U.S. Department of Health and Human Services
Assistant Secretary for Planning and Evaluation
Office of Disability, Aging and Long-Term Care Policy

CONSTRAINED INNOVATION IN MANAGING CARE FOR HIGH-RISK SENIORS IN MEDICARE + CHOICE RISK PLANS

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ACKNOWLEDGMENTS

This report is dedicated to improving care for seniors with disabilities or chronic illnesses. Our goal has been to help people who are responsible for designing and implementing care systems for this high-risk group. In particular, we have looked for ways to learn from the structures and processes that four innovative managed care organizations (MCOs) have used to care for a selected group of seniors who had high risks of hospitalization or other adverse health or functioning outcomes.

This report draws extensively on the experience and operations of the four MCOs that participated: Keystone Health Plan East, Regence HMO Oregon, Kaiser Permanente, Colorado, and Aspen Medical Group. We are indebted to the staff at these organizations who conferred with us during our site visits, shared documents with us, and commented on drafts of this report. We are also indebted to the many care managers and physicians who participated in our focus groups. We hope we have fairly and accurately described their programs and the enthusiasm they bring to serving high-risk seniors.

We spoke with many high-risk seniors at these organizations, either in focus groups or as part of our survey. They provided many insights into their care needs and into how care delivery systems appear to the people they are intended to serve. The study could not have been done without these people, and we greatly appreciate their participation.

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EXECUTIVE SUMMARY

This case study of four well-regarded managed care organizations (MCOs) found that they made numerous innovations to improve care delivery for elderly Medicare beneficiaries with chronic illnesses and disabilities. These MCOs used the flexibility provided by capitation to add new services, including (1) screening and other programs to identify high-risk seniors; (2) care management and disease management; (3) network credentialing; (4) occasional provision of off-policy benefits; and (5) better coordination and flexibility in the delivery of inpatient, subacute, and home health services. Yet their innovations were constrained by the Medicare + Choice contracts and the lack of clear evidence about the cost-saving potential of many services. The MCOs' contracts focus on the primarily medical services covered by Medicare and do not obligate (or pay) the MCOs to address seniors' needs for long-term support services, housing, transportation to routine care, or the myriad other types of nonmedical assistance high-risk seniors may need to maintain their functioning and independence. Also, it remains unclear whether these types of services, even the services that the MCOs did provide, will generate sufficient savings to cover their extra costs. Thus, while their innovations appear to have improved care and produced high levels of satisfaction among high-risk seniors, some unmet needs remain. Development of more comprehensive or intensive methods to address the full spectrum of needs will require more expansive contracts, new payment strategies, and stronger evidence of effectiveness.

Improving Delivery of High-Risk Seniors' Organizationally Complex Care Is an Important Policy Goal

The high costs and potential problems involved in delivering organizationally complex care to high-risk seniors will require better methods for managing care delivery. These seniors not only tend to have multiple chronic conditions that demand ongoing care, but they also may develop acute illnesses. In addition, they receive care from many providers in several different settings, including physicians' offices, skilled nursing facilities, hospitals, and their own homes. They often use multiple medications that may be prescribed by several physicians who may not coordinate their efforts. Many may also need long-term custodial or hospice care.

This care is expensive. Seniors with disabilities and chronic conditions, particularly those whose treatment involves multiple hospitalizations, account for a disproportionate share of medical costs. Furthermore, they often face serious health risks when needed care is inappropriate, delayed, deficient, or uncoordinated. Over the next decades, the number of high-risk seniors will increase dramatically, as will costs and adverse outcomes if better methods are not found to improve care delivery and effectiveness.

Efforts to increase the quality and efficiency of the organizational complex care used by high-risk seniors must address three broad characteristics that can be

organized with the acronym VIP: Variability, Impairments, and Providers. Population variability encompasses differences in conditions, functioning, and attitudes among individuals and over time. Impairments can limit seniors' ability to access care and, in the most severe cases, can limit their ability to care for themselves or even to live independently. Provider issues are important because high risk seniors' use of multiple providers can make it difficult to coordinate care and may lead to duplicative or missed services.

Medicare Managed Care Offers a Constrained Opportunity to Address the Challenge of Delivering Organizationally Complex Care to High-Risk Seniors

The opportunity stems from the flexibility and financial incentives capitation creates to increase the delivery of preventive care and to coordinate care delivered by multiple providers. Furthermore, managed care offers the promise of cost savings that could be shared between seniors, Medicare, and health plans. At the same time, capitation may also constrain the ability of managed care to achieve its potential. Some of these constraints are inherent in the use of financial incentives to control costs. Specifically, there has been substantial concern that, in an attempt to control costs, capitation may lead plans to overly limit seniors' access to specialty care. It may also create incentives for plans to focus only on types of preventive care that can be expected to generate substantial short-term benefits. Constraints also emerge from the way capitation is implemented in Medicare. This includes the constraints imposed by the current Medicare benefit package which predominantly focuses on medical care and excludes most medications, personal support services, and long- term custodial services many high-risk seniors need. It also includes constraints created by the lack of an effective way of adjusting capitation payments to reflect the greater-than- average needs of high-risk seniors. Fully adjusted payments could provide a greater incentive to develop cost-effective care programs and to attract beneficiaries who could benefit from those programs. Finally, efforts to improve care for seniors are constrained by the fragmentation in the health care and service delivery systems and by the general lack of strong evidence of the effectiveness of alternative service strategies. Thus, the mix of opportunities and constraints creates a situation where we see some innovations, but where additional efforts are likely to require steps to address the constraints.

This Case Study Focused on Innovative MCOs and Selected Groups of High-Risk Seniors

The four case-study MCOs include three managed care plans with capitated Medicare + Choice contracts and one large multispecialty provider group with a history of accepting capitation to care for elderly Medicare beneficiaries. These MCOs had held Medicare risk contracts for several years when we selected them in 1997, and they were responsible for the care of between 13,000 and 100,000 beneficiaries. The plans

reflect a mix of characteristics, including organizational structure, Medicare + Choice payment level, profit/nonprofit status, and geographic location.

Once we selected the MCOs, we focused on three "risk groups" of seniors who had severe limitations or multiple chronic conditions and whose risk status or conditions were known to their MCO. These groups include elderly beneficiaries being served by the MCOs' care management programs, those who had attained advanced age (more than 84 years old), and those who had experienced a recent hip fracture or stroke. While these three groups do not constitute or represent all high-risk seniors, they provide a convenient way of illustrating the experiences of seniors whose high-risk status is known to their MCO.

We collected information about these MCOs and seniors through site visits and focus groups conducted from October 1997 through January 1998. We also surveyed representative samples of high-risk seniors at three of the case study MCOs. These surveys included 1,657 beneficiaries and were conducted from March 1999 through July 2000.

The Case-Study MCOs Produced High Satisfaction Among High-Risk Seniors

The high-risk seniors in our study generally held very favorable opinions about their MCOs. Overall, 93 percent indicated that they would recommend their MCO to another person with similar health conditions. This figure is much higher than the overall satisfaction level previously reported for a national sample of high-risk groups in Medicare + Choice plans (Nelson et al. 1996). In that study, only 74 percent said that they would recommend their plan to someone with a serious or chronic health problem. In addition, the overall level of satisfaction we observed for our sample of high-risk seniors is approximately equal to the level reported by the largely unimpaired general Medicare population in Medicare + Choice plans.

This high level of satisfaction is evidence of the potential of managed care to serve high-risk populations well. It also establishes a goal for the Medicare + Choice system as a whole to produce equally high levels of satisfaction among beneficiaries with both high- and low-risk for adverse health outcomes.

A Substantial Fraction of Our Sample of High-Risk Seniors Seemed Unsure of How to Resolve Problems with Care

While the seniors in our sample were generally satisfied with their choice of plans, about a third had no concrete plan for addressing dissatisfaction with medical care or coverage decisions, possibly because of their generally high satisfaction levels: seniors who are happy with their care and coverage may not bother to learn how to complain effectively. Nevertheless, to the extent that these groups represent a broader population

in all Medicare + Choice programs, policymakers should consider cost-effective ways to promote their access to information and their ability to act on it.

Care Management Was an Important Extra Service Made Available to High-Risk Seniors in the Case-Study MCOs

Care management was a key innovation fielded by the four case-study MCOs. In general, the MCOs used their care management programs to assess the needs and capabilities of seniors at high risk for adverse health and functioning outcomes. The assessments often included home visits to assess seniors' needs and living arrangements. The assessments were followed by efforts to coordinate care delivered by the MCO network and to educate seniors about their conditions and treatments. Care managers also referred seniors to community-based social service agencies when they needed assistance and services beyond what was covered in the MCO's Medicare benefit package. In making referrals, the care managers typically followed up to see that seniors had met with the service agencies and that efforts to meet their needs were underway.

While there were many similarities, there were also some important differences among the care management programs of the MCOs. In particular, care management at the two group- model MCOs took advantage of their clinic-based approach to primary care. Care managers at these organizations were located in the clinics, where they could interact with physicians and patients on a face-to-fact basis, as well as by telephone. They relied on the clinic physicians as the primary source of referrals for care management and enrolled about three percent of their Medicare beneficiaries in care management. In contrast, the IPA-model care managers relied more on telephone contact and had higher caseloads, although they could order home health visits to assess seniors' home situations and deliver some medical social work services. The IPAs drew on their extensive data systems, new-member screening surveys, and tracking of hospital admissions to identify high-risk cases who could benefit from care management and enrolled approximately five percent of their Medicare beneficiaries in care management.

These care management efforts went beyond the basic Medicare benefit package, but were more limited than the efforts that are often recommended for assisting high-risk seniors (Chen et al. 2000). For example, the MCOs offered some patient education and advocacy, but these efforts were limited by the general short-term nature of the programs. In contrast, many prior care management demonstrations and the literature on best practices include on- going advocacy and monitoring as part of their service package (Chen et al. 2000).

The MCOs' Care Management Programs Focused on Short-Term Issues, an Emphasis the Participating Seniors Recognized

Many Seniors Were Unaware That They Had Been Enrolled in Care Management

Many seniors in our care management sample seemed to be unaware that they were indeed in care management. Even though this sample of seniors was selected from MCO-provided lists of members in care management, only 21 percent knew that they had a care manager from their MCO. Even if we include seniors who reported a care manager from outside their plan, a total of only 28 percent said they had someone to work with them and their physicians to help get the care they needed and to resolve any problems.

Of course, the lack of salience does not meant that the care management failed to benefit the seniors or to make care delivery more efficient for the MCO. The care managers appear to have delivered substantial services, but may nevertheless have had a difficult time standing out from all the other providers who work with high-risk seniors. These seniors interact with primary care physician, specialists, therapists, nurses, community-agency staff, and the office staffs of these providers. All care managers at the case study MCOs were nurses, so seniors may have assumed their care manager to be just another nurse who was working with their physician. This suggests that it can be hard to make care management salient among high-risk seniors unless the care managers have the time to build a personal relationship with their patients. In our focus groups with seniors in care management, many remembered getting help from a nurse and often associated that nurse with the MCO. However, most did not perceive that nurse as someone who could provide ongoing help or as someone to call if they had a problem with care coordination or access.

The low apparent level of saliency for care management among seniors also reflects several other factors. Most notably, the MCOs implemented care management that was generally time-limited and focused primarily on working with primary care physicians to stabilize high- risk seniors and refer them to appropriate community services. This focused nature of the care management means that many of the seniors in our survey sample may have received the bulk of their care management services well before we interviewed them, and they may not have remembered the earlier services, although those services might have been salient while they were being delivered. In addition, low salience may be consistent with the desire to provide seamless integration of care. The care managers may work to ensure that seniors obtain other highly-salient support services. Seniors may therefore remember the support services while forgetting about the assessments and referrals that got them to those services.

Seniors Who Knew They Were in Care Management Were Satisfied with It

Among those seniors who knew they had a care manager from their plan, most were satisfied with the help they got, and generally agreed that their care manager

knew enough about them to plan care effectively. At the same time, fewer than half of these seniors knew the name of their care manager, a measure we used to capture the closeness of their relationship. Furthermore, only four percent would contact their care manager if dissatisfied with medical care or with their MCO's benefit coverage decisions. Thus, from the perspective of the seniors, care management appears to have been useful but not an effective source of ongoing monitoring, education, or advocacy.

The Case-Study MCOs Fielded Several Programs to Improve Care of High-Risk Seniors

We noted numerous ways in which the four case-study organizations sought to improve care for high-risk seniors relative to the fee-for-service sector. In addition to care management, the MCOs' innovations include disease-management programs, enhanced monitoring and care coordination of seniors in subacute and custodial nursing homes, and disease- prevention programs targeted to high-risk seniors. The organizations also worked to improve care by requiring facilities in their networks to meet quality standards that were higher than those imposed by Medicare.

Group Model Organizations Had Advantages for Implementing Innovations

While it is difficult to draw strong conclusions from our sample of four MCOs, we did note several instances where the structure of the group model organizations facilitated the implementation of new service delivery and coordination methods. The two group MCOs in our study included a traditional group practice Health Maintenance Organization and a large multispecialty group practice with a history of accepting capitation. The advantages we saw at these groups seemed to stem from several factors. The group MCOs tended to foster close collaboration between physicians and MCO administrators. They also tended to attract a mix of physicians who are comfortable within managed care. They delivered primary care through clinics where primary care physicians and care managers could be located together and where there were more likely to be enough high-risk patients to support special initiatives. Last, the group models' networks limited their skilled nursing facilities to a small number that were felt to provide especially high-quality care. This network limitation also enabled the MCOs to work closely with the facilities to monitor patients and develop improved and more efficient care systems.

The IPA models also introduced a number of innovations, including care management and disease management programs. In addition, they provided their members with more choices of providers and more locations from which to obtain care. There were also several instances where IPAs contracted with large multispecialty medical groups and thereby offered their members the option of receiving care from a group model. Thus, it is possible that group-based approaches can continue to be made

available to many high-risk seniors, even though the number of group- and staff-model risk plans in the Medicare + Choice program has been declining.[1]

Common Features of the Case Study MCOs Can Guide Efforts to Improve Care for High- Risk Seniors

While the case study suggests that it is possible to produce high levels of satisfaction, it does not indicate specific steps to achieve such a level. Each of the case study MCOs developed its own programs, designing them in ways that worked for the plan. The MCOs' approaches shared common elements that can be organized with the acronym I-CAN: Identification and assessment, Care management, Assistance programs, and Network credentialing and support. These core elements enable the MCOs to identify high-risk seniors and to then deliver and coordinate necessary medical care and social supports. At the same time, each MCO developed programs that took advantage of opportunities provided by it structure and community. For example, the group model MCOs built on their clinic-based primary care deliver system to foster communication between care managers, physicians, and the care- managed seniors. The IPA models used their data systems to identify high-risk seniors. This enabled them to provide targeted services ranging from care management to pre- admission home visits to assess and educate seniors scheduled for joint replacement surgery. The IPA models also offered seniors a relatively large network.

While the case study was able to document the success of the four MCOs, it was much harder to determine why such success occurred. What led these organizations to field a broad range of programs targeted to high-risk seniors? What elements of their structure and management fostered experimentation and innovation? Such questions cannot be answered entirely based on the information gathered in our case study. Nevertheless, several possible factors did seem to emerge:

- Innovation was fostered by a culture of experimentation. All of the case study MCOs exhibited an interest in trying new approaches to coordinating and delivering care. Care management, group clinics, disease management, and other programs were fielded and monitored. Operations were then modified and possibly expanded if the pilot seemed to produce favorable results. Not every idea worked, but that did not seem to stop the MCOs from continuing to try new things and assessing how those new approaches might improve care and help to control costs.

- Innovation was supported by senior officials in the MCOs. In all cases, there were senior officials in the MCO who encouraged innovation and who often were instrumental in the development and implementation of new approaches.

[1] From December 1998 to October 2001, the number of Medicare + Choice risk plans classified as group or staff models fell by 31 percent (to 74 plans), even though total enrollment in these types of plans remained essentially constant at approximately 2 million. During the same time period, the number of IPA plans fell by 57 percent to 101 plans with an enrollment in October 2001 of approximately 3.5 million.

- The MCOs found ways to draw on community resources. All of the case study MCOs were in areas that had a wide array of community support services available. The MCOs referred high-risk seniors to these service providers in order to meet their needs for services that were outside of the MCOs' Medicare + Choice contracts.

The innovation we saw was often constrained by several factors. One is the lack of clear evidence that more ambitious interventions would be cost-effective. Without such evidence MCOs will be hesitant before making a substantial investment in new services or approaches. Another constraint came from the Medicare benefit package which focuses primarily on medical care and excludes most personal assistance, nutrition, housing, and long-term nursing home care as well as supports for families and other unpaid caregivers. It does not require or pay for MCOs to address needs for these non-Medicare services.

While the case study MCOs demonstrate that it is feasible to achieve high satisfaction levels among high-risk seniors, how likely is it that this can be replicated in a broader set of plans? How can policy foster the corporate commitment, active involvement of physicians, and a culture of experimentation that underlie much of the innovation we observed? Discussions with the MCOs, physicians, and seniors, identified four possible actions:

- **Stabilizing the financial and regulatory environment faced by Medicare + Choice plans**. A MCO's senior management will focus first on the overall performance of the organization and will focus on new care approaches for high-risk seniors only once the financial stability of the organization has been addressed. As a result, MCOs are not likely to pursue programs for high-risk seniors until they have some successful financial and operational experience with their Medicare + Choice risk plan. Outside factors that can affect basic performance, such as rapid growth or decline in enrollment, competition from new insurance products and plans, and mandates for new programs or services, will demand management attention and can divert attention for new innovations. As a result, uncertainty in the financial and regulatory environment can lead MCOs to address new approaches for high-risk seniors in an incremental, piecemeal fashion.

- **Reducing expectations of improvements in care combined with cost savings**. There is substantial evidence that it is very difficult to both improve care for high-rise seniors while saving money at the same time. While the experience of the case-study MCOs suggests that marginal improvements are possible in the current Medicare + Choice program, more substantial improvements may require more money.

- **Risk-adjusted capitation payments**. One way to ensure that there is sufficient funding for programs targeted to high-risk seniors is to implement a payment system that would explicitly recognize the higher costs incurred by such seniors.

- **Better cost-effectiveness analysis for mandated services**. Medicare + Choice regulations have mandated that plans provide several services intended to help high-risk seniors. Yet the analytic support for whether the capitation payments are sufficient to support provision of these services remains unclear. The fact that the case-study MCOs fielded many of these services before they were mandated, suggests that at least those organizations believed such services were effective within the capitation system of the mid- to late-1990s. Without stronger research support for the cost-effectiveness of these services within the current capitation system, however, it will be difficult to convince MCOs to embrace the mandates and to find additional ways to improve care for high-risk seniors.

It is ironic, but perhaps fortuitous, that our study is raising these issues today at a time when the Medicare + Choice program is under substantial stress, with plans withdrawing, enrollment dropping, and policymakers debating the importance of stabilizing the program. Among options discussed to stabilize the program, payment levels and regulatory requirements factor heavily in the debate. Our study's contribution to the debate on these issues arguably is to highlight how Medicare beneficiaries may be affected by the outcome of the resolution of this debate. We show that Medicare + Choice has the potential to enhance care for frail elders, an opportunity that might be lost if the program erodes. Assuming the Medicare + Choice program remains, the key challenge for policymakers will be to decide how to provide incentives for more broad-scale adoption of the innovations that managed care makes possible without adding to the regulatory requirements and instability that threaten the program. One promising step currently underway at the Centers for Medicare and Medicaid Services involves efforts to improve performance measurement (via HEDIS and CAHPS) so that it focuses more heavily on MCO performance for frail elders and then using performance information to inform beneficiary choice. Performance measures specific to high-risk seniors could also be used in to revise the payment system both through enhanced payment and a more adequate risk adjustor that compensates plans that seek to invest in care for the most vulnerable of Medicare beneficiaries.

