situation, self-reported physical or emotional health, functional status, or depression. The experimental group was slightly younger (average age of 72 versus 75 years) and had a higher incidence of heart problems than the control group. Those who had declined participation were also evaluated, and the

nonparticipants were found to be more likely to have a history of stroke, have some confusion about their medications, report depression, be limited in mobility, and be less able to read.

The general group visit two-hour format included:

- Fifteen minutes for warm-up and socialization
- Thirty minutes for a presentation on a specific health-related topic
- Fifteen minutes for a break during which the nurse took blood pressure readings, reviewed patients' medical records, and determined any immediate care needs
- Fifteen minutes for questions and answers
- Fifteen minutes for planning the next meeting
- Thirty minutes for brief one-to-one visits with the physician as needed

When necessary, the nurse scheduled individual physician visits for the patient and also completed medical-related paperwork requested by the patients. The physician circulated in the meeting, attending to individual concerns of patients. In addition, all patients were given their own summarized medical record to keep and bring to each visit for review and updating.

The results of the study showed that the CHCC was associated with: reduced use of ambulatory services such as acute and specialty office visits, fewer emergency room visits, fewer repeat hospitalizations, and higher levels of patient and provider satisfaction. There were increased nurse visits and telephone contact as compared to the control group, as patients appeared to see the nurse and physician as a team and have increased confidence in the nursing staff. There was also a greater level of immunization among the experimental versus the control group. An unintended benefit of the study was patient perception of improved access to care and to clinical expertise. The authors analyzed costs for the control versus the experimental patients. Data showed that the two biggest cost savings for the CHCC groups were in the categories of hospital and skilled nursing facility costs. Aggregate cost savings were estimated at \$31,928, or \$14.79 per participant per month.

The authors discuss the potential of this model for:

- Delivering health information efficiently to patients with chronic conditions by a multidisciplinary team
- Providing socialization opportunities for patients

- Offering an alternative to the brief one doctor-one office-one visit model of primary care that is often viewed as ineffective in addressing the care needs of the aging population

The authors also discuss some limitations of the study, including drop-out rates. Thirteen percent of participants never showed up for any visits, and another 12 percent discontinued coming before the study period ended. The authors ascribe some of this attrition to patients who never really wanted to be a part of the group visit format but were “being nice” and to those who became too ill to attend.

The group visits have continued at Kaiser. The authors conclude with the following:

The primary care physician has multiple roles in the exercise of the art of medicine. Currently the managed care environment is emphasizing the roles of diagnostician, healer, and gatekeeper. The equally important, and often more satisfying roles of comforter, confidant, educator, medicator, and cleric are being threatened by economic imperatives. There is neither the time nor reimbursement for the full exercise of this art. The specter of a seven-minute doctor office visit, during which government-imposed checklists and managed care clinical pathways must be addressed, is not a welcome development for many physicians caring for older patients or for the patients themselves. The group model of care, as an alternative to the traditional doctor office visit, provides the necessary time to address critical geriatrics issues, such as preventive care, management of chronic illness, loss of independence, death and dying, and concerns of the family—at less cost.

This model of providing primary care, patient and family education and teaching, and socialization and support shows promise. It invites shared learning between the patients themselves, as well as between the clinicians and the patients.

Geriatric Primary Care

How well are we doing in providing good geriatric primary care?

How well are we doing in providing good primary care to our nation's older adults? There seems to be room for improvement. Evidence of depression, poor nutritional status, and functional limitations among the elderly is routinely overlooked by the medical system. Medications are overprescribed, and interactions between medications or between the drugs and a person's disease arise too frequently. Services are often fragmented, and good care coordination is still the exception rather than the rule. There is insufficient attention paid to disability prevention, to promoting self-care practices, and to family training/education. The following articles offer further evidence of need for improvement.

The Limits of Modern Medicine

James S. Goodwin writes, "Like a number of geriatricians, I have come to believe that modern medicine does not work well for old people." Goodwin cites three areas that are especially problematic. The first is the "medicalization of everyday life." This refers to the way physician roles have expanded and become more focused on technology so that "we fail at our most important task—providing relief from suffering." The second problem area is the "primacy of diagnosis," where making a correct diagnosis and understanding pathophysiology is often deemed more important than successful treatment (for example, treatment that relieves suffering).