Finally, the Medicare program itself can constrain the ability to coordinate all the medical and other services high-risk seniors may require to maintain their functioning and independence. Funding for such services comes from many sources in addition to Medicare and the full range of providers extends well beyond those who deliver medical care. Furthermore, the seniors, along with their families and friends, will continue to provide substantial care. Full integration and coordination of these services will require corresponding efforts to coordinate funding and to look beyond the Medicare program.

The experiences of the case-study MCOs suggest that future efforts to improve care for seniors with disabilities and chronic illnesses will have to take many forms.

Each MCO will have to develop and adapt procedures to fit its own structure and processes. Furthermore, experience at the case-study organizations suggests that innovations are likely to be initiated and nurtured by highly motivated people with a special interest in care for high-risk seniors. These people must champion the new programs and approaches, and push their organizations to improve care. It will remain a challenge to identify and support such champions, particularly in the absence of mandated change. The examples provided by the case-study organizations can help guide the future, but rigorous evidence will also be needed on best practices and effective methods for disseminating new methods.

I. THE IMPORTANCE OF MANAGING CARE FOR HIGH-RISK SENIORS

Although the future of Medicare managed care has become uncertain, there is no doubt that effective ways must be found for managing the delivery of care for elderly Medicare beneficiaries with disabilities and chronic illnesses. This is illustrated by the case of a senior who, in a surprisingly lighthearted manner, related his case:

> I had a bypass in 1984, a four-way. And then in 1989, I had a six-way. And I had a broken hip. They set it wrong and I had to have another break. And I had knee surgery. I was getting along fine, but infection set in. So they had to take the prosthesis out. After knee surgery, they put a rod in my leg at the last surgery. Then I had a stroke.

Like many other seniors, this man requires organizationally complex care. That is, he has multiple chronic conditions that demand ongoing care, and he may also develop occasional acute illnesses. In addition, he receives care from many providers in several different settings, including physicians' offices, skilled nursing facilities, hospitals, and his home. He may also eventually need long-term custodial care or hospice care.

This care will be expensive. Seniors with functional limitations and chronic conditions, particularly those whose treatment involves multiple hospitalizations, account for a disproportionate share of medical costs. Even if we exclude those beneficiaries who reside in nursing homes, the personal health care expenditures for community-resident beneficiaries with a limitation in at least one activity of daily living (ADL) are more than four times greater than for those with no limitation (Centers for Medicare & Medicaid Services 2001). Correspondingly, beneficiaries with functional limitations account for a disproportionate share of expenditures. In 1996, beneficiaries with limitations in ADLs accounted for 20 percent of all Medicare beneficiaries and almost 40 percent of all personal health care expenditures. Overall, health care for beneficiaries with limitations cost approximately $94 billion in 1996.

The man's care may also be risky, since seniors with disabilities and chronic illnesses often face serious health risks when needed care is inappropriate, delayed, deficient, or uncoordinated. Problems may arise because one provider's efforts to treat a condition weaken the effectiveness of treatments for other conditions. Medications prescribed by different physicians could interact adversely. Insufficient attention might be paid to preventive care that could help stave off future illnesses or to rehabilitation that would improve the ability to live independently. Seniors may not understand their chronic conditions well enough to engage in appropriate self-care.

The high costs and potential problems of delivering organizationally complex care mean that better methods for managing care delivery must be developed. The Medicare program, providers, managed care plans, and seniors are all interested in finding ways to deliver care in ways that reduce costs and improve outcomes. This interest can be

seen in funding by the Centers for Medicare & Medicaid Services (CMS)[2] of the PACE and Social Health Maintenance Organization (S/HMO) programs that seek to promote better care for frail elderly beneficiaries, in funding for demonstrations to improve care coordination and integrated service delivery for chronically ill seniors (Schore et al. 1999; Chen et al. 2000; and Brown et al. 2001), in the Medicare regulations that require managed care plans to screen new members to identify those at high risk for hospitalization and adverse health outcomes (Health Care Financing Administration 1999), and in the efforts of advocates to make care more responsive to consumer needs.

Medicare, including the Medicare + Choice program, will play a central role in meeting this challenge. Virtually all of the growing number of seniors will be eligible for Medicare, and many will enroll in Medicare + Choice plans despite the recent decline in managed care enrollments. Many of those seniors who enroll in managed care will have chronic illnesses or functional limitations that put them at high risk for adverse health outcomes. Thus, the Medicare + Choice program will serve a substantial number of high-risk seniors and must find effective ways to care for these seniors. In 1998, there were more than 1.6 million Medicare beneficiaries who needed help with at least one basic activity of daily living (ADL) (such as bathing or eating) enrolled in Medicare + Choice risk plans (Health Care Financing Administration 2001).

This participation in managed care offers an opportunity to address the challenge of delivering organizationally complex care. It also raises some potential risks. Managed care has financial incentives to increase the delivery of preventive care and to coordinate care delivered by several providers. It also offers the promise of cost savings that could be shared between seniors, Medicare, and the health plans. At the same time, there are financial incentives and operational barriers that may limit the extent to which Medicare managed care achieves its full potential. For example, plans have incentives to focus on preventive care that can improve outcomes or create savings quickly than on preventive programs, such as smoking cessation, whose benefits are not realized until much later. The balancing of these competing incentives is particularly important to seniors with disabilities and chronic illnesses (Gold et al. 1998).

The challenge of delivering organizationally complex care will become even greater as the population ages. In the next 20 years, the overall number of people with chronic conditions is expected to increase by 28 percent, and their direct medical costs are likely to increase by 36 percent (Institute for Health and Aging 1996). Technological developments will continue to change the way care is delivered and will present new and complex choices to seniors. Hospital stays may become even shorter, with more care delivered in skilled nursing facilities and in seniors' homes. Medical tests will be more complex, and more drugs will be available for treating chronic illnesses. Also, providers such as advanced practice nurses, therapists, nutritionists, and care managers will play an increasingly large role in helping seniors live healthier lives.

[2] CMS was formerly known as the Health Care Financing Administration (HCFA).

To help the Medicare program meet this challenge, the Office of the Assistant Secretary for Planning and Evaluation in the U.S. Department of Health and Human Services funded this study, which examines a selected group of beneficiaries with disabilities and chronic illnesses in four managed care organizations (MCOs). The study includes interviews with a broad mix of those beneficiaries, as well as reviews of the systems and methods the MCOs have established for serving them. These organizations do not represent all Medicare + Choice plans, but their experiences and those of their enrollees provide a sense of the challenges inherent in serving high-risk seniors in Medicare, and suggest some of the ways MCOs can meet those challenges.

We focus on elderly Medicare beneficiaries with disabilities or chronic illnesses, whom we will call *high-risk seniors*. This group is important to policymakers because of their vulnerability to adverse outcomes, their generally high medical costs, and the expectation that this group will grow markedly over the next 30 years. There has been a particular concern over vulnerable populations within managed care systems, as evidenced by Medicare regulations that require Medicare managed care plans to screen new members and identify those at high risk for adverse outcomes. High-risk seniors also serve as a sentinel population that is particularly sensitive to the ways in which care is organized and delivered (Patterson et al. 1998). While many seniors face risks, we have focused on those who already have chronic conditions or disabilities and on those who are most likely to experience additional illnesses, impairments, hospitalizations, or loss of functioning and independence. While important, the study of people who face milder risk is quite difficult, because measurable outcomes occur less frequently, and the risk levels are often hard to influence.

In our site visits, focus groups, and surveys, we found considerable evidence of the extensive care needs of high-risk seniors and the organizationally complex care they receive. We also found innovation, attention to preventive care, and cost-consciousness among the four MCOs. These MCOs used the flexibility provided by capitation to add new services, including screening and other programs to identify high-risk seniors; care management and disease management; network credentialing; occasional provision of off-policy benefits; and better coordination and flexibility in the delivery of inpatient, subacute, and home health services. Yet their innovations were constrained by the Medicare + Choice contracts and the lack of clear evidence about the cost-saving potential of many services. The MCOs' contracts focus on the primarily medical services covered by Medicare and do not obligate (or pay) the MCOs to address seniors' needs for long-term support services, housing, transportation to routine care, or the myriad other types of non-medical assistance, high-risk seniors may need to maintain their functioning and independence. Also, it remains unclear whether these non-medical services, even the services the MCOs did provide, will generate sufficient savings to cover their extra costs. Thus, while their innovations appear to improve care and did produce high levels of satisfaction among high-risk seniors, some unmet needs remain. Development of more comprehensive or intensive methods to address the full spectrum of needs will require more expansive contracts, new payment strategies, and better evidence of cost-effective service delivery.

In presenting these findings, we start with an overview of the policies that are shaping Medicare managed care and an analytical framework for thinking about that program and how it serves beneficiaries with disabilities or chronic illnesses. We then describe our data and methods. In Chapter III, we examine the special features of high-risk seniors that will challenge care systems that seek to serve them. In Chapter IV, we review the processes and structures the four MCOs have developed for serving high-risk seniors. Chapter V provides more details about the experiences of a sample of high-risk seniors in three of the case-study MCOs, specifically, their satisfaction with their providers and plans and their perceptions of care management. Chapter VI looks at a particularly vulnerable group, elderly beneficiaries with a recent hip fracture or stroke. Finally, Chapter VII lays out some recommendations that emerge from this case study.

A. Policy Context

Over the next 30 years, the Medicare program is expected almost to double in size, covering 38 million more people than it does today. At the same time, the future of the Medicare + Choice program has become uncertain. During the early 1990s, enrollment in Medicare + Choice plans grew rapidly. Spurred by the attractive additional benefits many risk plans offered--such as coverage of prescription drugs and competitive premiums relative to those for traditional Medicare-supplemental coverage--enrollment tripled between 1993 and 1997 (Lamphere et al. 1997; and Nelson et al. 1996). Enrollment peaked in 1999 at 6.3 million beneficiaries (out of a total of almost 40 million beneficiaries overall). Enrollment is now in decline, as some plans withdrew from the Medicare managed care market or reduced their service areas.

Nevertheless, managed care remains an important option for many high-risk Medicare beneficiaries. In October 2001, approximately 15 percent of Medicare beneficiaries were enrolled in a Medicare + Choice plan. Of those, statistics from earlier beneficiary surveys suggest that more than 25 percent need help with basic ADLs, such as bathing (Health Care Financing Administration 2001). Furthermore, Medicare managed care is a source of ideas and methods for improving the delivery of care to groups at high risk for hospitalization or adverse health outcomes (Boult et al. 2000; Fox et al. 1998; Christianson 1998; and Chen et al. 2000).

Regardless of participation in Medicare + Choice plans, high-risk seniors tend to have greater-than-average difficulties obtaining adequate care (Nelson et al. 1996; and Manton et al. 1993). As Wagner et al. (1996) note, “usual medical care, regardless of organizational and financial arrangements, confronts chronically ill patients and their providers with a set of formidable obstacles to achieving effective clinical care and self-management.” These obstacles often lead to unmet needs. For instance, approximately one-third of all disabled elderly people now have an unmet need for assistance with at least one ADL (Institute for Health and Aging 1996). These unmet needs can lead to adverse consequences such as falls, difficulty with toileting, inability to have prescriptions filled, missed medical appointments, and preventable institutionalization

(Allen and Mor 1997; and Stone et al. 1987). In addition, the Medicare benefit package focuses on medical care, to the general exclusion of long-term nursing home care, personal assistance and other services oriented toward promoting functional independence (Moon 1996). High-risk beneficiaries must therefore look to Medicaid and other programs outside Medicare to meet those types of needs, as well as to obtain help with their often substantial costs for medications. This fragmentation of financing complicates efforts to coordinate medical care with social and custodial supports.

At the same time, it is not clear whether high-risk seniors in Medicare + Choice plans fare better or worse than those in fee-for-service. Although the structure of managed care offers theoretical advantages over the fee-for-service system, empirical studies provide mixed evidence about the different care processes and outcomes of the two systems (see, for example, Retchin et al. 1997; Miller and Luft 1997; Kramer 1996; Ware et al. 1996; Greenfield et al. 1995; Brown et al. 1993; and Retchin et al. 1992).

The most comprehensive comparison of Medicare fee-for-service and capitated managed care systems concluded that Medicare risk-contracting HMOs provide care comparable to that delivered by fee-for-service providers but use fewer health care resources (Brown et al. 1993). HMOs shortened the average hospital stay by 16.8 percent relative to the Medicare fee-for-service sector. They also increased the use of some services by beneficiaries whose health was poorest, while reducing the intensity of services more for this group than for other groups. For example, people in HMOs had a higher probability of hospitalization, but they also had the largest average reduction in hospital days and home health visits. Furthermore, the evaluation suggested that the reductions were more likely a result of better care delivery and the elimination of unnecessary services than of restricted access to health care.

Other studies suggest that care for high-risk seniors and others with chronic illness or disability may be worse in managed care than it is in the fee-for-service system. Ware et al. (1996) found that, over a four-year period, elderly patients in HMOs were almost twice as likely as their counterparts to experience a decline in physical health in a fee-for-service system. Shaugnessy et al. (1995 and 1994) provided data suggesting that lower use of home health care among HMO members may contribute to worse health outcomes.

The heterogeneity among managed care plans further complicates analysis of the effects of managed care. Each plan responds differently to its competition, its regulators, the general practice patterns in its service area, and its own experiences and existing systems. Although competition among plans can lead them to offer products with similar features, it seems likely that substantial diversity will remain with respect to specialized efforts targeted to high- risk seniors or other population subgroups. Thus, efforts to assess how well Medicare managed care serves high-risk seniors must explicitly recognize this diversity and avoid broad generalizations about the effects of managed care.

The future role of Medicare + Choice plans will be shaped by the availability of evidence about whether specific services such as care management will lower overall costs or improve care quality for high-risk seniors. A substantial body of literature has evolved over the past 15 years on the cost-effectiveness of alternative approaches to caring for high-risk seniors. In many cases, no evidence of cost savings has been found (Kemper 1988; Weinberger et al. 1996; Fitzgerald et al. 1994; and Schore et al. 1999), and additional research is needed to form a consensus about many approaches that have not been evaluated (Boult et al. 2000). The future role of Medicare + Choice plans could also be shaped by altering the Medicare benefit package, regulations, or payment system to encourage plans to develop new programs for high-risk seniors.

In addition to efforts by Medicare + Choice plans, a number of demonstration programs have evaluated the effectiveness of new models of financing care for high-risk seniors. These demonstrations have been sponsored by CMS and have included (1) the Program for All-Inclusive Care (PACE), which offers a comprehensive array of acute and long term care services for high-risk senior Medicare beneficiaries; (2) the Social HMO (S/HMO), which is a hybrid of a Medicare risk plan and a modest long term care community insurance plan; (3) EverCare, a demonstration program that pairs physicians and geriatric nurse practitioners to manage the care of nursing home residents more effectively; and (4) several state programs, such as Minnesota's Senior Health Options program, which integrates care and financing for dual eligibles, people simultaneously enrolled in Medicare and Medicaid (Wooldridge et al. 1999; and ASPE's Disabilities and Managed Care Web site 2000).

Although none of these kinds of MCOs are included among those we analyze for this report, they have changed the mix of services available to high-risk seniors. For example, PACE, which was found to reduce hospitalizations and nursing home entry, has recently become a program under Medicare + Choice and currently operates in 25 sites nationally (Burstein et al. 1996; and Wooldridge et al. 2000). The S/HMOs screen and assess seniors to determine those that could benefit from expanded community care services to help them avoid nursing home admissions and reduce the risk of complications from their chronic conditions. However, there is no consistent evidence that S/HMOs improve beneficiary outcomes relative to Medicare risk plans that do not receive the extra payments (Wooldridge et al. 2001).

B. Conceptual Framework

To guide our data collection and analysis, we developed a framework for organizing information about the characteristics of high-risk seniors and the key elements of care systems that try to serve them. We also developed a framework for considering the overall system within which Medicare + Choice plans operate.

1. Key Characteristics of High-Risk Seniors and the MCOs That Serve Them

Our study of high-risk seniors is organized around concepts identified by the acronyms VIP and I-CAN (Figure I.1). VIP stands for three key population characteristics that will challenge any system that tries to serve high-risk seniors:

- **Variability**. High-risk seniors often differ substantially from one another, and their conditions and symptoms often vary over time. Not only do they have varying mixes of conditions and impairments, but their attitudes and their capacities for self-care differ widely. As a result, individualized care plans (rather than standard protocols) often must be developed to fit each person's profile.

- **Impairments**. Most high-risk seniors have impairments that make them more difficult to serve than the general senior population. In particular, physical and cognitive impairments can make it hard for these seniors to access the care system effectively and, in some cases, to care for themselves. People often have multiple conditions that require organizationally complex care and place them at high risk for developing additional conditions or impairments. Finally, impairments are likely to worsen over time, and the impairments of some seniors will be sufficiently severe that they find it difficult to care for themselves or to live independently.

- **Providers**. High-risk seniors tend to have numerous providers and receive services in many settings, including physicians' offices, hospitals, nursing homes, and their own homes. This diversity of provider types and settings also leads to organizationally complex care.

I-CAN stands for care system features that MCOs can use to respond effectively to the needs of high-risk seniors:

- **Identification.** No targeted services are possible without initial identification of those seniors who are at high risk. This can be done through screening that uses surveys or administrative data, by providers in the course of delivering care, by monitoring hospital admissions to find people who have developed serious illness with substantial sequelae, and through general outreach activities designed to encourage self-identification by high-risk seniors. Identification systems also need to include some sort of general assessment system in order to refer identified people to the appropriate services, including more detailed assessment.

- **Care Management.** This type of service strives to make organizationally complex care more efficient and more manageable for the seniors and providers. It begins typically with a detailed assessment of people's needs and then helps to coordinate care delivery among multiple providers and facilitates referral to and follow-up with appropriate social service providers. It can also educate patients

about monitoring their conditions and about improving their self-care and lifestyles.

- **Assistance Programs.** These programs are aimed at seniors with specific needs who generally do not require the intensive efforts of care management. Because of the variability among seniors, a wide array of assistance programs exists. These include many types of disease management to address difficulties adhering to treatment regimens for specific diseases (like diabetes or heart failure), pharmacy programs that look for possible drug interactions or more efficient drug combinations, general health promotion and disease prevention programs, behavioral health screening and referral, and volunteer programs that address social isolation.

- **Networks.** MCOs can also promote better care for high-risk seniors by the way they build and run their networks. This includes recruiting geriatricians or other providers with specialized knowledge and skills for treating seniors. MCOs can also selectively contract with skilled nursing homes or other providers in order to ensure quality and to promote better coordination of care. Finally, MCOs can try to influence care delivery by compensating providers in particular ways, or by developing systems to foster information sharing among providers.