A third failing of modern medicine, says Goodwin, relates to reimbursement, where capitation rates are variable and may reward undertreatment. New methods also stress evidence-based medicine, sometimes to the detriment of patients. For example, he says, "the most important resources required in caring for the very old—sufficient time and empathy—are not included in the critical pathways of managed care." Goodwin suggests that we "need to tell more stories and to think and talk to each other about what the goals of medicine are and what they should be."

Source:
Goodwin, J. S. 1999. "Geriatrics and the Limits of Modern Medicine." *New England Journal of Medicine* 340 (22 April): 1283–5.

HMOs and Geriatric Care

The HMO Workgroup on Care Management, working as part of The Robert Wood Johnson Foundation-funded program Chronic Care Initiatives in HMOs, developed nine essential components of geriatric care that should be provided in HMOs that offer a Medicare-risk product. The nine components include:

1. High risk of adverse health outcomes identification
2. Geriatric case management programs to serve high-risk enrollees in all settings
3. Geriatric expertise available for program design and administration and for consultation
4. Continuing medical education and other professional training in geriatrics
5. Self-care programs for the chronically ill and their caregivers
6. Ability to identify and coordinate services for social needs
7. Wellness programs on successful aging and healthful living
8. Management information systems that provide needed data to physician decision makers
9. Performance and continuous quality improvement programs

The work group believes that capitation "introduces flexibility in the financing and delivery of care" and provides incentive to identify high-risk patients early. A study conducted in 1997 showed that at that time, many Medicare-risk HMOs had a long way to go. The survey found that only 14 percent of the HMOs had developed the expertise and the necessary programs to serve frail and chronically ill seniors.

Sources:
The HMO Workgroup on Care Management. 1998. "Essential Components of Geriatric Care Provided Through Health Maintenance Organizations." *Journal of the American Geriatrics Society* 46 (March): 303–8.

Kertes L. 1998. "Gaps in Services." *Modern Healthcare* 28 (16 March): 40–1.

Physician Communication

Effective communication between patients and physicians is vital to successful diagnosis and treatment. This may be especially true for chronic care, where treatment can span decades. Robin DiMatteo reports that 88 percent of surveyed Americans are satisfied with the care they receive from their physician; however, about 40 percent of patients fail to adhere to their doctor's recommendations. This "therapeutic failure" can result from insufficient physician explanations, poor patient understanding, and lack of consensus between physician and patient. DiMatteo concludes that physicians and patients must develop treatment recommendations collaboratively based on physical findings, patient expectations, outcome preferences, level of acceptance of risk, and costs.

Source:

DiMatteo, R. 1998. "The Role of the Physician in the Emerging Healthcare Environment." *Western Journal of Medicine* 168 (May): 328–34.

Elders, Disabilities, and the Physical Environment

Several studies published in the March 1997 issue of the *American Journal of Public Health* examined the progression of disability in older people and the importance of understanding the benefits of the physical environment in enhancing the independence and mobility of an aging population. As Satariano states, the physical environment can either enhance or impede the independence and mobility of older people. One study by Lois M. Verbrugge, Ph.D., looked at the efficacy of personal and equipment assistance for relieving difficulties in doing everyday tasks. In general, the study found that for a sample of community-dwelling adults with moderate to severe functional difficulties:

- Just under 72 percent of the study participants needed assistance getting in and out of the bathtub.
- Nearly 90 percent needed assistance opening jars.
- Equipment was more efficacious for reducing disability than personal assistance alone or a combination of equipment and personal assistance.
- Greater improvements were seen in people who were unable to perform lower extremity tasks such as walking across a room or going up steps than in people who had better function initially.

Verbrugge concludes that a better understanding of the equipment and structural needs of disabled people would have great benefit in alleviating dysfunctions and in preventing dysfunctions in the first place. Current challenges, she notes, include improving the aesthetics of existing devices, redesigning equipment, and developing better information sources for populations.