FIGURE I.1. The "VIP" Needs of High-Risk Seniors and "I-CAN"

Characteristics of High-Risk Seniors:	MCOs Can Respond with:
Variability Variation in needs, abilities, and attitudes: – Among high-risk seniors – Over time Impairments Reduced stamina, ambulation difficulties, and limited driving ability that make it difficult to access care Sensory and cognitive impairments that can impede self-monitoring and communicating with providers Multiple chronic and acute conditions High risk for developing additional conditions and impairments Limitations in self-care and independent living Providers Use of multiple providers Receipt of multiple services, often in multiple settings	Identification – Screening surveys – Review of administrative data – Provider referral – Inpatient admissions – General assessment Care Management – Assessments – Care coordination – Referral to community agencies Assistance Programs – Disease management – Expanded home health care – Pharmacy programs – Health education and prevention – Behavioral health – Volunteer programs Network – Physician recruitment – Selective contracting for facility care – Payment policies

2. Major Elements in Managed Care Systems

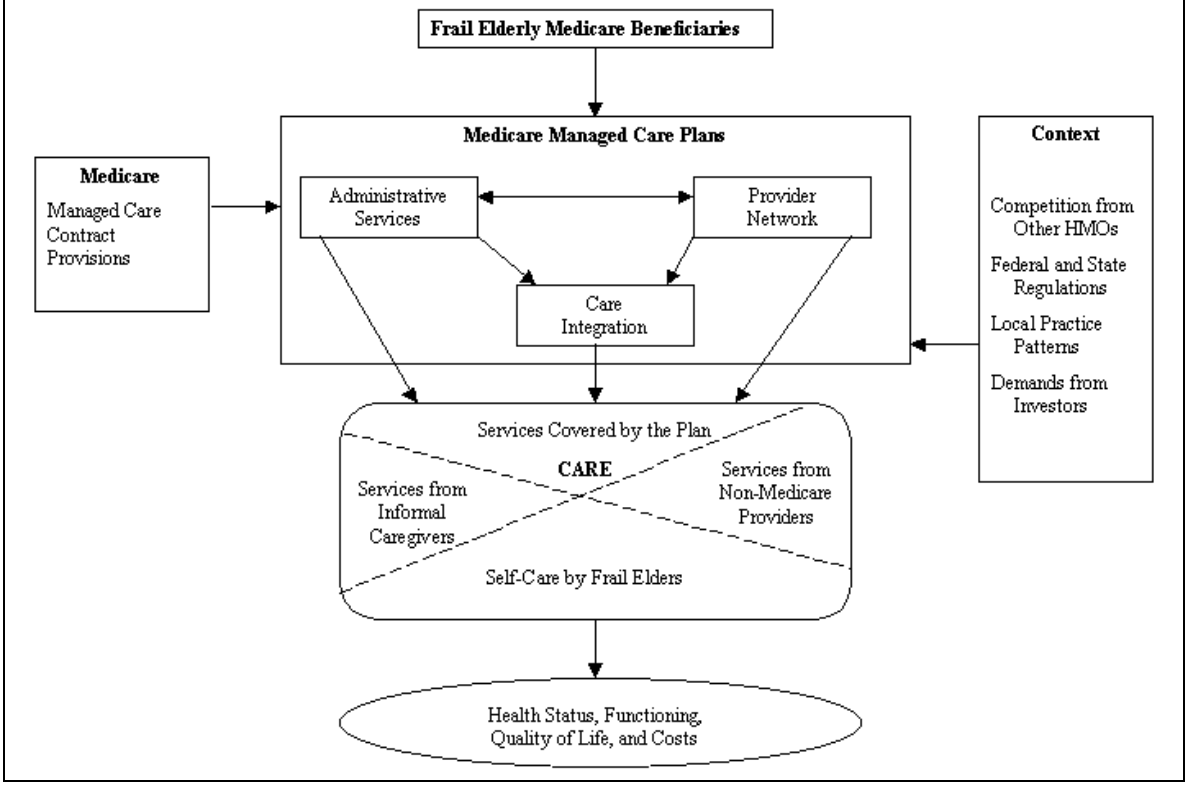
In addition to the VIP and I-CAN characteristics of high-risk seniors and the MCOs that serve them, it is important to pay attention to the fragmented system of care that shapes the health, functioning, and quality of life of a growing number of high-risk seniors (Gold et al. 1998). Although a Medicare + Choice plan can control delivery of most of the health care its members receive, the plan remains only one element in this system. Most social services and custodial care that high-risk seniors need are delivered either by providers who are independent of a plan's provider network or by the seniors and their families. Furthermore, accountability for the mix of services high-risk seniors receive is divided among numerous stakeholders who often have differing priorities and authority. Finally, plans' competition for enrollees, providers, and capital creates incentives and constraints with respect to the strategies they use to improve care for the portion of the market represented by high-risk seniors.

Our view of managed care systems for high-risk seniors in Medicare begins with the elderly beneficiaries and ends with the key outcomes the system is intended to affect: health status, functioning, quality of life, and costs (Figure I.2). Outcomes are shaped generally by people's lifestyles, attitudes, and physical makeup, as well as by the care they receive. That care is shaped, in turn, by the actions of the managed care plan, which is responsible for delivering or arranging for Medicare-covered medical care. The actions of the plan are shaped by two broad external forces: the Medicare program and market forces. Medicare, which is administered by CMS, contracts with health plans to deliver its benefit package to those beneficiaries who choose to enroll. CMS thereby sets the requirements for and expectations about what a plan must deliver to its members, as well as furnishes established capitation payments. A plan's actions also are shaped by the characteristics of the markets in which it operates, particularly the level of competition from other insurers, the policies of state regulators and accreditation bodies, the infrastructure of local care, historical practice patterns, and demands by the plan's shareholders (or, in the case of nonprofit plans, by sponsors).

Care is delivered to high-risk seniors by a fragmented system. Most medical care is covered by Medicare and is delivered by the plan's provider network. The remaining medical care (such as medications), along with services such as long-term nursing home care, personal assistance, nutrition services, housing, and transportation, are provided by a mix of providers who operate largely outside the Medicare system. Finally, a substantial amount of care is provided by unpaid caregivers, such as family members, friends, and neighbors, and by the high-risk seniors themselves. Although the managed care plan may influence these other sources of care through education and coordination, and may even decide to fund some of these services, it remains contractually obligated only for Medicare-covered care. Because the boundaries between the different types and sources of care are not well defined, there often are alternative sources for specific services. Thus, the care delivered by one group can interact with that delivered by others.

Although the elements in this structure can interact in myriad ways, three relationships are particularly important for our study of Medicare managed care for high-risk seniors: (1) the interrelationship between elderly Medicare beneficiaries and the plan, (2) the contract linking Medicare and the plans, and (3) the fragmented nature of care delivery for high-risk seniors.

FIGURE I.2. Systems Framework for Managed Care Organizations



When beneficiaries enroll in a managed care plan, they tie receipt of Medicare benefits to a contractual entity (the "Medicare + Choice plan"). The plan is then obligated to provide or arrange for all Medicare benefits, as well as any other benefits it has added to its package. Most Medicare risk plans restrict beneficiary choice to a specific provider network.[3] In exchange, plans offer savings to most beneficiaries willing to accept these restrictions. For example, many plans do not have deductibles or charge members a premium, although members still must pay the Medicare Part B premiums. Many plans also offer coverage for prescription drugs or for hearing aids and glasses. During the late 1990s, beneficiaries in these plans often could save $1,000 or more per year in out-of-pocket expenses, compared with the fee-for-service system.[4] A

[3] This restriction may be less than absolute for some Medicare managed care products. For example, point-of-service options (when they exist) provide some funding for providers not in the network but do impose higher cost sharing on such use.

[4] For example, CMS estimated that the expected value of the deductibles and copayments paid by beneficiaries in the fee-for-service system is approximately $77 per month (or about $924 per year). Also, the average 1999 costs for the widely available AARP Medigap H policy, which includes a prescription drug benefit, ranged from about $100 per month to more than $200 ($1,200 to $2,400 per year), depending on the person's state of residence.

key issue facing beneficiaries who consider enrolling in managed care is whether the savings are sufficient compensation for letting the plan restrict their choice of providers.

The relationship between Medicare and a plan centers on the contract, which obligates the plan to provide the Medicare benefit package, along with any additional services the plan has added to its benefit package, to enrolled beneficiaries in return for a specific capitation payment rate. The contract stipulates such features as mandated 24-hour coverage, provider access standards, quality assurance systems, data-reporting requirements, and grievance and appeals mechanisms. The contract enables Medicare to shift the financial risk for delivering Medicare benefits from the government to the plan. It establishes specific expectations about plan performance yet gives the plan considerable flexibility in deciding how to meet them.

To fulfill their contractual responsibilities, plans establish administrative and clinical systems through which they and their associated provider networks deliver care to the enrolled population. Of particular relevance to high-risk seniors, some plans establish care management systems that seek to identify and assess members who are likely to require extensive care, then manage the care delivered to those people. The exact structure of these internal subsystems varies among, and sometimes within, plans. Furthermore, for their Medicare populations, plans may establish structures, such as screening protocols or case management systems, that differ from those for other enrolled populations.

In Medicare managed care, as in Medicare fee-for-service, high-risk seniors draw on a wide array of services that are provided through a fragmented system of overlapping providers and funding sources (Bringewatt 1995; and Weiner and Skaggs 1995). These services include medical care, assistance from both paid and unpaid caregivers, and a variety of long term care and other services that lie outside the Medicare benefit package. High-risk seniors also engage in various self-management activities, including monitoring their physical and emotional status; engaging in health-promotion activities; and adhering to any recommended diet, exercise, medication, and treatment protocols.

Managed care plans have the structure and incentives to coordinate delivery of covered medical care; they also have considerable flexibility in determining the specific mix of providers and kinds of expertise reflected in the plan. Medicare + Care regulations also require that plans take some steps to reduce fragmentation, but the regulations provide only vague guidance about expectations in this area.

3. Implications for This Study of High-Risk Seniors in Medicare Managed Care

An implication of our conceptual framework is that seniors outcomes are shaped by a wide array of factors, only some of which are under the control of their managed care plan. These factors may vary from community to community and from person to person. The effects of any systematic effort an MCO makes to affect the delivery of care can be masked by the variation among high-risk seniors in the extent to which they can

draw, or wish to draw, on family, friends, social service providers, and themselves to meet their needs. The effects of MCO efforts can also be masked by differences in the local availability of senior-related community services (such as home-delivered meals and financial aid for purchasing needed medications) that influence outcomes, particularly the extent of unmet needs for help with ADLs.

This difficulty in identifying the specific effect of an MCO means that our case study of only four MCOs will not be able to come to definitive conclusions about links between MCO structure and beneficiary outcomes. Nevertheless, we feel that it is possible to identify some suggestive patterns in the information we collected about MCO structure and in the experiences high-risk seniors report in our surveys. The combination of detailed operational information gathered from site visits to all four MCOs and consumer survey information gathered from beneficiaries in three of those MCOs gives us a strong base for examining ways in which MCO features may affect outcomes. In looking among these MCOs, we have seen that different MCO approaches are associated with differences in beneficiary perceptions about the MCO services. These patterns suggest challenges that all MCOs will face in serving high-risk seniors and offer some suggestions about useful ways to address those challenges.

The conceptual framework also highlights the potential importance of care management for coordinating the organizationally complex mix of services and providers. The set of services included in “care” can be very large for high-risk seniors. As a group, they are likely to have more providers, paid and unpaid, than other beneficiaries. They are likely to need medications and social support services that are not covered by Medicare and are delivered by providers who are not contractually linked to the MCOs. They and their families will often have to play a major role in monitoring the dynamic nature of their chronic conditions and complying with multi-part treatment regimens. Interest in making this fragmented system work effectively and efficiently leads naturally to interest in care management. Thus, it was not surprising that care management plays a key role in how the case study MCOs arrange care for high-risk seniors.

While interest in care management is high, we expect that MCOs will be cautious in their use of this service. Care management is not a covered Medicare benefit, and there is little clear evidence that it can generate net savings. Therefore, MCOs would be expected to undertake fairly limited care management programs until they develop a better sense of the ways in which such programs are affecting their net revenues and the health outcomes of their beneficiaries. In addition, we would expect that MCOs would deliver care management that focused on assessment and coordination of medical care. We would expect them to refer high-risk seniors to local social service providers for services that lie outside the Medicare benefit package (such as home-delivered meals or respite care for unpaid caregivers).

We also expect that MCOs organized as group or staff models will have more control over their providers than will Individual Provider Associations (IPAs) or network MCOs. The close relationship between MCOs and providers in group models gives

these MCOs an internal source of ideas for making care more efficient and cost-effective, as well as a more direct ability to influence how care is delivered. In addition, group or staff MCOs would be expected to attract physicians and providers who are more comfortable with prepaid medicine. In contrast, network or IPA models tend to include providers that contract with several other MCOs as well as treat patients who have fee-for-service coverage (Collins et al. 1997). Thus, providers in these networks face multiple sets of financial incentives and, in some cases, multiple suggested care protocols and monitoring procedures. Any one IPA or network plan will therefore have only a limited ability to shape the care delivered by providers.

II. STUDY POPULATIONS AND METHODS

The goal of our case studies has been to understand the perspective and experiences of elderly Medicare beneficiaries who have enrolled in innovative managed care organizations (MCOs) and who are known to those organizations as having high risks for hospitalization and adverse health outcomes. We focused on this group to get an idea of the ways in which managed care could help high-risk seniors. High-risk seniors who had not been identified by their plans clearly require attention, but studying those people would not allow us to observe any proactive services. In addition, high-risk groups of seniors provide an important sentinel group for studying the performance of managed care organizations (Patterson et al. 1998).

We began our case studies by selecting four innovative MCOs: three managed care plans with capitated Medicare + Choice contracts and one large provider group with a history of accepting capitation to care for elderly Medicare beneficiaries.

We selected the four MCOs after developing a list of organizations that had innovative programs for seniors with multiple chronic conditions or disabilities. We developed the list using reports in the literature, suggestions from the project's Technical Advisory Group, and the authors' knowledge of the industry. In selecting the four to study, we looked for a mix of organizations in terms of plan type, Medicare + Choice payment level, profit/nonprofit tax status, and geographic location. All organizations also had to have more than 10,000 elderly Medicare beneficiaries and several years' experience with special programs for seniors.

Once we selected the MCOs, we identified three groups of seniors who had severe limitations or multiple chronic conditions and who had been identified as high risk by their MCO. These groups include elderly beneficiaries being served by an MCO's care management program, those who had attained advanced age (more than 84 years old), and those who had experienced a recent hip fracture or stroke. While these three groups do not constitute or represent all high-risk seniors, they provide a convenient way of illustrating the experiences of seniors whose high-risk status is known to their MCO.

We conducted the case study site visits from December 1997 through October 1998, and surveys from March 1999 through December 1999, with a second round of interviewing for the subsample of seniors with hip fracture or stroke conducted from October 1999 through July 2000.

A. Participating Managed Care Organizations

The four MCOs that participated in this study are:

- **Keystone Health Plan East** (referred to herein as Keystone East): an IPA-model plan that, at the time of our case study, contracted directly with individual physicians to care for about 80 percent of its Medicare enrollees and had capitated contracts with large provider organizations to care for the other 20 percent.

- **Regence HMO Oregon** (referred to herein as HMO Oregon): an IPA-model plan that relied on capitated contracts with large provider organizations to care for a substantial proportion of its Medicare beneficiaries.

- **Kaiser Permanente--Colorado** (referred to herein as Kaiser Colorado): a group model HMO in which the HMO (the Kaiser Foundation Health Plan) contracts for physician services with the Colorado Permanente Medical Group, which has about 450 physicians who serve Kaiser Colorado members exclusively and who participate in all aspects of health plan management.[5]

- **Aspen Medical Group** (referred to herein as Aspen): a large nonprofit multispecialty medical group in the St. Paul/Minneapolis area, which serves 13,000 Medicare + Choice beneficiaries who enrolled in **Medica Health Plan** and then selected Aspen as their primary care clinic. At the time of our visit, about 60 percent of the Medicare beneficiaries seen at Aspen were enrolled in managed care.

These four organizations represent a diverse mix in terms of their size, recent growth, geographic location, and other characteristics (Table II.1). In our case study, the major distinction among the four MCOs is the group nature of Kaiser Colorado and Aspen compared with the IPA/network organization at Keystone East and HMO Oregon. It is also important to note the much larger scale and recent growth rate for Keystone East and the very low growth rates at Aspen and HMO Oregon. Differential growth sets up different dynamics and opportunities in these organizations. For example, at the time of our site visit to Keystone East, the MCO was devoting substantial energies, including staff hiring and updating their data systems, in order to integrate almost 200,000 new members. The longer experience with Medicare managed care at the two group models, Aspen and Kaiser Colorado, is also an important difference among the four case-study MCOs.

[5] Although referred to in the text as Kaiser Colorado, the programs described refer to both the health plan and the Permanente Medical Group.

TABLE II.1. Managed Care Organizations Studied				
	Aspen Medical Group/Media Health Plan	**Kaiser Health Plan of Colorado**	**Keystone Health Plan East**	**Regence HMO Oregon**
Headquarters Location	St. Paul, MN	Denver, CO	Philadelphia, PA	Portland, OR
Date of Site Visit	October 1998	January 1998	October 1997	December 1997
Organization Type	Capitated Medical Group	Group	IPA/Network (with 20 percent of enrollees in groups)	IPA/Network (with 75 percent of enrollees in groups)
Total Enrollment at the Time of Our Visit	90,000	339,000	800,000	440,000
Capitated Medicare Enrollment at the Time of Our Visit	13,000	38,400	102,400	17,600
Growth in Medicare Enrollments During the Year Prior to Our Visit	Close to zero	9.8 percent	23 percent	0.4 percent
For-Profit Status	Nonprofit	Nonprofit	For-profit	Nonprofit
Medicare Risk Plan Established	1976[a]	1986	1993	1994
Organization Established	1974	1980	1987	1976

NOTE: All MCO data were collected from the MCOs.

a. Aspen began its Medicare risk plan under a demonstration that predated the 1982 enactment of the legislation authorizing Medicare managed care, the Tax Equity and Fiscal Responsibility Act (TEFRA) of 1982.

The four MCOs operated in market areas with differing characteristics (Table II.2). The major distinction is between the area in and around Philadelphia (served by Keystone East) and the areas served by the other organizations. The Philadelphia area is notable for its high provider supply and utilization patterns and its higher Medicare + Choice payment rates. The number of inpatient days per 1,000 residents in Philadelphia is at least twice that for the other areas and almost three times the rate for the Portland area. The Medicare payment level for 1998 was $718 for the city of Philadelphia, which is 40 to 70 percent more than the highest rate for the other catchment areas.

The other major distinction is the managed care penetration rate: the percentage of people who are enrolled in managed care. Among our four organizations, HMO Oregon operates in the area with the greatest managed care penetration, almost half the population and half the Medicare beneficiaries were enrolled in managed care. (Because many people do not have insurance, the penetration rate among all *insured* people is much higher than 50 percent.) Kaiser and Aspen also operate in areas with high managed care penetration. Keystone's market has the lowest managed care penetration among Medicare beneficiaries, although managed care was growing quickly there during the late 1990s and was well above the average rate for the nation as a whole.

It is important to note that the four case-study MCOs implemented several services for high- risk seniors before those services were mandated by the Centers for Medicare & Medicaid Services (CMS; formerly known as the Health Care Financing Administration). For example, all four screened new members before it was mandated. In addition, they were identifying and assessing high-risk seniors before the regulation requiring Medicare + Choice plans to identify each person with a serious or complex medical condition, assess the condition, and develop a treatment plan that allows direct access to specialists.[6] That regulation also requires that plans have in place programs for coordination of plan services with community and social services. The regulations do not, however, outline the responsibility of MCOs to address the non-acute care needs of the enrolled beneficiaries, nor do they define "serious and complex medical conditions."

B. Data Collection

Our case studies draw on two primary sources of data:

- Site visits and focus groups conducted at the four plans from October 1997 through January 1998

- Surveys of selected samples of beneficiaries known to be at high risk for adverse outcomes in three of the four MCOs. The surveys included 1,657 beneficiaries and were conducted from March 1999 through July 2000.

1. Site Visits and Focus Groups

We used site visits and focus groups to collect information about the structures and processes the MCOs used to care for high-risk seniors. Most of this information was collected during three-day site visits conducted by three of the authors of this report (Drs. Fox, Retchin, and Thornton). Prior to each visit, we reviewed information on the health plan, including benefit packages, market area, Medicare enrollment growth, and any documents the organization could provide that described their special programs for high-risk seniors. During each visit, we spoke with the director of Medicare programs, the medical director, and the director of care management. We also spoke with the care management supervisors and staff from any special programs for elderly Medicare beneficiaries with chronic illnesses or disabilities. Site visits included four separate focus groups with physicians, care managers, seniors enrolled in the organization's care management program, and seniors with a recent hip fracture or stroke. We also spoke with managers at skilled nursing facilities and home health agencies that served large numbers of the organization's patients. Finally, we spoke with the director of the local Area Agency on Aging in order to get an overview of the services available locally. We held follow-up telephone interviews with several of these people to obtain

[6] An Interim Final Regulation for the Medicare + Choice Program was published on June 26, 1998, requiring plans to engage in these activities; it was derived from a recommendation contained in the Consumers Bill of Rights and Responsibilities that called for allowing persons with serious and complex illnesses to have direct access to specialists. A final regulation was issued on June 29, 2000.

supplementary information. Overall, we talked to more than 150 people in conducting the case studies.

TABLE II.2. Characteristics of Area Health Care Markets and Practice Patterns

	Denver[a] (Kaiser Colorado)	Philadelphia[b] (Keystone East)	Portland[c] (HMO Oregon)	Minneapolis-St. Paul[d] (Aspen)	United States
Demographics					
Population, 1996[e]	2,125,212	3,723,835	1,375,518	2,509,572	265,284,000
Medicare Beneficiaries, 1996[f]	236,005	598,730	175,894	286,722	37,164,000
Percentage of Population Age 65 and over, 1996[f]	9.2%	14.5%	11.9%	9.7%	12.8%
Managed Care					
Overall HMO Penetration Rate, 1996[g,h]	36.0%	37.0%	48.7%	44.2%	20.3%
Medicare Risk Plan Penetration Rate, 1997[f]	40.0%	29.4%	48.7%	32.9%	12.9%
Medicare Payment Level, 1998[f]	$408-$514	$522-$718	$383-$412	$367-$431	$472[i]
Physicians and Hospitals					
Family and General Practitioners per 100,000, 1996[g,h]	25	18	17	36	22
Specialists per 100,000, 1996 [g,h]	168	191	148	133	136
Hospital Beds per 1,000, 1995[h,i]	2.3	4.2	2.1	2.4	3.3
Admissions per 1,000, 1995[h,i]	91	163	94	105	117
Inpatient Days per 1,000, 1995[h,i]	470	1,127	404	572	753
Average Length of Stay, 1995[h,i]	5.1	6.9	4.3	5.4	6.5

a. The Denver area refers to the counties in the Denver and the Boulder-Longmont Primary Metropolitan Statistical Areas: Adams, Arapahoe, Boulder, Denver, Douglas, and Jefferson.
b. Unless otherwise noted, the Philadelphia area refers to the five counties in Keystone East>s service area: Bucks, Chester, Delaware, Montgomery, and Philadelphia counties.
c. Unless otherwise noted, the Portland area refers to the four counties in HMO Oregon>s service area: Clackamas, Columbia, Multnomah, and Washington counties.
d. Unless otherwise noted, the Minneapolis-St. Paul area refers to Anoka, Dakota, Hennepin, Ramsey, Scott, Washington, and Wright counties.
e. U.S. Census Bureau 1997.
f. Health Care Financing Administration 1997.
g. Interstudy 1997.
h. For some market areas, the statistic is for the plan's approximate service area; data were not always available for the exact area.
i. American Hospital Association 1996/1997. U.S. average payment level.

In preparing to analyze the site-visit information, we first developed reports on each of our site visits. Those reports were reviewed by staff at the participating organizations, to ensure that we reported facts about the organization accurately. Similarly, this report has been reviewed by key staff at the four organizations as well as by our Technical Advisory Panel. The authors, of course, remain responsible for any remaining errors and for the interpretation of the information provided.

2. Survey of Selected High-Risk Beneficiaries in Three MCOs

We conducted surveys to gather information about the characteristics, experiences, and perceptions of high-risk seniors in three of the case-study MCOs: Aspen, Kaiser Colorado, and Keystone East.[7] These surveys focused on the three groups of elderly high-risk Medicare beneficiaries we are studying: (1) those whom the MCO's enrolled in care management programs, (2) those with advanced age, and (3) those with a recent hip fracture or stroke. A total of 1,657 beneficiaries were interviewed by telephone between March and December 1999. We also reinterviewed 301 of the beneficiaries in the hip fracture and stroke subsample approximately seven months after their initial interview.

We conducted the survey using computer-assisted telephone interviewing (CATI). Surveys were administered to three types of respondents. Whenever possible, we spoke directly to the sample members. When that was not possible, we spoke to a proxy or representative proxy respondent. The proxy respondents were interviewed for sample members who made their own medical decisions but could not complete the interview at the time of the survey. The representative proxies were interviewed when they were the ones who made health care decisions for sample members who were unable to do so. The survey included questions and options that the interviewers could use to switch respondent type during an interview if it became clear that the respondent could not complete the interview or when the sample member became available to complete an interview that we had started with a proxy.

We did not interview proxy respondents for sample members who had died. Thus, our results reflect the characteristics of people who survived from the time they were selected for the survey until the interview. For the care management group, the elapsed time between selection and interview ranged from 1 to 20 months. For the advanced age sample, the elapsed time ranged from 6 to 15 months. Beneficiaries included in the hip fracture and stroke samples were interviewed approximately 3 months and 10 months after their vent.

The overall response rate for the wave 1 survey, which includes all three subgroups, was 76 percent. The response rate for the wave 2 survey of hip fracture and stroke patients was 89 percent. The response rates varied among the MCOs. For wave 1 the rates were 79 percent for Aspen, 74 percent for Keystone East, and 69 for Kaiser Colorado. Response rates for wave 2 were 88 percent for Aspen, 90 percent for Keystone East, and 85 for Kaiser Colorado. The low rates for wave 1 at Kaiser Colorado were caused by a requirement imposed by their institutional review board that we give all sample members a prepaid postcard that they could use to opt out of the survey (Stapulonis et al. 2001). If we exclude the postcard refusals in calculating response rates, the rate would be 77 percent. Thus, the survey performance among individuals

[7] Stapulonis et al. (2001) provide details about the survey. In calculating the response rate, we excluded two groups of ineligible respondents: (1) those who were deceased, and (2) those sample members from Kaiser Colorado who we were precluded from interviewing because they returned a postcard asking to be excluded from the study.

we had a chance to contact and interview by telephone was very similar among the three MCOs. The survey data were weighted to reflect the probability of selection and to correct for survey nonresponse. The correction for nonresponse was based only on gender and age, which were the only two relevant variables available on the lists of names provided by the MCOs.

The beneficiaries included in the survey were sampled from lists provided by three of the case study MCOs. The sample selection was conducted in an effort to be representative of the three high-risk groups in these MCOs. Specifically,

- **Care Management Subsample**. The three MCOs provided lists of their members who had been enrolled in care management. For Kaiser Colorado and Keystone East, the lists included seniors who had been in care management between January and August 1998. For Aspen, whose care management program had started more recently, the list contained seniors enrolled in care management from September 1998 through January 1999. We selected people at random from each list. The number of people selected from each MCO was determined to give us approximately equal confidence intervals for MCO-specific estimates.

- **Advanced Age Subsample**. The MCOs provided lists of all their members who had attained age 85 by October 1998. We selected a random subset of them for the survey. Again, the sample size for each MCO was determined to give us approximately equal confidence intervals for MCO-specific estimates.

- **Hip Fracture and Stroke Subsample**. The MCOs provided lists of elderly beneficiaries who had been hospitalized for hip fracture or stroke from November 1998 through August 1999.[8] The lists were updated on a monthly basis so that we could interview these patients 3 months after their event (hip fracture or stroke) and then again 10 months after the event. Since the flow of cases was fairly small, we attempted to interview every hip fracture or stroke case that we could.

The final samples for each of the MCOs and subsamples are given in Table II.3. This sample is quite large for a case study and gives us a good indication of the experiences of the selected groups of high-risk seniors at each of the three MCOs. Nevertheless, estimates for subgroups, particularly for the hip fracture and stroke groups, are imprecise and give us a basis for detecting only very large differences between subgroups.

The lists from which the subsamples were selected were not mutually exclusive. For example, some of the beneficiaries on the lists of people in care management were

[8] In a few months during this 10-month period, data were obtained from only one or two of the three case-study MCOs (Stapulonis et al. 2001). However, we have no evidence of seasonality in the treatment of hip fracture or stroke and believe that the resulting samples provide a good indication of the experiences of people with hip fracture or stroke in the three case study MCOs.

more than 85 years old and therefore were also included on the lists of people with advanced age. The figures in Table II.3 include each beneficiary in the subsample from which he or she was selected. In the analysis, we weighted the sample data to reflect the actual probability of selection (Stapulonis et al. 2001).

The timing of the two waves of interviewing for hip fracture and stroke patients reflects several factors. We wanted to describe two phases in the treatment these people will receive. Immediately following the event, it will be mostly medical care. Later, it will shift to be mostly ongoing monitoring or, in some cases, long-term custodial support. The two waves of interviewing were designed to capture this change in the nature of care.[9] In addition, the second interview, conducted 10 months after the event, should capture the full extent of recovery for most seniors (Magaziner et al. 1990; and Jorgensen et al. 1995).

TABLE II.3. Number of High-Risk Seniors Interviewed

Survey Sample	Total	Aspen	Kaiser Colorado	Keystone East
Wave I				
Care management	718	192	153	373
Advanced age	552	158	190	204
Hip fracture	136	20	27	89
Stroke	251	37	25	189
Total	**1,657**	**407**	**395**	**885**
Wave II				
Hip fracture	104	15	18	71
Stroke	197	28	22	147
Total	**301**	**43**	**40**	**218**

C. Characteristics of Our Sample of High-Risk Seniors

The characteristics of our sample indicate some traits that distinguish our sampled high-risk seniors from the overall Medicare population. The composition of our sample reflects two types of selection. First, our focus on people with advanced age and a previous stroke or hip fracture implies that our sample will be older than the average elderly Medicare beneficiary. Furthermore, members of any of our three sample subgroups (care management, advanced age, previous hip fracture or stroke) are more likely to have poorer-than-average self- assessed health status and possess multidimensional needs resulting from multiple functional limitations and chronic conditions.

To describe our sample of high-risk seniors, we present means of variables related to the demographic characteristics and the health and functioning of beneficiaries in our sample. Means from our survey are weighted to adjust for nonresponse and the

[9] We would have preferred to conduct the first interview within a month or two of the event. However, it proved to be impossible to obtain and process the sample lists from the MCOs that fast.

probability of selection into a given survey sample,[10] and allow us to make generalizations about the relevant populations of the three MCOs at the population level. Furthermore, to give a general sense of how our sample compares to the population of elderly Medicare beneficiaries, means derived from the 1997 Medicare Current Beneficiary Survey (MCBS) (Health Care Financing Administration 1999) are also included. Standard errors were not available for the means we derived from published data from the MCBS, but even those published for smaller subgroups were consistently less then one percent. Therefore, the following standard will be used to give an idea of whether the means are statistically significant: if the mean of our sample is more than 2 x (standard error) away from that of the MCBS, then it will be considered significantly different.

1. Demographic Characteristics

The high-risk seniors in our sample are more likely than the average Medicare beneficiary to be of advanced age, female, and white. Chronic conditions, disability, and frailty are all more common among those of advanced age (Health Care Financing Administration 1999), so it is not surprising that Table II.4 indicates that our sample of high-risk seniors is older than the average Medicare beneficiary. While the high percentage of seniors of advanced age (70 percent) is due primarily to our sample selection process, 17 percent are age 85 and older even among our subsample of seniors in care management, or seniors with a recent hip fracture or stroke. The fact that this disproportionately aged sample is predominately female is likely due to females' longer life expectancy. White non-Hispanics constitute 76 percent of our sample, significantly lower than the 85 percent of all Medicare beneficiaries. While this may be surprising because of the large proportion of white non-Hispanics in Denver and Minneapolis-St. Paul, 72 percent of the weighted sample consists of seniors in Keystone East, which reflects the larger-than-average proportion of black non-Hispanics in Philadelphia.

Our sample is also characterized by relatively low education and income levels compared with the general elderly Medicare population. Table II.4 indicates that nearly half (46 percent) of the seniors in our sample did not complete high school, and this is significantly higher than the 37 percent for Medicare beneficiaries. Low educational attainment, to the extent that it is associated with low levels of literacy, may impede seniors' ability to understand written instructions and thus complicate the provider's job of communicating treatment protocols. A larger proportion of seniors in our sample, 35 percent compared to 30 percent for the Medicare population (as indicated in Table II.4), have annual incomes below $10,000. A disproportionately low-income population may face additional challenges to obtaining effective care as a result of their severely limited ability to purchase services not covered by Medicare.

[10] The sample weights for our survey cause the sample to sum to the population of 15,086 beneficiaries included on the lists submitted by the three MCOs. This population was obtained as follows: 72 percent are from Keystone East, 7 percent from Aspen, and 21 percent from Kaiser Colorado. The survey subsamples contain beneficiaries in care management, of advanced age, and with a recent hip fracture or stroke.

TABLE II.4. Demographic Characteristics (Percentages and Their Standard Errors)		
	Survey Sample	**All Medicare Seniors**
Age at Time of Interview		
65 to 74	15.8^ (0.6)	52.5
75 to 84	14.2^ (0.6)	34.9
85 or older	70.0^ (0.2)	12.7
Gender		
Female	66.4^ (1.6)	58.2
Male	33.6^ (1.6)	41.8
Race/Ethnicity		
White (non-Hispanic)	75.6^ (1.5)	84.5
Black (non-Hispanic)	11.4^ (1.1)	7.5
Hispanic	3.6^ (0.6)	5.8
Other	9.4^ (1.0)	2.2
Education		
Did not complete high school	46.0^ (1.7)	36.8
High school graduate	33.9 (1.6)	32.5
At least some college	20.1^ (1.2)	30.8
Total Household Income		
Less than $10,000	35.3**^ (1.9)	30.2
$10,000 to less than $20,000	40.1**^ (1.9)	29.5
$20,000 or more	24.6**^ (1.5)	40.3
Lives Alone	41.5^ (1.7)	29.5
Residential Situation		
Lives in a community	82.8^ (1.3)	94.1
Lives in a Nursing Home	17.2	5.9

SOURCE: Telephone survey of 1,657 high-risk seniors from three managed care organizations, conducted between March and December 1999 by MPR.
NOTE: Values are percentages, with standard errors in parentheses.

a. Data from 1997 Medicare Current Beneficiary Survey (MCBS) for Medicare beneficiaries age 65 and over.

^ Significantly different from MCBS mean. Standard errors not available for MCBS means, so survey sample means considered significantly different from MCBS if difference is greater than 2 x (standard error) of the survey sample mean.

** Item had over 20 percent nonresponse. No other variables in this table had more than 5 percent nonresponse.

The high-risk seniors in our sample live in a mix of residential settings. Most of them, 83 percent, lived in the community, but 17 percent lived in nursing homes at the time we interviewed them. This rate of institutionalization is higher than among all Medicare seniors, although it is not surprising, since our sample has a greater incidence of functional limitations and multiple chronic conditions. Among community-resident seniors, those who live alone face higher risks because there is no one else in the household to provide assistance with ADLs or IADLs should such assistance be necessary. In the absence of a resident caregiver, the responsibility of arranging and paying for these services typically rests with the senior or other nonresident family members.

2. Health and Functioning

Not surprisingly, beneficiaries in our sample have inferior health status and are more functionally limited than the average Medicare-covered senior (Table II.5). Just over 30 percent of high-risk seniors in our sample consider themselves in excellent or very good health compared with 44 percent of all Medicare-covered seniors.

TABLE II.5. Health and Functioning (Percentages and Their Standard Errors)

	Survey Sample	All Medicare Seniors[a]
Health Assessment		
Excellent or very good	30.2^ (1.6)	43.8
Good	32.7 (1.6)	30.7
Fair	25.7^ (1.5)	18.3
Poor	11.4^ (1.1)	7.2
Functional Limitations[b]		
None	42.4^ (1.8)	62.8
IADLs only	30.2^ (1.7)	17.5
1 to 2 ADLS	18.4^ (1.4)	12.7
3 to 5 ADLs	8.9 (1.0)	7.1
Number of Chronic Conditions[c]		
None	9.0 (1.1)	
One or two	40.8 (1.7)	
Three or four	35.6 (1.6)	
Five or more	14.6 (1.1)	

SOURCE: Telephone survey of 1,657 high-risk seniors from three managed care organizations, conducted between March and December 1999 by MPR.
NOTE: Values are percentages, with standard errors in parentheses. None of the variables in this table had more than 5 percent nonresponse.

a. Data from 1997 Medicare Current Beneficiary Survey (MCBS) for Medicare beneficiaries age 65 and over.
b. Functional limitations involve needing help or supervision with (1) activities of daily living (ADLs) that include bathing, eating, dressing, transferring, and toileting; or (2) with Instrumental Activities of Daily Living (IADLs) that include preparing meals, doing light housework, managing money, or using the telephone. These questions asked only of the 1,399 community residents in our sample.
c. People were asked whether they had been diagnosed with any of the following 12 chronic conditions: arteriosclerosis, hypertension, heart attack, other heart disease, previous stroke, depression, cancer, diabetes, arthritis, asthma, previous hip fracture, and Alzheimer's or other dementia. Figures for all Medicare seniors are not presented, because the MCBS does not ask about the same conditions, so the data are not comparable.

^ Significantly different from MCBS mean. Exact standard errors not available for MCBS means, so survey sample means considered significantly different from MCBS if difference is greater than 2 x (standard error) of the survey sample mean.

The presence of one or multiple functional limitations and chronic conditions is likely to be a contributing factor to the inferior self-assessed health status of our sample of high-risk seniors. These seniors are more likely to be functionally limited than the average Medicare senior, and results in Table II.5 support this in showing that 42 percent of survey respondents do not have any limitations in ADLs or IADLs; much

lower than the 63 percent average for elderly Medicare beneficiaries. In fact, every category of functional limitations suggests that the high-risk seniors in our sample are significantly more likely to have functional limitations. In addition, half the seniors in our sample possess three or more chronic conditions, and 15 percent have five or more.