Another study reported on physical functioning as people age and examined the gender differences in the incidence of disabilities. Based on longitudinal data, Dorothy Dunlop found that the progression of disability is walking, bathing, transferring, dressing, toileting, and feeding, which differs from previous studies. The researchers also found gender differences in the onset and progression of disability indicating that while women live longer than men, they spend more time in disabled states.

An improved understanding of disability progression is important for several reasons. It helps in the identification of older people at high risk of disability and assists in forecasting public and private lifetime costs required to support disabled elderly people.

Sources:

Dunlop, Dorothy D., et al. 1997. "Disability in Activities of Daily Living: Patterns of Change and a Hierarchy of Disability." *American Journal of Public Health* 87 (March): 378–83.

Satariano, William A. 1997. "Editorial: The Disabilities of Aging—Looking to Physical Environment." *American Journal of Public Health* 87 (March): 331–2.

Verbrugge, Lois M., et al. 1997. "The Great Efficacy of Personal and Equipment Assistance in Reducing Disability." *American Journal of Public Health* 87 (March): 384–92.

Disability Prevention, Service Use, and Older Adults

An integrated delivery system must focus its care management efforts on preventing disability and implementing interventions for people at risk. A study published in *The Journal of the American Medical Association* noted that those people who become disabled rather suddenly, compared with those whose disability comes on more slowly, are much more likely to have been hospitalized for the following seven conditions: stroke, hip fracture, congestive heart failure, pneumonia, coronary heart disease, diabetes, and dehydration. For any diagnosis, 72 percent of people with catastrophic disability and nearly half of those developing

progressive disability were hospitalized in the year in which they became disabled. On the other hand only 14.7 percent of those who were stable with no disability and 22 percent of those with some disability were hospitalized.

The authors concluded that “hospital-based interventions aimed at reducing the severity and functional consequences of these diseases could have a large impact on the reduction of severe disability.” The study also found that with the very elderly, sudden, severe disability was treated less intensively in the hospital, which may indicate that physicians are improperly making treatment and medical decisions based on age.

In terms of service needs and utilization of health services by older adults, an article in the *Journal of the American Geriatrics Society* found an increase in the utilization of inpatient and outpatient services among older people over the past two decades, especially for diagnoses associated with chronic heart failure, musculoskeletal disease, illnesses related to frailty, and institutionalization. According to the researchers, these findings may have major implications for Medicare and other public programs, demonstrating a great urgency in searching for “more effective and cost-effective approaches to delivering medical, social, and long-term care to the future older population and for means of curbing ineffective use of health resources.”

Perhaps the greatest misuse of prevention services are the frequently organized health fairs that offer a battery of tests, from comprehensive chemistry panels to carotid duplex studies. These tests are rarely targeted to people who are specifically at risk for a given disease. At best, they are costly services that offer no improvement to outcomes. At worst, they uncover abnormal results that cannot be evaluated in the context of symptoms or history, and no one knows how or who is to follow-up with these results. Patients believe that they have had a physical and may neglect more productive and yet less glamorous interventions with their primary care providers, such as diet counseling, smoking cessation classes, or medication review.

Health plans and health systems need to track the cost of care and clinical outcomes linked to prevention strategies. Through better data collection, they will have the necessary evidence to demonstrate the benefits of prevention services that offset the initial financial investment for planning, implementation, and evaluation.

Sources:

Ferrucci, Luigi, et al. 1997. “Hospital Diagnoses, Medicare Charges, and Nursing Home Admissions in the Year When Older Persons Become Severely

Disabled.” *The Journal of the American Medical Association* 277 (5 March): 728–34.

Haan, Mary N., et al. 1997. “The Impact of Aging and Chronic Disease on Use of Hospital and Outpatient Services in a Large HMO: 1971–1991.” *Journal of the American Geriatrics Society* 45 (June): 667–74.