One result that both enhances and reflects the ability of high-risk seniors to overcome the challenges they face is their high level of activity. Previous research has shown that exercise for seniors of advanced age has the effect of minimizing the debilitating effect of their health conditions and functional impairments (Morey et al. 1989). In our sample of seniors in the care management and advanced age subgroups, 65 percent reported that they exercised for 20 minutes or more at least three times during the week before their interview (not tabled).

While seniors in our sample are, on average, more impaired than the general Medicare senior population and are likely to face above-average risks for adverse outcomes, many report currently being in fairly good health. Almost a third report being in excellent or very good health, 42 percent report no functional limitations, and most report having substantial physical activity. Thus, while our sample faces the high risks associated with advanced age, a recent hip fracture or stroke, or other factors that led to their being selected by their MCO's care management program, they are not frail. For these seniors, a major objective of their care will be to maintain their health and functioning.

D. Analysis Methods

The analysis of case study information was based on the site visit reports and follow-up discussions with key staff at the four MCOs. Using the VIP and I-CAN frameworks, we looked for ways in which these organizations had attempted to meet the diverse and often extensive needs of high-risk seniors. In particular, we compared methods used to identify high-risk seniors and to then coordinate and manage their care.

Much of the survey data analysis is based on descriptive statistics (averages and cross-tabulations). In general, we present weighted means in order to provide as close a measure as possible for the target populations being described. When comparing the three organizations whose members were surveyed, we use regression analysis to control for the underlying differences in the characteristics of the beneficiaries enrolled in the three MCOs. These regressions are not weighted but do control for factors that reflect the probability of selection into the survey and survey nonresponse. In particular, the following control variables were used for most regressions:

- Plan (Kaiser Colorado, Aspen, Keystone East)
- Survey Subgroup (care management, advanced age, hip, stroke)
- Respondent Type (sample member, proxy, representative proxy)
- Gender (male, female)

- Age (age 65-74, age 75-84, age>84)
- Race (white, black, other)
- Education (no high school diploma, high school graduate, at least some college)
- Income (less than $10,000, $10 to $20,000, more than $20,000)
- Self-Reported Health Status (excellent, good, fair, poor)
- Medicaid (whether sample member reported having Medicaid coverage)
- Marital Status (whether married)
- Residential Status (whether sample member lives alone)
- Chronic Conditions (2 or fewer conditions, 3 or 4 conditions, 5 or more conditions)
- Dementia (whether the sample member has Alzheimer's disease or other dementia)
- ADL Limitations (no limitations, limited in 1 or 2 activities, limited in 3 or more activities)

Means for these control variables, and their variation among the three MCOs included in the survey, are presented in Table II.6. The race categories used in the regressions (Table II.6) differ from those presented in Table II.4, because we were unable to control for ethnicity as a result of the small number of Hispanics. Ethnicity is therefore ignored as a control variable, and Hispanics are classified into their corresponding race category. Similarly, the regressions use only 3 categories to describe the number of chronic conditions. We combined seniors who reported no chronic conditions with those who reported fewer than two such conditions, because the group with no conditions was fairly small. Finally, we control for the presence of dementia, because we believe that that controlling for the number of chronic conditions alone will not capture the effect of relatively high rates of dementia in the Aspen and Kaiser samples, and the absence of an explicit control for this measure could lead to omitted variables bias. In the analysis of the hip fracture and stroke sample (see Chapter VI), the sample was too small to permit us to control for all the variables included in this list. We therefore developed a slightly smaller set of control variables that are listed in Appendix Table A.1.

When one of these control variables was missing for a sample member, we imputed the mean for the full sample. In addition, when a variable was missing for more than five percent of a sample, we added an extra control variable that indicated whether or not we had imputed for each sample member. This extra control variable enables us to control for any characteristics that are systematically related to whether the variable was missing for a sample member. We never imputed values for any of the variables used as outcomes in the regression analysis.

TABLE II.6. Variability of Sample Characteristics Across MCOs (Percentage and Their Standard Errors)				
	Total	MCO		
		Aspen	Kaiser Colorado	Keystone East
Sample Indicators[a]				
Care management	30.9 (0.1)	21.3 (0.0)	9.5 (0.1)	38.1 (0.1)
Advanced age	68.8 (0.1)	74.2 (0.1)	91.5 (0.1)	61.6 (0.1)
Hip fracture	1.6 (0.0)	2.1 (0.0)	1.7 (0.1)	1.5 (0.0)
Stroke	4.4 (0.0)	3.8 (0.1)	1.0 (0.0)	5.5 (0.0)
Plan				
Aspen	6.8 (0.0)	100.0 (0.0)	0.0 (0.0)	0.0 (0.0)
Kaiser Colorado	21.1 (0.1)	0.0 (0.0)	100.0 (0.0)	0.0 (0.0)
Keystone East	72.1 (0.1)	0.0 (0.0)	0.0 (0.0)	100.0 (0.0)
Respondent Type				
Sample member	64.0 (1.6)	58.0 (2.6)	66.9 (3.0)	63.7 (2.1)
Proxy	22.5 (1.5)	24.7 (2.3)	22.9 (2.7)	22.2 (1.8)
Representative proxy	13.5 (1.2)	17.2 (2.0)	10.2 (1.9)	14.1 (1.6)
Age at Time of Interview				
65 to 74	15.8 (0.6)	4.5 (0.2)	2.8 (0.3)	20.7 (0.9)
75 to 84	14.2 (0.6)	13.9 (0.3)	5.7 (0.3)	16.7 (0.9)
85 or older	70.0 (0.2)	81.6 (0.2)	91.8 (0.1)	62.5 (0.3)
Gender				
Male	33.6 (1.6)	26.3 (2.2)	27.5 (2.8)	36.1 (2.0)
Female	66.4 (1.6)	73.7 (2.2)	72.5 (2.8)	63.9 (2.0)
Race[b]				
White	83.8 (1.3)	95.7 (1.1)	92.8 (1.6)	80.1 (1.7)
Black	12.1 (1.1)	1.7 (0.7)	1.6 (0.8)	16.1 (1.6)
Other	4.2 (0.7)	2.6 (0.9)	5.7 (1.5)	4.9 (2.2)
Education				
Did not complete high school	46.0 (1.7)	41.7 (2.6)	37.8 (3.0)	48.9 (2.2)
High school graduate	33.9 (1.6)	32.6 (2.4)	27.2 (2.8)	36.1 (2.1)
At least some college	20.1 (1.2)	25.7 (2.3)	34.9 (3.0)	15.0 (1.5)
Total Household Income[e]				
Less than $10,000	35.3** (1.9)	35.5** (2.9)	31.7** (3.3)	36.4** (2.4)
$10,000 to less than $20,000	40.1** (1.9)	39.9** (2.9)	31.3** (3.3)	42.8** (2.4)
$20,000 or more	24.6** (1.5)	24.6** (2.4)	37.0** (3.4)	20.8** (1.9)
Health Assessment				
Excellent	30.2 (1.6)	24.6 (2.3)	31.7 (3.0)	30.3 (2.0)
Good	32.7 (1.5)	37.3 (2.2)	30.6 (2.7)	32.9 (1.8)
Fair	25.7 (1.5)	26.1 (2.3)	25.9 (2.8)	25.6 (1.9)
Poor	11.4 (1.1)	11.9 (1.6)	11.8 (2.0)	11.2 (1.4)
Has Medicaid[e]	19.6* (1.4)	27.9* (2.4)	18.2* (2.5)	19.2* (1.8)
Married	30.3 (1.4)	21.8 (1.9)	25.2 (2.7)	32.5 (1.8)
Lives Alone	41.5 (1.7)	59.8 (2.8)	58.6 (3.2)	35.1 (2.2)

TABLE II.6 (*continued*)				
	Total	MCO		
		Aspen	Kaiser Colorado	Keystone East
ADL Limitations[c]				
Two or fewer	91.1 (1.0)	92.5 (1.6)	90.4 (2.0)	91.1 (1.2)
Three to five	8.9 (1.0)	7.5 (1.6)	9.6 (2.0)	8.9 (1.2)
Number of Chronic Conditions[d]				
Two or fewer	49.8 (1.7)	48.8 (2.6)	42.5 (3.1)	52.1 (2.1)
Three or four	35.6 (1.6)	34.4 (2.4)	41.1 (3.1)	34.0 (2.0)
Five or more	14.6 (1.1)	16.7 (1.9)	16.4 (2.3)	13.9 (1.4)
Alzheimer's or Other Dementia	9.9 (1.0)	16.8 (2.1)	12.5 (2.1)	8.5 (1.2)

SOURCE: Telephone survey of 1,657 high-risk seniors from three managed care organizations, conducted between March and December 1999 by MPR.
NOTE: Values are percentages, with standard errors in parentheses.

a. Percentages will sum to more than 100, because some seniors are in multiple sample frames.
b. Race categories are different from those in Table II.4, because we were unable to control for ethnicity as a result of the small number of Hispanics. Ethnicity is therefore ignored as a control variable, and Hispanics are classified into their corresponding race category.
c. ADL limitations involve the need of help or supervision with the five activities of daily living: bathing, eating, dressing, transferring, and toileting. These questions were asked of the 1,399 community residents only.
d. People were asked whether they had been diagnosed with any of the following chronic conditions: arteriosclerosis, hypertension, heart attack, other heart disease, previous stroke, depression, cancer, diabetes, arthritis, asthma, previous hip fracture, or Alzheimer's or other dementia.
e. Nonresponse was high for the income question. In general, fewer than 80 percent of respondents answered these questions. Nonresponse was also something of a problem for the Medicaid question, where between 95 and 80 percent of respondents answered it.

* 5 to 20 percent nonresponse.
** Over 20 percent nonresponse.

III. CARE NEEDS OF HIGH-RISK SENIORS

Care systems for elderly Medicare beneficiaries with disabilities and chronic illnesses must be able to address a variety of special needs and characteristics. In Chapter I, we used the acronym VIP--variability, impairments, and providers--to organize these needs and characteristics into three broad categories.

We use descriptive information from our site visits, focus groups, and survey to illustrate the VIP characteristics for a special sample of high-risk seniors. In particular, our selection process means that we focused on a subset of high-risk seniors enrolled in well-regarded and innovative managed care plans. Furthermore, the high risks of these seniors are, in general, known to their managed care organization (MCO) because they were selected from three types of lists that the MCOs generated: (1) lists of seniors in the MCO's care management program; (2) lists of organization members who have attained an advanced age (85 or older); and (3) lists of seniors who have experienced a recent hip fracture or stroke. Thus, we suspect that our sample of high-risk seniors is likely to have more favorable experiences than other such seniors in Medicare + Choice plans or in Medicare fee-for-service. Furthermore, our survey sample was heavily weighted toward the largest of our case-study sites, Keystone East. Overall, 72 percent of our survey sample comes from that organization, so our tabulations disproportionately reflect the experiences of the Philadelphia-area high-risk seniors enrolled in Keystone East.

There are two important caveats to keep in mind with respect to the characteristics presented in this report. First, while we focus on high-risk seniors in managed care, most of the special characteristics we identify also pertain to high-risk seniors in the Medicare fee- for-service sector. We hope that our findings will help all organizations that seek to serve high-risk seniors, not just MCOs. Second, while we often focus on challenges high-risk seniors face, this should not mask the great capacity, courage, and resiliency seniors generally exhibit when dealing with health and functioning problems.

A. Variability

Variability among high-risk seniors is important because of the ways in which it can complicate their care. First, the risks faced by this group stem from many different combinations of chronic illnesses and functional limitations. Careful assessment is required to assess the full range of an individual's health and functioning needs and the appropriate medical care, therapies, and assistance with daily living. Second, the symptoms of chronic illnesses can vary substantially over time and so need to be monitored carefully. Treatments for a chronic illness depend on its course, so providers must know whether its symptoms have recently been worsening or improving before they can make appropriate treatment decisions. Finally, seniors differ in their attitudes and abilities. These differences affect how they negotiate the care system, follow treatment regimens, and respond to changes in their health or functioning.

Variability is also important because of the need to ensure that all groups have appropriate access to care. In particular, there are some groups of high-risk seniors for whom adequate care will probably require special efforts. Among the general Medicare population who are healthy or have only occasional acute illnesses, the consequences of delays in care may not be particularly problematic. However, among high-risk seniors, delays can lead to serious complications in their conditions and complicate care delivery (Stone et al. 1987). Thus, organizations that want to serve high-risk seniors will have to pay special attention to early identification and assessment.

1. Variability Complicates Identification of High-Risk Seniors

Predicting the occurrence of adverse outcomes is difficult enough in homogeneous groups, but the substantial variability among high-risk seniors renders this task even more challenging. In particular, systematic identification is difficult because of the wide range of causes, the gradual onset of many cases of frailty, the tendency of many symptoms to fluctuate over time, and the diversity in seniors' reactions to increasing impairment (Soldo and Manton 1985).

The challenge of identifying frailty was raised in our focus groups. Several physicians mentioned that they struggled to identify high-risk elderly patients and that this difficulty limited their ability to direct care management and home care to frail elders. One physician lamented that his group had thus far been less than successful in their attempts to identify those seniors most at risk for frailty and prevent unfavorable outcomes such as institutionalization:

> We're trying to sort out ahead of time people at risk. It seems that we end up choosing people after they've had the ER visits or the fractured hip or whatever and then scrambling for placement like everybody else.

Physicians might have benefited from the new-member screening and assessment efforts conducted by all four MCOs, but that screening information did not appear to be disseminated effectively.[11] In fact, some physicians were unaware of these data, such as the primary care physician who reported,

> I was shocked by how much information the plan collected about my patients. The assessments they brought to us raised some very important medical issues.

At the two IPA-model MCOs, network physicians reported that they often were overwhelmed by screening data provided by the several managed care plans whose members they treated. Many indicated that they participated in as many as seven plans and received member-screening information from most of those plans. They indicated that the resulting "reams" of paper, all with different formats, made it so difficult to use the screening data that the reports were essentially useless.

[11] In Aspen's case, the screening is done by the Medica Health Plan rather than by the medical group.

Physicians seemed confident that they could identify high-risk seniors better during office visits than through other methods. Even here, though, there were challenges. One physician noted that many issues cannot be identified effectively during an office visit, and that being able to have a nurse make a home visit (even if the patient is not homebound) is important for identifying frailty or risk levels:

> Probably one of the more common things that I will ask our home care people to do is a visit to evaluate home safety and patients' functioning in their home setting. From just an office visit I don't know what's going on in that house, and I want somebody to go in and check it out.

Several focus group physicians indicated that part of the difficulty in identifying high-risk seniors is that many seniors' functioning during an office visit is not indicative of their general level of functioning. That is, some high-risk seniors tended to visit their physician's office when they felt strong enough to make the visits, and would postpone a visit if their functioning was particularly limited. Thus, functioning during office visits provided a biased view of the seniors' overall functioning level. Also, some seniors who functioned well, nevertheless had substantial hazards in their homes. In one case, a patient who exhibited only minor mobility limitations in the office was found to be at risk for a serious fall because her only shower facilities were in her basement down a steep open staircase.

2. Diverse Characteristics of High-Risk Seniors

The general characteristics and variability of high-risk seniors has been well documented (Levkoff et al. 1988; Pope and Taslov 1991; Fox and Fama 1996; and Stone et al. 1987). These characteristics are also seen in our sample of high-risk seniors, particularly the high levels of chronic illness and functional limitation summarized in the prior chapter (Table II.5). A sizable minority are limited in their ability to engage in three or more ADLs, with a few limited in all five.[12] Most high-risk seniors in our sample have 2 or more chronic conditions, and some reported more than 10. In addition, there are several important types of variation that mirror the variation in the overall Medicare population. In particular, variation in education, income, and living arrangements (Table II.4 and Table II.5) have important implications for access to care.

From the perspective of MCOs that want to serve high-risk seniors, it is particularly important to note the variation with respect to the mix of conditions and functional limitations. Individuals with multiple chronic conditions or impairments need a more comprehensive care management program rather than focused disease management programs. The care management programs must be able to address many different combinations of chronic illnesses and limitations with respect to ADLs and IADLs. For example, Table III.1 shows that seven percent of our sample of high-risk seniors who live in the community report three or more chronic conditions and limitations in three or more ADLs (questions about limitations in ADLs were not asked of seniors living in nursing homes). Further analysis of this particularly high-risk group indicates that more

[12] The five basic areas of daily living are: bathing, eating, dressing, transferring from bed to a chair, and toileting.

than half these seniors have less than a high-school education, and almost half report annual incomes of less than $10,000 (Table III.2, last column).

TABLE III.1. Distribution of Chronic Conditions and Functional Limitations in Our Sample of High-Risk Seniors (Percentages)

Number of ADL Limitations[b]	Number of Chronic Conditions[a]			Total	Number of Observations
	0	1-2	3-12		
0	9	34	30	73	962
1-2	1	6	12	18	273
3-5	0	2	7	9	164
Total Sample	10	42	49	100	1,399
Number of Observations	107	515	777	1,399	

SOURCE: Sample of 1,399 community residents taken from telephone survey of 1,657 high- risk seniors from three managed care organizations, conducted between March and December 1999 by MPR.
NOTE: Values are percentages and are weighted to represent the population and correct for nonresponse.

a. People were asked whether they had been diagnosed with any of the following chronic conditions: arteriosclerosis, hypertension, heart attack, other heart disease, previous stroke, depression, cancer, diabetes, arthritis, asthma, previous hip fracture, and Alzheimer's or other dementia. Totals for this variable will not match those in Table II.4, because this sample is restricted to the 83 percent of our sample who lived in the community.
b. Limitations in activities of daily living involve the need for help or supervision with the following: bathing, eating, dressing, transferring, and toileting.

While the exact figures will differ for other samples of high-risk seniors, the need to accommodate people with diverse mixes of conditions, functional limitations, education, and income will characterize all groups of high-risk seniors.

High-risk seniors generally must take an active role in their own health care to maximize their health and functional independence. The variation in their attitudes and capacities, which could affect their actions in this regard, should thus be taken into account when customizing their treatment protocols. For example, in our sample 29 percent of seniors with three or more chronic conditions and one or two ADL limitations (Table III.3, second column) reported that they would do just about anything to avoid seeing a doctor. If this means that they ignore the early signs of an illness, for example, then this attitude could be an obstacle to effective care. Attitudes such as this introduce yet another variable that MCOs encounter in the process of caring for high-risk seniors.

B. Impairments

Physical and mental impairments can make it difficult for seniors to communicate effectively with their providers, travel to and from medical appointments, and cope with major life changes. Organizations that want to serve high-risk seniors must take steps to address the complications these impairments introduce into the process of delivering care.