Depression: Reorganization of Service Delivery and Confidentiality

The recognition and treatment of depression as a primary and comorbid condition has received a great deal of attention in the last few years. Specifically, the focus has been on depression as a chronic disease in need of better diagnosis and treatment, care system integration, and financing. Several recent articles discuss critical issues surrounding mental health services and issues within the United States health system, including: the organization of services and adherence to treatment guidelines, patient confidentiality versus quality improvement and outcomes tracking, and insurance benefits for covered services.

The July / August 1997 issue of *The Quality Letter for Healthcare Leaders* features the topic of depression. Articles cover the identification and care of depressed patients by healthcare organizations, a self-rating tool for patients suspected to be suffering from depression, and an examination of Group Health Cooperative (GHC) of Puget Sound’s efforts to restructure depression treatment in the primary care setting. A recently published GHC study in *Medical Care* found that physician training alone is not enough to ensure success in guideline implementation and compliance for depression. A reorganized service delivery model that supports the primary care physician with on-site mental health personnel, education materials, and close monitoring of patient progress and surveillance of medication adherence was essential.

Another issue that surrounds depression is the ability to track information for the purpose of quality assurance and outcomes research without jeopardizing patient confidentiality. An article in *Healthplan* discusses six policies that have been adopted by Harvard Pilgrim Health Care to protect the confidentiality of patients’ mental health records, including limiting access to all computerized general and mental health records, separating detailed mental health notes from the general medical record, and allowing patients to sequester data in their general records upon request.

Sources:

Lin, Elizabeth H. B., et al. 1997. "Achieving Guidelines for the Treatment of Depression in Primary Care: Is Physician Education Enough?" *Medical Care* 35 (August): 831–42.

Meade, Vicki. 1997. "Identifying and Caring for Depressed Patients: Healthcare Organizations Try New Approaches." *The Quality Letter for Healthcare Leaders* 9 (July / August): 2–11.

Meade, Vicki. 1997. "A Problem-Solving Approach to Depression Treatment in Primary Care." *The Quality Letter for Healthcare Leaders* 9 (July / August): 12–6.

"A Self-Rating Tool for Patients Suspected to Be Suffering from Depression." 1997. *The Quality Letter for Healthcare Leaders* 9 (July / August): 17–8.

Simons, Janice. 1997. "Who Needs to Know?" *Healthplan* 38 (July / August): 57–60.

Polypharmacy: A Significant Issue for the Elderly

The authors define polypharmacy as the use of multiple medications, including over-the-counter (OTC) or nonprescription medications. While they recognize the many positive effects of medications on older patients by alleviating symptoms and curing certain diseases, the authors point out that attention to the adverse consequences resulting from multiple drug use in older patients is warranted. Polypharmacy and other medication-related issues are of concern among the elderly in the United States. Consequences of polypharmacy may include:

- Adverse drug reactions
- Drug to drug interactions
- Medication noncompliance
- Decline of quality of life or functional ability

Preventive strategies offered include: patient education, physician education, prescribing guidelines, monitoring guidelines, and regulation.

Source:

Stewart, Ronald B., and James W. Cooper. 1994. "Polypharmacy in the Aged: Practical Solutions." *Drug & Aging* 4 (6): 449–61.

Better Outcomes

What outcomes should we be looking for?

In healthcare, value is often measured in terms of utilization and outcomes. The nature of a chronic condition requires that service utilization be tracked in increments of more than just one or two years. People with chronic conditions may go a long period of time without accessing the healthcare system and then “crash,” requiring significant resources. Investment in disability prevention may not “pay off,” in terms of lower healthcare utilization, for several years.

Measuring outcomes for people with chronic conditions is difficult. In contrast to acute conditions where episodes are discrete and can be measured in terms of improvement toward cure, many chronic conditions are characterized by decline. Therefore, evaluating care based on improvement does not fairly reflect the nature of this population. Clinical outcomes need to be measured in terms of slowing disability progression, improving function (when possible), and maintaining quality of life. The goal of measurement with regard to healthcare delivery would be to examine whether providers and the healthcare system provide the right care, at the right time, in the right manner, to the person’s satisfaction. Robert Kane (1998) writes: “clinicians need to think in more longitudinal terms, to recognize the continuous nature of chronic care, and to focus their attention on changes in patients’ status.”