TABLE III.2. Factors Complicating Care for Seniors Reporting 3-12 Chronic Conditions (Percentages and Their Standard Errors)			
	Characteristics of High-Risk Seniors with 3-12 Chronic Conditions[a]		
	0 ADL Limitaions[b]	1-2 ADL Limitaions[b]	3-5 ADL Limitaions[b]
Advanced Age (>=85)	59.2 (2.4)	69.4 (3.7)	64.0 (5.3)
Low Education (No High School)	40.8 (3.2)	54.0 (5.2)	55.6 (6.5)
Low Income (<$10,000)	25.3 (3.3)	41.1 (5.6)	45.7 (7.0)
All of the Above	5.8 (1.7)	17.3 (3.9)	16.7 (6.0)
None of the Above	25.4 (1.4)	16.0 (2.1)	15.6 (2.7)
Number of Observations	460	188	129

SOURCE: Sample of 777 community residents with 3 to 12 chronic conditions taken from a telephone survey of 1,657 high-risk seniors from three managed care organizations, conducted between March and December 1999 by MPR.
NOTE: Values are percentages and are weighted to represent the population and correct for nonresponse. Standard errors are in parentheses.

a. People were asked whether they had been diagnosed with any of the following 12 chronic conditions: arteriosclerosis, hypertension, heart attack, other heart disease, previous stroke, depression, cancer, diabetes, arthritis, asthma, previous hip fracture, and Alzheimer's or other dementia.
b. Limitations in activities of daily living involve the need for help or supervision with the following: bathing, eating, dressing, transferring, and toileting.

TABLE III.3. Attitudinal Factors Affecting Care for Seniors with Multiple Chronic Conditions (Percentages and Their Standard Errors)			
	Characteristics of High-Risk Seniors with 3-12 Chronic Conditions[a] in Addition to:		
	0 ADL Limitaions[b]	1-2 ADL Limitaions[b]	3-5 ADL Limitaions[b]
Worries About Health	20.3 (2.6)	21.1 (4.0)	38.4 (8.7)
Would Do Anything to Avoid Doctor	22.1 (2.7)	28.8 (5.1)	15.7 (5.9)
When Sick, I Keep to Myself	33.2 (3.0)	34.4 (5.3)	29.5 (7.1)
Number of Observations	437	161	77

SOURCE: Sample of 675 community residents with 3 to 12 chronic conditions taken from telephone survey of 1,657 high-risk seniors from three managed care organizations, conducted between March and December 1999 by MPR. Number of observations differs from those in Table III.2, because respondents defined as representative proxies were excluded for these questions.
NOTE: Values are percentages and are weighted to represent the population and correct for nonresponse. Standard errors are in parentheses.

a. People were asked whether they had been diagnosed with any of the following 12 chronic conditions: arteriosclerosis, hypertension, heart attack, other heart disease, previous stroke, depression, cancer, diabetes, arthritis, asthma, previous hip fracture, and Alzheimer's or other dementia.
b. Limitations in activities of daily living involve the need for help or supervision with the following: bathing, eating, dressing, transferring, and toileting.

1. Types of High-Risk Seniors with Multiple Impairments

Different impairments have different implications for care delivery. For example, physical impairments can often make it difficult for a senior to travel to receive care. Mental impairments can limit the extent to which a senior can engage in self-monitoring or self-care. To assess how impairments affected care for the high-risk seniors in our sample, we used the survey data to define three overlapping groups of seniors.[13]

- **Seniors with Physical Impairments**. We considered a sample member to have a physical impairment if he or she has at least one of the following: any ADL limitation, hardening of the arteries, a previous heart attack, other heart disease, a previous stroke or hip fracture, cancer, diabetes, arthritis, asthma or other respiratory disease, or osteoporosis.

- **Seniors with Mental Impairments**. We considered as having a mental impairment any sample member who reported depression, Alzheimer's disease or other dementia, or a prior stroke.

- **Seniors with Chronic Conditions**. We considered as having a chronic condition any sample member who reported having at least one of the following 11 illnesses that we asked about in the survey: hardening of the arteries, hypertension, a previous heart attack, other heart disease, depression, cancer, diabetes, arthritis, asthma or other respiratory disease, or Alzheimer's disease or other dementia.

While there is considerable variation among each of these groups, they highlight three different types of challenges for MCOs. Table III.4 illustrates the distribution of these three impairment groups and a fourth group that includes those people who report no impairments or chronic conditions. Among our interview sample, 87 percent report some sort of physical impairment, and about the same percentage report having a chronic condition. Just over a quarter of the community-resident seniors in our sample reported a mental impairment. Looking at the overlap among these groups, we note that approximately a quarter (26.5 percent) of the sample reported having both a physical and a mental impairment, as well as a chronic condition; only 9 percent of the sample reported no impairment or chronic condition.

[13] The classification of people with a prior stroke was particularly problematic in developing these groups. We included these seniors in both the group with physical impairments and the one with mental impairments, even though we did not know the precise nature of any limitations resulting from their strokes. At the same time, we excluded them, and those with a previous hip fracture, from the group of seniors with chronic conditions.

TABLE III.4. Impairments and Chronic Conditions Among Our Sample of High-Risk Seniors[a] (Percentages and Their Standard Errors)	
	Survey Sample
Impairment Groups	
Seniors with physical impairments	87.0 (1.3)
Seniors with mental impairments	28.3 (1.6)
Seniors with chronic conditions	88.5 (1.3)
Seniors without impairments or chronic conditions	8.7 (1.1)
Impairment Combinations	
Seniors with physical and mental impairments	27.5 (1.6)
Seniors with physical impairments and chronic conditions	84.3 (1.4)
Seniors with mental impairments and chronic conditions	27.2 (1.6)
Seniors with physical and mental impairments and chronic conditions	26.5 (1.5)
Number of Observations	1,399

SOURCE: Sample of 1,399 community residents take from telephone survey of 1,657 high-risk seniors from three managed care organizations, conducted between March and December 1999 by MPR.
NOTE: Values are percentages and are weighted to represent the population and correct for nonresponse. Standard errors are in parentheses. None of the variables used in this table had more than a 5 percent response rate.

a. A person with at least one of the following is defined as physically impaired: any ADL limitation, hardening of the arteries, a previous heart attack, other heart disease, previous stroke, depression, cancer, diabetes, arthritis, asthma, previous hip fracture, or osteoporosis. A mental impairment involves the presence of one or more of the following: a previous stroke, depression, or Alzheimer's or other dementia. A person with at least one of the following is defined as having a chronic condition: hardening of the arteries, hypertension, a previous heart attack, other heart disease, depression, cancer, diabetes, arthritis, asthma or other respiratory disease, or Alzheimer's or other dementia.

2. Difficulty Communicating Symptoms and Needs

Impairments can make it difficult for seniors to communicate with their providers, and these difficulties can compromise the delivery of effective care. In addition, many beneficiaries in our sample have low levels of education (Table II.4), which could impede their ability to understand written instructions. These characteristics must be addressed by organizations that want to serve high-risk seniors.

The focus-group and survey data suggest that seniors and physicians may view communication issues differently. Physicians in our focus groups saw the issue in terms of whether they had enough time to spend with patients who had complex and multiple needs. The seniors in the survey generally reported being satisfied with their ability to communicate with their providers, but those in our focus groups did report some problems.

Focus-group physicians, particularly those in the group model organizations, tended to report communication problems due to short length of office visit appointments, which are generally scheduled every 15 minutes. One internist stated:

> There's pressure to see more and more and more people, which makes it increasingly difficult to do what you need to do for the elderly. When I joined this organization, all our appointments were 20-minute appointments. We now have 10-minute appointments. And it's not unusual to have those double-booked.

This message was underscored by another primary care physician in the same practice:

> You cannot, *cannot*, deal with an eighty-year-old person with six or seven major medical issues and psychological issues and five to seven drugs in a 15-minute appointment.

Despite the fact that many reported several chronic illnesses and impairments, most seniors in our survey reported being pleased with their ability to communicate with providers. Overall, only 3 percent reported being unsatisfied with how physicians explained test results, medications, and other treatments. At the same time, seniors who participated in the more open-ended discussions of the focus groups reported that they had forgotten to ask questions or discuss symptoms during the office visits. Others reported that they were often timid or confused during an office visit and as a result failed to ask questions or report symptoms that they had wanted to discuss with their physician. There was a sense that communication problems resulted in their having inadequate knowledge about medications and treatment regimens. As one senior mentioned:

> We were rushed and we were never allowed enough time [with the doctor]. . . . We'd find ourselves on the way home thinking, oh my God, we never had a chance to ask him this or ask him that. . . . You don't have enough time to reflect and say what you wanted to say.

The seniors expressed particular concern about communication problems with new doctors or specialists they saw in the hospital or on a short-term basis.

> You're just not comfortable with [hospital-based doctors], because your primary care doctor knows to ask the questions they have to ask.

> You get strange doctors. My wife was in the hospital, she had 14 doctors. It's not the same care.

Both seniors and physicians expressed frustration with automated attendant telephone systems. Some seniors had difficulty following telephone instructions; others complained about having to wait a long time on the phone, being put on hold, and being given incorrect information. During one focus group discussion, a participant pointed out that he always foiled the automated attendant by pressing zero to get the operator. This strategy was eagerly embraced by the others in the group.

Finally, educating high-risk seniors and other vulnerable subgroups of Medicare beneficiaries often requires targeted strategies and one-on-one interventions (Gold and Stevens 2001). Such efforts are particularly important for the 44 percent of seniors over age 65 who score at the lowest levels of literacy (Kirsch et al. 1993).

3. Travel to Care Providers Is Often Difficult

Losing one's ability to travel independently not only inhibits access to care, but represents a major life change that can cause emotional distress. Independent travel, particularly driving, is an essential element in seniors' autonomy. Also, a large fraction of seniors' trips outside the home are related to medical care and other essential services. For example, Retchin (1998) found that among seniors 80 to 84 years old, approximately 17 percent of all trips outside the home are for medical reasons. Since frail elders are particularly likely to experience health problems if they miss medical treatments and appointments, the loss of driving ability can create serious problems, particularly for seniors who live where alternatives to personal vehicles are limited.

Physicians in our focus groups noted that it was often difficult to get seniors to stop driving. Not only was it hard to tell seniors the bad news that their impairments make driving unsafe, but there was the concern that a request to stop driving will limit the senior's subsequent access to care. One physician discussed the quandary that loss of driving privileges can present for doctor appointments for his patients, and the influence on physician selection:

> You see a lot of couples that seem to do pretty well while one or the other is driving, and then you get to that point where neither one really can safely drive, and suddenly they've become landlocked and it's a huge problem. I don't know that there are resources really that are very reasonable "cost-wise" to get most of their patients back and forth to their doctors' appointments. They tend to choose providers based on geography more and more, and their ability to get back and forth is very tough.

Physicians and staff with the Area Agencies on Aging also reported that a lack of transportation deters some frail elders from seeking needed care. This issue was reported most frequently during our site visits to the two group model MCOs (Aspen and Kaiser Colorado), where primary care (and much specialty care) was delivered at a small number of clinics. In contrast, this issue arose seldom during our visits to the two IPA organizations (HMO Oregon and Keystone East), which delivered care through a dispersed network of physician offices. Overall, we got the sense that the clinic-based delivery approach of the group models may be a disadvantage for seniors whose driving abilities have become impaired. Kaiser Colorado has taken specific steps to address this issue by including a transportation benefit in its Medicare + Choice plan.

Transportation assistance tended to be available in cities and nearby suburbs for all four case study communities. However, the people we interviewed generally agreed that seniors who lived on the edges of the metropolitan areas had few, if any, options for obtaining transportation assistance.

Even those seniors who could obtain a ride service noted that they still have trouble obtaining care. These problems arise because of the frequent inflexibility of transportation schedules combined with delays in medical appointments. One senior

found that physicians' tight schedules, combined with time constraints due to scheduled transportation pickup times, could make it difficult to obtain care:

> If you're more than 15 minutes late, a lot of doctors will not see you, and you may not be able to get another doctor's appointment for like . . . another four to five weeks.

In an extreme case, a senior reported returning home without seeing a physician, because her scheduled ride home came before her physician was available to see her.

Problems can also arise for those frail elders who need assistance getting from their homes to the vans, because many transportation services provide only curb-to-curb service. This means seniors must be able to get from their home to the curbside, something several seniors found difficult to do without assistance.

4. Major Life Changes by Many Seniors Complicate Care Delivery

On top of all the other challenges, caring for frail elders is complicated by the fact that many are experiencing major life changes, including functional declines, a loss of independence, major illnesses, and the death of a spouse. For example, one elderly focus group participant spoke of these life changes and how they can make it harder for people to accept care recommendations:

> My husband worked all his life, and now that he's no longer working, he looks like he's falling apart. Everything is wrong with him. He needs a hip replacement. He won't do it. He's a diabetic. He has several problems.

In other cases, focus group participants spoke of wanting to ensure that they had tried every means to save the life of a dying spouse or parent. This desire often led to conflicts with the MCOs about the types of care and referrals that should be provided to people with end- stage illnesses. One man spoke passionately about how he had wanted to obtain additional specialist referrals for his wife who had recently died, even though he now recognized that no efforts would have saved her. This man's experience suggests that MCOs may want to pay special attention to end-of-life care delivery. Seniors and their providers face many very difficult decisions at such a time, and MCO decision-making processes that seem acceptable at other times of life seem harsh when seniors and their families face death. Referral to counseling services or even special care to review and discuss treatment options may be useful in helping seniors and their families face this time of life and judge the value of alternative courses of treatment. Not only would such attention and discussions help seniors make critical end-of-life decisions, they might improve relationships between families and the MCOs. Nevertheless, efforts of this type may be difficult to fund in the current system because, as one focus-group physician mentioned, "Unfortunately, there is no CPT billing code for compassion."

C. Providers

Many high-risk seniors, as a result of their multiple chronic conditions and functional limitations, face the challenge of coordinating care from multiple providers. If care is not properly coordinated, then the potential of seniors having unmet personal care needs is greater. Other challenges arise from the Medicare benefit package, which excludes coverage for most medications, personal support services, and long-term custodial care. Some of these services can be obtained through community agencies, but even then there are often waiting lists. Moreover, the rapid technical change of health care delivery may have caused the expectations of high-risk seniors to diverge from current practice patterns, which could create misunderstandings between beneficiaries and providers.

TABLE III.5. Complexity of Care for High-Risk Seniors (Percentages and Their Standard Errors)

	Survey Sample
Number of Specialists Seen in Past Six Months	
None	39.5 (1.7)
One	31.7 (1.6)
Two	19.9 (1.4)
Three or more	9.0 (0.9)
Number of Prescriptions Taken Daily	
None	14.2 (1.3)
One to three	44.3 (1.8)
Four or five	23.2 (1.5)
More than five	18.3 (1.3)
Number of People Assisting with Daily Living Activities	
None	55.8* (1.7)
One	25.4 (1.5)
Two or more	18.8* (1.4)
Number of Assistive Devices Used	
None	54.8 (1.7)
One	22.5 (1.5)
Two or more	22.7 (1.4)

SOURCE: Telephone survey of 1,657 high-risk seniors from three managed care organizations, conducted between March and December 1999 by MPR.
NOTE: Values are percentages and are weighted to represent the population and correct for nonresponse. Standard errors are in parentheses.

* 5 to 20 percent nonresponse. No variables in this table had more than 20 percent nonresponse.

1. Multiple Conditions of High-Risk Seniors Require Organizationally Complex Care

The organizationally complex care of high-risk seniors is illustrated in Table III.5, by the large portion, 29 percent of our sample, who have seen two or more specialists in the past six months. These specialists are just the tip of the iceberg. The seniors also receive care from their primary care physician and the nurses and other staff who work for them. There may also be an occasional visit to a backup primary care physician

when the regular physician is unavailable. The set of care providers also includes the family and friends who provide unpaid assistance with ADLs or IADLs. In addition, there are further complications related to polypharmacy and use of assistive devices.

Effective care requires that all this care be coordinated. For example, one senior said,

> I require a number of specialists, including a urologist and a heart doctor. I've had a double bypass. I felt I should see a heart doctor occasionally. And I've had a half-dozen skin cancers, and the primary care doctor can't cover everything.

Effective care coordination is particularly important with regard to prescription drugs because of the risk of adverse events due to polypharmacy. This issue is especially pertinent for the 18 percent of our sample taking more than 5 prescriptions daily (Thornton et al. 1991).

Continuity of care is especially important and challenging when frail elders receive care from many providers, because problems with any single provider may compromise all the care. The challenge, therefore, is to ensure that all the providers work together. Some examples of coordination problems reported in our focus groups include an instance when a discharge planner wanted a patient to leave the hospital before the case manager was able to establish appropriate living arrangements. Several participants shared stories in which there was a lack of communication among doctors and specialists in the delivery of care. One senior, who was the primary caregiver for his wife, spoke about the difficulty of getting information from one setting to another:

> When my wife went back to the clinic, her doctor didn't have any notes from the doctor that saw her at the hospital. And obviously they hadn't communicated because her [primary care] doctor had no idea what had transpired at all. I would have expected some kind of communication.

Another senior who was caring for her husband noted similarly that:

> When my husband left the nursing home, there should have been better communication with his doctors. The nursing home told me that they were communicating with the clinic doctors. But apparently not, because my husband's medication should have automatically been switched when he came home. I shouldn't have to be calling back and explaining this, that, and the other thing. There's a pharmacist that calls, but he should be in touch with the primary care physician so that when I want to get [the prescription] refilled I don't have to explain all this.

A physician noted that coordination among specialty providers can also be problematic:

> We need more collaboration, as opposed to actions by individual departments such as a mental health department, neurology, and internal medicine. We need to see the patient as a whole, as opposed to having pockets of funding that come

> out of each of the departments. I have seen these problems in other systems as well.

The physicians in our focus groups also pointed out that comorbidities make it difficult to address all a patient's problems fully in one office visit, because time is limited or because treating too many problems at once may confuse many seniors. Physicians try to prioritize problems and make sure they address the most important ones during office visits. Sometimes the treatment priorities of patients differ from those of physicians, which can interfere with effective care delivery.

2. High-Risk Seniors Require Care from Providers Not Covered by Medicare

Medicare plays a primary role in addressing medical conditions and impairments but a smaller role in dealing with limitations in functioning and disability. Therefore, it does not address the full range of needs of high-risk seniors. In both fee-for-service and managed care systems, Medicare covers medical treatments, limited preventive care, and interventions to address impairments. It also covers some services to maintain improve functioning, although those are generally limited to services deemed "medically necessary." This limitation creates problems for many high-risk seniors who may require care to maintain their functioning or quality of life or to prevent additional complications. Furthermore, many services used by high-risk seniors are intended to address nonmedical issues associated with helping them maintain independence and functioning. These services may fail to meet strict medical-necessity criteria, particularly given the lack of evidence of the effectiveness of many interventions aimed at prevention and functional support.

Results in Table III.6 show that many high-risk seniors in the three surveyed MCOs receive home- and community-based services beyond those included in the Medicare fee-for-service home health benefit. For example, 10 percent of our sample receive home-delivered meals, and 12 percent receive transportation to medical appointments. In addition, 29 percent of the high-risk seniors in our sample receive home health services, but our survey does not indicate whether these services are covered by Medicare or by the MCO.

3. Waiting Lists for Many Community Services

Seniors, care managers, and Area Agency on Aging directors all mentioned waiting lists as a challenge to delivering support services. Case managers frequently reported waiting lists for community-based social services such as home-delivered meals and chore assistance. Another problem was that different communities within an MCO's service area differ in the level of services available, depending in part on government funding at the local level. Keeping track of services that were available was a challenge. Both governmental and private nonprofit agencies varied in their eligibility requirements, the application process, and staff attitudes and responsiveness, including whether phone calls were returned promptly. In one county, the funding allocation to the agency was depleted before the end of the fiscal year, and services were curtailed.