For individuals with chronic conditions and for the primary care team, perhaps the most significant quality measures are patient satisfaction with access, appropriateness, communication, and coordination; quality of life; and disability prevention or delay. Kane recommends the development and adoption of clinical glidepaths, where sets of parameters for each chronic condition are established as a way to measure expected course versus actual course of a condition. Information relating to these parameters would be tracked, and deviations from the glidepath would trigger action by the primary care team. Glidepaths could be connected to pathways across settings so that progress could be continuously monitored and any needed care would be coordinated across time and setting.

Clearly, we need better information tracking to support improved primary care (Denman and Wainio 1999). People with chronic illness access the healthcare system in many different places—physician’s offices, emergency rooms, hospitals,

nursing homes. However, the way information flows within and across systems in these settings is fragmented. In fact, tracking clinical data across settings and over time is virtually impossible. In reaction to this need to better understand resource utilization, healthcare organizations are now spending a great deal of money updating, linking, and implementing new information systems. For the most part, though, the implementation of new information systems will not be the magic bullet. Without careful consideration, information systems may only “speed up the mess” of unnecessary or inaccurate data. Organizations and providers need to determine what information is important and relevant enough to communicate, track, and analyze. What information do providers need to make informed decisions? What information is important to clients and caregivers? What information is important to the healthcare system and its quality improvement efforts?

What the system needs, then, is not necessarily new technology but rather more integrated information processes. This includes appropriate and open communication channels, defined uniform data elements, an effective data collection system and longitudinal database, and an integrated information system. The data elements and information system should capture meaningful and relevant demographic, clinical, functional, and financial information. Important outcomes of such a system could include the development of registries that identify people with particular chronic illnesses in order to focus interventions; the facilitation of follow-up, including reminders; and the feedback of relevant information to the primary care team for quality improvement purposes (Wagner 1996).

Case Examples

In 1992 The John A. Hartford Foundation undertook a major initiative to develop improved methods of caring for frail elders through the Generalist Physician Initiative. This initiative explored ways to enhance provision of primary care, with the generalist physician in a key role and with the support of a team of nurses, nurse practitioners, social workers, and others. The range of issues to be addressed went beyond medical, to include issues related to patients' psychological and social well-being. Ten sites participated in this initiative. Descriptions of three, Carle Clinic, Illinois; United Health Services, New York; and Huntington Memorial Hospital, California, are presented in this report.

Carle Clinic: Primary Care and Case Management Demonstration Improves Outcomes

The Carle Clinic Association is a large, multi-specialty physician group practice located in Urbana, Illinois. Carle Clinic has over 280 practicing physicians representing 50 medical and surgical specialties and serves over 2,000 patients daily. Carle Clinic focused on a geriatric collaborative practice model under the leadership of family practice and internal medicine physicians, with four groups of elderly participants. A treatment-to-comparison group methodology was utilized. The project's main goal was to develop a model of geriatric management that redefined the physician's participation, enhanced collaborative decision making, and advanced care management. The project incorporated both medical and nursing assessments; care plans; and interventions that coordinated medical, social, educational, and preventive services.

Nurse partners were identified to manage a caseload of up to 150 complex cases. The nurses were aligned with primary care physicians. The nurse partners provided comprehensive nursing assessment, monitoring, and health education and promotion in the home or clinic setting. They worked collaboratively with the patient, physician, and others to assess, plan, and manage care and services. A collaborative process of interdisciplinary team building, joint decision making, mutual support, and enhanced communication was established.

As part of the initiative, a case management program designed for at-risk elderly patients led to improved self-reported health status and lower medical utilization.

The clinic developed case management plans for 579 patients at 4 of its 14 offices. The test group, comprising elderly persons identified by their physicians as having a high risk for serious health complications and who agreed to participate in the study, was compared with a control group of 486 patients through record review. In addition to lower mortality, patients in the test group used fewer than half as many hospital bed days by the second year of the study and had slightly lower hospitalizations and emergency room visits overall.