TABLE III.6. Home and Community-Based Services Used by High-Risk Seniors (Percentages and Their Standard Errors)	
	Survey Sample
Home and Community-Based Services Received in Past Year	
Home-delivered meals	9.5 (1.0)
Transportation to medical appointments	12.1 (1.1)
Senior center	29.4 (1.6)
Home health	29.4 (1.6)
SOURCE: Telephone survey of 1,657 high-risk seniors from three managed care organizations, conducted between March and December 1999 by MPR. **NOTE**: Values are percentages and are weighted to represent the population and correct for nonresponse. Standard errors are in parentheses. None of the variables used in this table had more than a 5 percent nonresponse.	

4. Technical Change and Patient Expectations

Several seniors in the focus groups expressed difficulty dealing with some of the recent advances in medicine. In particular, it appeared that many had difficulty adjusting to new regimens that enable some complex medical conditions to be treated outside a hospital. These methods have induced insurance plans (including Medicare) to create incentives to shorten the length of hospital stays and to encourage treatment in the least-expensive feasible environment. Thus, patients are discharged from hospitals quicker, with some going to nursing homes and others going home. In many cases, the seniors do not feel ready for the move. Many also have expectations based in times when long hospital stays were much more common. As a result, seniors reported finding themselves in situations where a physician's or MCO's judgment about what was medically necessary differed from what the patients felt they were ready to handle:

> I think it's awful when they send people home that are so sick. They don't care if they live or die. And then they took him out and they put him in the nursing home when he was so sick. I think this is terrible.

> My husband was very ill and sent to St. John's Hospital. I thought he was going to die. He looked just terrible. So they called me up and said, he's ready to be released. Here he had pneumonia and had a high fever and I had to take him back. And it wasn't long after that that he was right back again. So all this money of transporting them and all this, I just don't get it.

D. Unmet Needs of High-Risk Seniors

Despite the complexity of health care for high-risk seniors, very few report not receiving needed help with ADLs or IADLs. Table III.7 indicates that, while 2.5 and 2.7 percent reported not receiving needed help bathing and transferring, less than 2 percent reported unmet needs for the remainder of the ADLs. Unmet needs were slightly more common for IADLs than for ADLs. This differential may reflect the greater availability of services to deal with the more serious ADL limitations.

Looking at unmet needs alone provides little cause for concern, but adverse outcomes suggest that there is room for improvement. For example, among high-risk seniors who needed help changing their clothes, approximately 15 percent said they could not do so as frequently as they wished because of a lack of assistance. Approximately 14 percent of those who felt they needed help with bathing reported that they could not bathe as often as they would have liked because they lacked needed help. Furthermore, five to six percent of the seniors in our sample reported that they went hungry because they did not receive needed help preparing a meal or eating.

TABLE III.7. Unmet Needs of High-Risk Seniors (Percentages and Their Standard Errors)

	Survey Sample
Needs Human Help but Does Not Receive Help with:[a]	
ADL	
Bathing	2.5 (0.6)
Eating	1.1 (0.3)
Dressing	1.6 (0.5)
Transferring	2.7 (0.6)
Toileting	0.9 (0.4)
IADL	
Preparing meals	2.6 (0.6)
Doing light housework or making bed	5.8 (0.9)
Managing money	2.8 (0.7)
Using telephone to call physician	1.8 (0.5)
Getting around inside home	2.4 (0.5)
Adverse Outcomes Among Those Who Needed Help with Activity, Regardless of Whether They Got Help[b]	
Experienced discomfort because unable to eat when hungry and did not have needed *help preparing meal*	5.8 (1.6)
Unable to call physician because did not have needed help using the telephone	3.7 (1.0)
Unable to bathe as often as liked because did not have needed help bathing	14.4 (1.9)
Unable to change clothes as often as liked because did not have needed help changing clothes	14.8 (3.3)
Unable to eat when hungry because did not have needed *help eating*	5.4 (2.6)
Unable to get out of bed or chairs because did not have needed help transferring	14.3 (2.7)

SOURCE: Telephone survey of 1,657 high-risk seniors from three managed care organizations, conducted between March and December 1999 by MPR.
NOTE: Values are percentages and are weighted to represent the population and correct for nonresponse. Standard errors are in parentheses. None of the variables in this table had more than a 5 percent nonresponse.

a. Sample consists of 1,399 community residents only.
b. Sample consists of beneficiaries who reported needing help with a given activity.

While the presence of adverse outcomes due to unmet need among high-risk seniors is cause for concern, there are several important points to consider when examining these outcomes. First, as stated earlier, Medicare + Choice plans with risk contracts are required to provide only the benefits specified in their risk contract, which

generally focus on those services that are “medically necessary.” Assistance with ADLs or IADLs is often not categorized as such and so would not be covered (Ireys et al. 1999). Second, there is evidence of widespread unmet need among the general elderly population, including those in the Medicare fee-for- service sector (Allen and Mor 1997; and Institute for Health and Aging 1996). Thus, the levels found for our sample of high-risk seniors are not substantially out of the ordinary.

We now turn to the ways in which our case-study managed care organizations tried to address the variability, impairments, and organizationally complex set of providers that characterize high-risk seniors.

IV. KEY ELEMENTS IN MANAGING CARE FOR HIGH-RISK SENIORS

Faced with the need to serve high-risk seniors who are characterized by their variability, impairments, and use of multiple providers managed care organizations (MCOs) can draw on several approaches. As noted in Chapter I, we have organized these approaches under the I-CAN acronym: Identification, Care Management, Assistance programs, Networks.

This chapter examines how our case study MCOs used these four approaches to improve care for high-risk seniors. In particular, we examine the innovations these organizations made, relative to the care systems typically found in the Medicare fee-for-service sector. These innovations suggest ways in which Medicare + Choice can improve care for high-risk seniors. They do not, however, represent the general performance of Medicare + Choice plans, as we deliberately selected the four case study organizations because they had innovative programs. In addition, activities at the four case study organizations show only what is possible within the current Medicare + Choice system. Options such as Social Health Maintenance Organizations and the Program of All Inclusive Care for the Elderly (PACE) offer wider potential because of their more generous funding and benefit packages (Medicare Payment Advisory Commission 1999).

A. Identifying High-Risk Seniors

Identification underlies effective care systems for high-risk seniors. It is impossible to deliver effective treatments without first identifying who is likely to be at risk of adverse outcomes. In addition, it is essential to act on the results of identification efforts. People identified as facing high risks for adverse health outcomes need to be referred to the appropriate follow-up services, which could include more detailed assessments.

The variability among high-risk seniors makes the use of multiple approaches essential to effective identification. Symptoms and impairments can vary among individuals and over time, so any single method is likely to miss some high-risk seniors. In addition, multiple approaches are required to respond to the variation among seniors in their attitudes toward health and seeking care. All of the case-study MCOs had developed multiple identification methods.

Traditionally, in the fee-for-service and managed care sectors, high-risk seniors are identified as they enter the hospital or otherwise obtain care after the occurrence of a serious illness. In addition, physicians have long identified high-risk seniors over the course of regular office visits. Managed care has brought additional identification methods, including screening surveys and analysis of claims/encounter data. In addition, advocate groups have encouraged proactive identification that would promote

self-referrals from high-risk seniors and referrals from their families and the community service organizations that provide assistance to seniors (Gold et al. 1998; Medicaid Working Group 1995; and Consortium for Citizens with Disabilities 1993).

Assessments are usually made by primary care physicians in the context of regular office visits. In fact, assessment and diagnosis are the basic elements of primary care practice. Specialized geriatric assessment clinics and home health visits are also used to assess care needs. MCOs that identify high-risk seniors through surveys or reviews of administrative data face the issue of how to use that screening data to determine appropriate follow-up. The screening data at our case study sites were generally intended to be used to identify people who should visit a physician as soon as possible, although this goal was not always met. We found virtually no evidence that information collected in screening surveys was used to develop clinical plans.

1. Identification Approaches

At the time of our site visits, three of the four case study organizations (Aspen, Keystone East, and Kaiser Colorado) screened all new members through self-administered questionnaires provided as part of the new-member enrollment process. Keystone East used a 79-question form that focused on diagnoses, functional status, and self-perceived health and well-being. It included the SF-36, the Probability of Repeat Admission (PRA) instrument, a nutritional screen, and questions regarding health habits (for example, exercise and smoking) and receipt of preventive services (for example, mammography and prostate screening).[14]

At the time of the site visit, Kaiser Colorado had a formal screening program at only two clinics that are part of a pilot (out of 14 clinics in its delivery system).[15] The two clinics serve a total of 11,000 seniors. Kaiser Colorado used a 47-question form that includes the PRA. In 1998, the Kaiser Colorado screening program was expanded to become planwide.

At Aspen, new-member screening was done by the Medicare + Choice Plan, Medica. However, Medica did not share any of the screening information it collected with Aspen, so this new-member screening did not influence care delivery directly.

At the time of our visit, screening at HMO Oregon differed according to whether a new member chose to have his or her care managed by a capitated medical group. HMO Oregon had undertaken risk screening on a pilot basis for those enrollees who did not elect to receive care from a capitated medical group. For those enrollees who elected to receive care from a capitated practice, the practice was responsible for any screening. Whether the process will be continued will depend on the results of the pilot.

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[14] The SF-36 is an instrument widely used to obtain information on functional status and other patient characteristics (Ware et al. 1994). For a discussion of the PRA, see Boult et al. (1994); and Pacala et al. (1997).

[15] To test the value added of screening, Kaiser Colorado also conducted screening at two other sites. In these sites, the screening information was entered into the members' medical records, but no special steps were taken to encourage use of that information.

The questionnaire used by HMO Oregon included the PRA, along with additional questions relating to prescription drug use, smoking and alcohol consumption, and socioeconomic status.

Response rates for new-member screening varied among the organizations. The rates were approximately 66 percent for HMO Oregon, 70 percent for Keystone East, and 88 percent for Kaiser Colorado. All these response rates are very high for mail surveys, thanks to the intensive follow-up efforts the organizations made to obtain information from seniors who did not respond to the original mail questionnaire. The rates may also reflect the organizations' efforts to make the screening part of the new-member enrollment process. Some seniors at Kaiser Colorado are given the survey when they enter an outpatient clinic, which may explain the particularly high response rate at this site.

The four organizations we studied were atypical in their use of long new-member questionnaires that solicit information for both screening and assessment. In the industry as a whole, brief screening instruments have been much more common (HMO Workgroup on Care Management 1996). The longer instruments provide more information for assessing the overall health and care needs of new members. In particular, the longer instruments provide a basis for assessing the risk for poor health outcomes, as well as the risk for hospitalization or high costs which can be predicted using fairly short instruments (HMO Workgroup on Care Management 2000; and Pacala et al. 1995). The longer instruments also appear to reflect the greater-than-average research orientation of the innovative MCOs included in our case study. The longer instruments used by the case study organizations appear not to have led to low response rates.

We found that the case study organizations generally made little use of the screening data. The major exception was that Keystone East used the data to help target new enrollees for their care management program. At the other extreme, Medica did not share any of the screening information with Aspen (which was responsible for delivering care to the Medica members who selected it as their primary care provider). At none of the sites did we find that the screening data were used for clinical purposes. Often the screening data were not sent to physicians or other staff involved in providing care. Keystone East made an attempt to share its screening data with its care managers, but the system was not effectively communicating the data at the time of our visit. Even when screening data were included in patients' medical records, it appears that physicians paid it little attention. Instead, the physicians in our focus groups responded that they preferred to rely on their own examinations and discussions with patients. Care managers also seem to have conducted their own assessments of seniors referred to them. Thus, to the extent the new-member survey screening information was used, it was used by the MCOs to identify new members who should be encouraged to have a physician visit soon. The physicians and other providers would then be responsible for clinical assessments and any treatments.

Our case study MCOs used a variety of methods other than screening surveys to identify most of the high-risk seniors they referred to care management or disease management. Aspen and Kaiser Colorado identified high-risk seniors mostly through referrals by primary care physicians. HMO Oregon and Keystone East used a mixture of methods with the largest group of high-risk patients identified following an inpatient admission.

All organizations encourage physician referrals. Kaiser Colorado does so by meeting periodically with primary care physicians about when to make referrals, and it has distributed a one-page set of criteria for referrals. Kaiser's general guidance to physicians is that, if in doubt, refer patients to care management. Aspen and Kaiser Colorado promote physician referrals by locating care management staff in the clinics so that they can interact with primary care physicians on a regular basis. Keystone East provides information in provider bulletins highlighting its care management program. Although it is not widely read, there is also a section on the topic in the provider manual. Finally, Keystone encourages self- referrals through its new-member "welcome call" program.

Focus-group physicians and care managers also reported that risk status often is identified in conjunction with treating specific, acute conditions. For example, one care manager described performing a presurgical screening for a patient facing a total hip replacement and determining that the patient had congestive heart failure as well. Another care manager told of identifying a woman with multiple chronic conditions, including a severe herniated disk, although the woman had initially contacted the care manager in search of help caring for her disabled husband. This woman had intentionally avoided seeking medical care because she was afraid she would be hospitalized and therefore be unable to care for her husband.

The combinations of methods used by these organizations tended to identify two to five percent of their elderly members as facing risks sufficiently high to warrant enrollment in care management. The two group-practice organizations, Aspen and Kaiser Colorado, identified two to three percent of their members as sufficiently high-risk to require care management. Keystone East used broader criteria for referral to care management, and correspondingly identified a higher fraction of its members as high-risk, approximately five percent.

The MCOs also tried to identify seniors who could benefit from disease management and other specialized programs. Again, they relied on a mixture of identification methods combined with a fairly simple assessment process that determined which programs might be appropriate. HMO Oregon analyzes its claims/encounter data to identify members with congestive heart failure. Kaiser Colorado had developed a registry for members with diabetes. All the MCOs also rely on physician referrals.

Each organization seems to have used an identification method that drew on its strengths. The two group-practice organizations relied on their clinic-based primary care

physicians to refer high-risk seniors to co-located case managers. The close ties between physicians and organizations facilitated communication about the availability of care management and the types of seniors who should be referred. In contrast, Keystone East and HMO Oregon, which are IPA model organizations, had a less direct connection with their participating physicians, most of whom participated in several other managed care plans and accepted fee- for-service patients. Thus, it was more difficult for these organizations to get physicians to identify and refer high-risk patients. To overcome this difficulty, they drew on their administrative data systems and their new-member screening surveys to identify high-risk cases.

2. Assessments

Assessments are the key step in linking identification efforts to the delivery of effective care. Furthermore, assessments address the variability among high-risk seniors so that MCOs and providers can tailor interventions to meet each person's specific needs. In general, MCOs will combine a quick general assessment with their identification efforts. This general assessment uses the screening information to determine if someone is likely to need the intense and comprehensive services of a care manager, the focused interventions of disease management, or other services. If a thorough assessment is required, it is done as part of the care management process.

To a large extent, the MCOs relied on the primary care physicians to do much of the assessment. These assessments were generally done in the course of routine office visits and were based on the physicians' judgments about individuals' conditions and appropriate treatments. However, when high-risk seniors were identified through screening and other identification efforts, the MCOs arranged for additional assessments. In addition, when physicians felt that a senior required substantial community support or other non-medical care, they could refer that person to a care manager or other professional who could assess those types of needs and help arrange for care. For those seniors identified through MCO high-risk identification processes, the first step was to identify those individuals who have a specific high-risk condition but who were in fairly good shape, with no mental or physical impairments. Assessments for these people emphasized ongoing monitoring so that subsequent impairments or symptoms could be detected and addressed quickly. A more complex situation involved those people who, to maintain functioning, required social support services outside the Medicare benefit package. The MCOs tended to address these needs by identifying the appropriate community agencies and referring people to them. The most difficult cases were those involving high-risk seniors with several chronic conditions and impairments. These cases were first identified in a quick review of the screening or other identification information and then referred to the organization's care management program for a more thorough assessment. Care management staff evaluated the high-risk seniors' medical and psychosocial needs, which are often intertwined. They also assessed the seniors' home and informal support situation in terms of the availability of competent caregivers, the degree of physical safety, and evidence of abuse. The care managers then developed a care plan, worked to ensure that it was implemented, and monitored the people for changes in their health or functioning.

The four case study organizations rarely arranged for formal geriatric assessment clinics. This is generally true in Medicare managed care, because of the high costs and lack of clear evidence about the cost-effectiveness of such assessments. Among the four case study organizations, we observed no efforts to establish geriatric assessment programs such as specialized clinics or inpatient units. Two organizations, however, appeared to emphasize special geriatric training as part of their staff composition. For example, a high proportion of physicians at both Aspen and Kaiser Colorado had an additional qualification in geriatric medicine. These physicians were more likely to use assessment tools and approaches similar to formal assessment, even though there were no specially designed assessment programs.

B. Care Management

Care management lies at the heart of an organization's efforts to promote good care for high-risk seniors. In general, it is a collaborative process that assesses needs, develops care plans, and then implements and monitors those plans in order to promote high-quality, cost-effective care (Case Management Association of America 1995). For high-risk seniors, care management can promote communication and coordination between the numerous providers who work with a specific person. It can ensure delivery of tertiary preventive care--care intended to help people who have already developed chronic conditions, serious impairments, or frailty to maintain or recover their health and functioning. Such preventive care can help mitigate the consequences of chronic disease and frailty, as well as help control costs by reducing the likelihood that these seniors will require expensive treatments.

Care management is distinct from utilization review programs. Aliotta (1996) points out that care management and utilization management have different focuses. Utilization management systems seek to control costs, ensure medical necessity, and help plans identify trends in care delivery. Utilization management tends to be reactive, focusing on acute care episodes, with emphasis on reducing the length of hospital stays and planning discharges effectively. Utilization management also focuses on providing low-intensity services to a large number of people. In contrast, care management takes a more proactive approach in shaping care for individuals. Care management focuses on assessing risk, intervening early, and promoting consistency and continuity among the wide array of services a person may need. In addition, care management tends to provide intensive services to specific groups of plan members, most often identified through rigorous targeting efforts.

Attempts to promote care management among MCOs are hindered by the lack of clear evidence that it is a cost-effective means for improving care, or even for promoting an MCO's image in the community. A recent study of best practices in care coordination reviewed evidence for 157 different programs and found some evidence that care management can work, in the sense that it can reduce hospitalization rates for carefully targeted groups (Chen et al. 2000). That study found very little information about the

specific program characteristics that make a care management program work and even less on what it takes to generate cost savings. What little evidence they found suggests that successful care management programs tend to follow a general approach that starts with an assessment of each person in order to develop a care plan, followed by structured efforts to implement the plan, monitor the patient and care plan, and adjust the care plan as necessary (Chen et al. 2000). Nonetheless, these programs are expensive and thus require careful targeting of high-risk enrollees or those with specific chronic illnesses, to ensure cost-effectiveness (Mukamel et al. 1997).

1. Care Management Processes

At all four case study organizations, care managers had a core set of duties. In general, their job was to coordinate access to medical care and community support services by working with patients who were at risk of hospitalization, or who had been hospitalized, to ensure timely access to services such as home health and both primary and specialty physician care.