Patients were enrolled in the two-year program in 1993. Upon enrollment they were assessed for health status, psychosocial needs, and environmental needs at home. The nurse case manager and primary care physician met with every patient and family to engage them in the care plan that they developed collectively. The nurse case manager also conducted an in-home assessment to identify and evaluate needs for a variety of services such as home care and heating bill financial aid, arranged for needed services, and monitored each patient in the test group based on the individualized care plan that was developed. The nurse case manager served as an information resource for the patient and family and provided coordination for home care and hospital discharge planning, as appropriate. Program costs were estimated to be \$21 per member per month for year one and \$19 per member per month for year two.

When the Hartford Foundation grant ended, Carle Clinic decided to expand the case management program and to use the program delivery model as the central feature of its Medicare risk package.

Sources:

"Carle Clinic Case Management Pilot Improves Outcomes for Elderly Patients." 1997. *Report on Medical Guidelines & Outcomes Research* 8 (30 October): 6-8.

Williams, F. N.d. *The John A. Hartford Generalist Physician Initiative Report*. Tempe, Ariz.: School of Health Administration and Policy, Arizona State University.

System Case Management at United Health Services

United Health Services is a healthcare system that includes acute care, trauma services, primary care, long-term care, and home care services. It is located in south central New York State. United Health Services created a System Case Management (SCM) program to help primary care physicians resolve the problems that their older patients have with negotiating the healthcare system, namely to coordinate social, medical, and preventive healthcare and to manage costs.

Participating physicians were internists providing primary care through United Medical Associates (UMA), a multi-specialty medical practice consisting of more than 100 physicians. The study included ten internists—five in the study group and five in the control group. The target patient group consisted of people over age 60 who were served by the ten identified physicians.

SCM was offered to older patients who needed assistance in accessing appropriate health and social care services. Patient care coordinators (PCCs) were identified—masters-prepared nurses with advanced training in geriatrics and adult care. These PCCs were located within the physicians' practices. They were to act as the patient and family advocate and educator and to help the patient and family develop self-care skills. The PCCs closely collaborated with the physician on clinical and care management issues. The PCC also assisted the physician in collecting and managing information using a system-wide method for communication and a case management database. The study included about 260 patients in the study group and 245 in the control group. The study group patients were served by four PCCs during the two and a half year demonstration period.

Patients in the demonstration were 43 percent less likely than the control group to use the hospital and 44 percent less likely than the control group to use the emergency room. A cost-avoided analysis found a net savings of \$380,415 due to avoiding or delaying nursing home placement, hospitalization, and emergency room visits. Researchers also found significant improvements in patient satisfaction and physician satisfaction.

Sources:

United Health Services. N.d. *United Health Services System Case Management: Implementation Manual*. Binghamton, N.Y.: United Health Services.

Williams, F. N.d. *The John A. Hartford Generalist Physician Initiative Report*. Tempe, Ariz.: School of Health Administration and Policy, Arizona State University.

Huntington Memorial Hospital's Physician Partnership Project

The Physician Partnership Project at Huntington Memorial Hospital in California demonstrated the effectiveness of a system to link physician offices with community-based care resources. The project was initially funded (February 1992 to August 1994) by The John A. Hartford Foundation to test ways in which nonmedical, supportive services could be brought to primary care physicians for their age 65 and older patients. The model partnership, a special liaison relationship between primary care physician practitioners and social work coordinators, was designed to facilitate client access to long-term and community-based care. Among the project components Huntington has developed and tested are the assignment of a case manager liaison to the primary care physician offices and a client questionnaire to assist in identifying those at risk of developing serious problems.

The Physician Partnership Project had three components to meet the goal of improving integration between continuum providers:

- A system that provides easy access to case management and community resources
- A screening tool to identify client risk factors
- A system to promote integration and collaboration

The project provided a rapid response for assessment, brief intervention, and linkage to home and community services through a case manager liaison who was on call to physician offices. The liaison conducted assessments, provided immediate information and referral, maintained short-term contact with clients/patients, and referred clients with complex situations or long-term care management needs to agency or community case management programs. Regular office rounds were made by the liaison to maintain visibility, discuss cases, and educate staff about patient risk factors.

Initially a self-assessment tool was given to clients during office visits, but mailing was found to work best. During the 30-month grant period, a total of

3,018 questionnaires were mailed to all clients aged 65 and over who had visited participating physician offices. Of these, 27 percent were returned. The questionnaires were reviewed by the liaisons, who determined that 62 percent of the respondents needed a follow-up telephone call for further assessment. Analysis showed that difficulties with food preparation, light housework, and getting about the home were the main indicators that led the liaison to contact the client. In addition, although a significant number of clients reported limitations in daily functioning, especially related to mobility, few were receiving assistance.

The typical reasons for referral by the case manager liaison to community services were questions concerning client safety and living arrangements, cognitive problems, anxiety and depression, and family and client conflicts. Referrals to 2,256 community services were made during the grant period. The most common service referrals were for personal care and home health, durable medical equipment, transportation, alternative housing options, emergency response devices, and support groups. A majority (75 percent) of the clients that needed intervention required only two or three contacts by the liaison.

In satisfaction surveys conducted by Huntington, both physicians and patients reported benefits from the project. Clients interviewed by telephone said they appreciated the assistance the liaison provided. In a written survey, responding physicians agreed that the liaison model saved them time and benefited their patients. They found the liaison accessible, reliable, and helpful in identifying clients in need of community services.

Challenges:

- Addressing the resistance of office staff to the case manager's role
- Quantifying cost savings to the hospital
- Quantifying cost savings to physicians

Keys to Success:

- Case manager liaison visibility in the office
- Rapid response to physician referrals
- Effective communication mechanisms between physician and case manager
- Ongoing education to physician and staff about the case manager's role.
- Ongoing education to physician and staff about risk indicators

Huntington received a 14-month extension to the original Physician Partnership Project in order to provide technical assistance to sites nationwide that were interested in replicating the model. Huntington provided technical assistance to six sites:

- Massachusetts General Hospital
- The Medical Center of Central Massachusetts
- Mount Sinai Hospital, New York
- ElderMed America / Unihealth, California
- Montefiore Medical Center, New York
- Miami Valley Hospital, Ohio.

Sources:

Williams, F. N.d. *The John A. Hartford Generalist Physician Initiative Report*. Tempe, Ariz.: School of Health Administration and Policy, Arizona State University.

Conclusion

Primary care is an integral part of the support we provide to older adults. It is core to the identification and assessment of need, to prevention of disability, and to maintenance of function. Primary care involves the coordination of a broad range of services and expertise. Given the complexity of many chronic conditions, comprehensive primary care can play a significant role in reducing and/or preventing the debilitating consequences of chronic illness.

We know there is room to improve the way in which care is delivered to older people and those with chronic conditions. As healthcare's highest-cost and fastest-growing group, the chronically ill are the biggest challenge facing delivery systems and providers. Disparate funding streams and silos of care fragment today's healthcare delivery system. Individuals and their caregivers are frustrated and ill-served by the lack of communication and coordination within and between systems of care. Providers and practitioners work within systems with little integration of care management functions, clinical and administrative information systems, or financing mechanisms that would facilitate the delivery of seamless healthcare across the continuum of services. In fact, physicians and other healthcare professionals are frequently not paid, trained, or empowered to coordinate the host of medical and nonmedical services that are needed. Health systems are frustrated by the lack of integration but have little incentive to break down the silos of care that exist within their organizations and among other service providers.

We must find ways to develop and empower interdisciplinary primary care teams—working together with older people and their families—to effectively anticipate and address the many predictable problems older people experience. Untreated depression, malnutrition, functional loss, vision and hearing impairment, falls, confusion, adverse drug reactions, sleep impairment, incontinence—these are syndromes or conditions that can be reduced by better primary care management and self-care skills. Addressing these issues can have a profound effect on the older person. We have a responsibility to address these and other issues by increasing our support and exploring new models of primary care.

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