The four case study organizations limited their care management efforts in various ways. Kaiser Colorado and HMO Oregon had programs that generally limited intensive care management services to a 4- to 6-week period. Keystone East limited most care management contact to the telephone. In addition, the relatively high caseloads assigned to care managers at Keystone East had the effect of limiting the average amount of attention provided to high-risk seniors. In general, the four organizations tried to focus their care management efforts on assessment, care planning, and referral to support-service providers in the community. They placed less emphasis on long-term patient education, ongoing advocacy, and long-term monitoring. While they recognize the potential value of long term care management services, they generally referred seniors to community organizations to obtain that care. In addition, they tended to rely on primary care physicians to identify new problems or on the seniors themselves to recontact the care management program.

These limitations appear to reflect an effort to spread available resources in a way that helps the most people with needs. Care management is not a covered Medicare service, and thus the MCOs are not directly compensated for providing it. Based on our discussions with staff at the four organizations, it seems that the organizations have designed their care management efforts to focus on resolving medical or social crises with an emphasis on short-term efforts that would stabilize a person rather than on long-term monitoring and advocacy. This approach let the MCOs use a relatively small team of care managers to address problems for many seniors. The approach appears to be based on a sense that once a person’s situation has been stabilized, it is better to spend the available resources stabilizing another person than to continue to deliver long-term monitoring services to the first person.

Financial constraints were especially clear at Aspen, where staff felt that Medica’s recent decision to pay Aspen on a fee-for-service basis rather than through capitation

would not provide enough resources to operate the program without the additional funding Medica provided specifically for care management.

To some extent it appears that the organizations felt that the limited duration of the care management was consistent with the ongoing responsibility of the primary care physicians to monitor patients. The high-risk seniors targeted by the care management programs tend to have frequent physician visits. Thus, the physicians are in a position to monitor their patients' progress and to re-refer patients to care management if necessary.

Care managers also coordinated access to community-based social services, although the MCOs rarely paid for these services. Instead, the organizations ensured that the care managers were familiar with local resources, and the care managers either made referrals or set up arrangements with local programs. These programs included congregate or home- delivered meals, opportunities to socialize at senior centers, exercise programs geared to elderly or disabled people, transportation services, Medicaid home and community services, and opportunities to volunteer or be contacted by volunteers. These services address problems such as social isolation, failure to thrive, depression, and limitations on basic activities of life in the expectation of reducing the need for inpatient or other high-cost services.

All four case study MCOs dealt with local Area Agencies on Aging, which are funded under the federal Older Americans Act and either are based in local government agencies or operate as private nonprofits. Keystone East, for example, has a close relationship with the Philadelphia Corporation on Aging (PCA), which provides in-home services, has support groups, and maintains a friendly visiting program for the homebound. These services are paid for by the enrollee or supported by the community rather than the health plan. One problem in accessing PCA and other social service agencies is that many of them have waiting lists for services.

2. The Structure of Care Management

The lack of a dominant care management model that has been shown to save money is reflected in the diverse approaches used by the four case study organizations. While all four have such programs, they differ along a number of dimensions. The most important differences appear to be the scale of the programs, whether care managers interact with patients face-to-face or only by telephone, the location of care management staff in proximity to primary care physicians, the staffing structures, and the duration of active care management services.

Scale. At the time of our visit, only Keystone East had a care management program that was available to all seniors, including those enrolled with capitated provider units. Care management activities at HMO Oregon reflected the overall division of risk at that plan. The medical groups capitated by HMO Oregon had responsibility for care management for their patients, while HMO Oregon provided care management to enrollees whose primary care physicians were not part of capitated practices. Kaiser

Colorado had formal care management only at the two clinics participating in its pilot program. After completing an internal evaluation of this pilot, which suggested that care management could save money, Kaiser Colorado decided to expand the care management to all its clinics. Aspen's care management program, which received a substantial part of its funding from Medica Health Plan, served only those patients enrolled with Medica.

Location. Aspen and Kaiser Colorado located care managers in their clinics, so that the care managers could have face-to-face contact with patients and primary care physicians. Keystone East centralized its care managers, who then conducted all patient contact over the telephone. Each care manager was given a specific geographic region in order to promote communication with the set of physicians who also served that area. HMO Oregon used both approaches (co-location and separate location), which reflects its delegation of risk and care responsibility to capitated provider groups. At all four organizations, home health staff were used to conduct home evaluations, and there were special programs to help manage care for people in nursing homes.

Mode of Contact with Patients. As noted, in Keystone East's care management program, patient contact was done exclusively over the telephone. If a face-to-face communication with the patient or family member was required, it was made by staff from a contracted home health agency. Care managers were assigned to all physicians who admit at a particular hospital. This approach is intended to ensure that the care manager is knowledgeable about local social service resources, and to promote good relations with primary care physicians. However, the physicians who participated in our focus group reported having little contact with care managers, which indicates that assignment to a limited number of physicians does not guarantee effective communications.

HMO Oregon relied heavily on telephone contact, but care managers did occasionally meet with patients or family members. Care managers also performed home visits, although more commonly the contracted home health agency performed this task.

The two care managers at Kaiser Colorado routinely met with patients in the clinics, as did the care managers at Aspen. This was convenient for them, as they were located in the clinic, a situation that also enhanced relations with the primary care physicians. In both organizations, case managers used home health nurses to conduct home visits, although Aspen had its care managers make the home visits for patients who did not meet the Medicare fee-for-service eligibility criteria for home visits. Kaiser Colorado and Aspen also use telephone monitoring.

Caseloads. The four organizations also differed with respect to care manager caseloads. Keystone East planned for care manager caseloads that averaged 130 seniors. At HMO Oregon, caseloads were about 90 seniors per care manager for those seniors who received care management directly from HMO Oregon (that is, other than those enrolled in capitated provider groups). Kaiser Colorado had caseloads between

40 and 50. Aspen care managers tended to have caseloads of approximately 70 seniors, although they were working to reduce caseloads. The differences in these caseloads reflect the structure of the care management programs, as well as such factors as the level of intensity of care management, mostly related to the frequency with which the patient is contacted; whether staff perform other functions such as patient education; and the extent to which care managers are assisted by other staff or rely on home health agency staff.

Aspen's care management structure was notable because it integrated the efforts of several specialized staff. In particular, there were four programs within the overall care management system:

1. Acute care coordinators who were based in hospitals and who focused on utilization management and discharge planning. These staff work with the hospital in order to increase efficiency as well as to manage specific patients.

2. Disease management nurses who provided care management for specific conditions, including frailty as well as chronic obstructive pulmonary disorder, congestive heart failure, and diabetes.

3. Subacute and long-term care management teams that were led by nurse practitioners and that visited nursing homes regularly to monitor enrollees' health status and care needs.

4. Home care staff who provide most of the Medicare-covered home health services to Aspen's members.

In addition to these staff, there were Integrated Services nurses who were responsible for coordinating the four types of services listed above and for ensuring continuity of care. In particular, Integrated Services nurses worked to ensure smooth handoffs when patients moved from one system to another, or when patients' needs lay outside the scope of the other programs.

The Legacy Health System "Resource Specialist" Pilot Project. The Legacy Health System, a major provider unit for HMO Oregon, is testing an innovative program at two capitated medical groups (Health First and Adventist) and two independent physician practices. Care management in this program is performed by "resource specialists," who are not medically trained; rather, they have AB degrees and between 5 and 17 years of social service experience (for example, with Area Agencies on Aging, mental retardation or developmental disability programs, or senior centers). Legacy uses 3.5 full-time-equivalent resource specialists to handle a caseload of 400. About 25 percent of enrollees at the participating clinics are assigned a care manager, a higher ratio than is typical for health plans, and the program includes a focus on people with functional deficits of a milder nature than most health plans would regard as warranting care management.

The resource specialists see patients face-to-face at least quarterly (but often monthly). In addition to coordinating medical care, they emphasize access to social services, family dynamics, and the physical home environment. Importantly, the capitated medical groups have agreed to pay for any off-policy benefits the resource specialist might authorize. Resource specialists work closely with the primary care physicians of enrollees to make sure that the physicians are informed of the enrollees' situation and of efforts to ameliorate it. No effort is made to discharge patients from care management. The program is being evaluated under a grant from the Robert Wood Johnson Foundation and will be expanded if the research results are favorable.

3. Off-Policy Benefits

The organizations differed in their reliance on "off-policy" benefits, those which are not explicitly linked in the MCO's Medicare + Choice Contract. Such benefits are commonly initiated by the care management staff. Plans that will authorize off-policy benefits do so selectively. Examples of off-policy benefits at our four case study organizations include:

- Providing services in the home in situations where the patient is not homebound. This might be done in lieu of placing a malnourished or dehydrated patient in a hospital or nursing home. Home visits were also used to assess seniors in care management, even when the senior was not homebound.

- Paying for transportation to the physician's office for a low-income enrollee if there is concern that deterioration will result from lack of medical care

- Providing durable medical equipment not covered by Medicare, such as rails in showers, repairing stairs to prevent falls, and glucometers for persons with diabetes who are not insulin-dependent.

- Providing home intravenous antibiotics rather than placing the patient in a hospital or nursing home

The four organizations differed in their procedures for authorizing off-policy benefits and in the extent to which they went beyond the Medicare coverage guidelines. The organizations sought to balance their interest in helping care-managed seniors with their concern that beneficiaries who do not receive additional benefits will complain or bring a formal grievance, arguing unequal treatment.[16]

All four provided care management services that clearly go beyond the Medicare benefit package. As for other off-policy benefits, HMO Oregon seemed to offer care managers the greatest latitude. These case managers can preauthorize any home health care service or durable medical equipment purchase, and they also make occasional use of off-policy benefits. They are guided by written procedures but still

[16] This reason arose at all four case study organizations and from a number of plans that are not part of the study.

enjoy some latitude to use their best judgment. On a day-to-day basis, the HMO Oregon medical directors perform a largely consultative role and do not review most decisions of care managers. The major criterion in deciding whether to authorize off-policy benefits is whether such benefits have the potential to prevent emergency room or inpatient use.

Keystone East allows for off-policy benefits but requires approval by the medical director or the patient's primary care physician. For example, all in-home services recommended by care managers had to be approved by the primary care physician. Care managers can request an exception to the Medicare fee-for-service rules in order to meet a specific need for a senior in care management. A care manager in our focus group, however, indicated that such requests are seldom made and that, by and large, the Medicare coverage rules are rarely exceeded.

Aspen follows the coverage rules established by Medica, the health care plan in which beneficiaries have enrolled prior to selecting Aspen as their primary care clinic. Medica hews closely to the Medicare coverage rules and therefore does not permit Aspen much latitude with respect to off-policy benefits.[17] Although care managers can authorize home health visits for beneficiaries who do not meet the Medicare fee-for-service criteria for such care, most other care must be provided through referrals to community agencies.

Kaiser Colorado care managers can provide some off-policy benefits with approval from their supervisor. For the most part, such benefits are limited to covering home health nurse visits for evaluating patients and assessing their home situation. Otherwise, use of off-policy benefits is rare.

Managed care plans are under contractual obligation to provide only the Medicare benefit package plus any extra benefits included in their contracts. Some may go beyond that package in response to the requirements of the Medicare payment system. In general, plans will provide additional coverage or services only if they think it is to their (1) financial advantage, in terms of reducing the overall cost of care; or (2) marketing advantage, because of favorable word-of-mouth advertising. Furthermore, it is often very difficult to decide whether a possible innovation might meet these criteria, because there is little evidence about cost-effectiveness of such services.

In the focus groups, several physicians noted that the flexibility provided by managed care increased their ability to treat their patients effectively. A physician in a capitated medical group (in this case, not Aspen) noted that the capitation payments allowed him to arrange for durable medical equipment that could greatly improve treatment. To illustrate his point, he discussed his frustration with the restrictions typically imposed in the Medicare fee-for- service section:

[17] One indication of Medica's adherence to Medicare fee-for-service rules is its decision not to waive the requirement that patients have a three-day hospital stay prior to receiving coverage for skilled nursing home care. Nationwide, most Medicare managed care plans waive this rule in order to facilitate moving patients to the least-costly setting where their conditions can be treated adequately.

> I had a [fee-for-service] patient in a nursing home with a decubitus ulcer that didn't meet the guidelines for getting an air bed. He had a Grade I ulcer, which went to Grade II and is headed to Grade III. He absolutely needed an air bed, but he didn't meet guidelines. So he landed in the hospital to get a skin flap. Even then I had trouble getting him the air bed he needed. The guidelines require that he has to stay in the hospital for at least three days before he could get into a skilled nursing facility and get an air bed. But he did not need to be in the hospital that long. I actually called the regional director of Medicare in San Francisco and was told that I cannot admit somebody to a skilled nursing bed until they've been in the hospital for three days. That's a Medicare guideline.

Physicians also complained about the inability to order home visits to evaluate seniors who might face substantial risks but who are ineligible for home care under the Medicare fee-for- service rules. These physicians indicated that they could arrange for such visits under managed care, and one physician went so far as to say that because of the Medicare restrictions he "felt sorry for his fee-for-service patients."

4. Perspective of Seniors in Care Management

Many of the seniors who were enrolled in care management programs and participated in our focus groups seemed unaware of care management. (Similarly, in Chapter V we present survey evidence which suggests that many high-risk seniors are unaware of available care management services even when enrolled in care programs.) This does not mean that the programs fail to coordinate care, although it does suggest that many participants will not identify care management programs as a source of information for dealing with their symptoms and illnesses or difficulties accessing care. Participants in the programs that placed greater emphasis on face-to-face meetings were more aware of care management.

At Keystone East and HMO Oregon, the care-managed seniors in our focus group often remembered telephone calls from nurses but did not seem to understand that they were in a care management program whose mission included helping them get the care they needed. Similarly, at Aspen, the seniors recalled assistance they received from nurses but did not express an understanding of the care management program. Only at the Kaiser Colorado focus group did the care-managed seniors seem to understand care management. At that site, many of the seniors even referred to their care manager by name:

> Bonnie just bends over backwards to understand what you want and goes out of her way to try to get it. I found that on several occasions she's better to call than your doctor.

This difference reflects Kaiser Colorado's care management program, where caseloads are small and care managers meet with seniors during clinic visits, as well as over the telephone. Care managers at Keystone East and HMO Oregon contacted seniors almost exclusively over the telephone and used staff from contracted home health agencies to make any in- home contact or assessments. Aspen had a clinic-

based care management system similar to Kaiser Colorado's, so it was surprising that the care-managed seniors did not understand the care management program better. This may have reflected the newness of the Aspen care management program (which was only a few months old at the time of our visit) or the fact that Aspen's team approach to care management can divide patient contact among several staff.

5. Perspective of Care Managers

Care managers at the four MCOs talked about the differences in the goals they saw for care management, how they interacted with physicians, how they measured success, and the barriers and frustrations they encountered when trying to manage care for high-risk seniors.

Goals of Care Managers. Care managers described their role as coordinating care and advocating for patients who are sick or have functional deficits. Doing so entails coordination of both community-based social services and medical services and requires the efforts of physicians, hospital staff, emergency rooms, home health agencies, and nursing facilities. Several care managers emphasized that their function was not traditional utilization management, although they were aware that their support within the organization depended on reducing the need for expensive medical services, particularly inpatient care:

> We are not gatekeepers but coordinators of care. In the event of an ER visit or hospitalization, I might visit and try to find out why that is happening and help identify resources so that the problem does not happen again.

> I don't know if we'd say that our goal was to reduce inpatient use. Rather, it is to get people to a maximum level of functioning and medical stability, which has a long-term effect on inpatient use. So our philosophy is a little bit different from utilization management. Our focus is on doing the right thing and making sure that the best care is provided because that's more preventive and correct than worrying about cutting hospital days as a goal in its own.

Care managers also stressed their role in maximizing functional status of patients and fostering independence. However, for patients who were no longer able to live in their home, they would advise on whether an assisted-living facility or nursing home was appropriate.

Educating patients and physicians was also stated as a goal. The care managers in our focus groups indicated that patients often benefited from instruction on how to gain access to medical services and specific community-based social services that the care manager might help arrange. Patients being empowered to care for themselves to prevent future medical crises was also expressed as a goal. Patient empowerment entails both prevention and knowing how to make appropriate use of the health care system.

Care managers felt that the role they played was not understood by many doctors. In one of the case study organizations, they talked about needing to educate the health plan's medical directors. In two of the organizations, care managers felt that their goals for care management were more long-term than those of the administrators:

> We have a more personal piece to our job than many people in administration. They don't have a relationship with the family and the patient and the day-to-day happenings that go on in our job, and I think that it is a different perspective.

Relationship of Care Managers with Primary Care Physicians. Care managers regarded the relationship with physicians, notably primary care physicians, as good but uneven, with most being supportive but others hesitant:

> We get good response from most doctors. For those who are hesitant, I think the problem is that they haven't seen that we're really worth our salaries.

Several care managers felt that a substantial proportion of primary care physicians did not understand care management or use it appropriately. Other care managers reported difficulty getting to know the doctors, who they say often assume that the care manager will become an additional burden on their time. Good followup and rapport with the physician were important and helped generate referrals, although one care manager said that she received too many referrals. Another care manager felt that the key to getting physician buy- in was to have success with at least one patient of a given physician. Finally, care managers at Kaiser Colorado and Aspen thought that care management was needed, in part, to address discontinuities that can arise in the approaches these organizations used to deliver physician services to people in the hospital. These two organizations use hospital-based physicians to deliver inpatient care, so patients generally receive inpatient care from a physician different from their primary care physician. The additional physician involved in treating seniors required further efforts to obtain information and coordinate care.

Measures of Success. Care managers found it difficult to quantify and measure successful care management, because so much of the process is based on professional judgment. In general, they viewed success in terms of patient and family satisfaction, willingness of patients to allow the care manager to help them, belief that they had improved care coordination, and helping seniors to maximize their functional abilities. They also mentioned identifying bad health habits and getting patients into primary care promptly before they deteriorated to the point where they required extensive or emergency services.

As stated earlier, the case study organizations differed in whether the care manager made home visits or otherwise met with the patient, instead of performing care management entirely by telephone. Those who did make home visits felt that they were able to identify and solve problems that many traditional home health nurses might miss, such as a bare pantry, potentially signaling nutrition problems; a physically dangerous home environment; or evidence of alcoholism or abuse of elderly people.

Barriers and Frustrations. Care managers saw themselves as mediating between patients and families on one hand and providers and community-based social services agencies on the other. There was a recognition that all parties had to be brought together to ensure successful care management. With regard to providers, obtaining buy-in from resistant doctors was mentioned previously. Another problem is discharge planners who want the patient to leave the hospital before the care manager has been able to arrange alternative living arrangements, such as placement in a nursing home or, less frequently, a rehabilitation hospital. Arranging for admission to a nursing home for long-stay patients is difficult in some communities; one care manager reported having to call 15 nursing homes that day to find an available bed. Also, the care manager may be more cognizant than the discharge planner that the home environment is hazardous or that a patient's dementia will require the manager to spend an extra day coordinating resources.

Care managers identified problems that arise because of the difficulty in communicating with all the other decision makers who influence a senior's care. For example, one care manager noted that utilization review staff may terminate home health services because the patient no longer meets the coverage criteria of being homebound or in need of skilled care. Such decisions were often made without input from the care manager or without even informing the care manager in a timely manner.

Care managers in our focus groups also raised a series of organizational and administrative frustrations that can arise, including:

- Caseloads that were too large, which made it hard to be proactive with patients
- The volume of written documentation that is required (although care managers hastened to add that documentation was a necessary part of their jobs)
- Inadequate secretarial or clerical support, resulting in too much paperwork for the care managers
- The necessity of staying abreast of new technologies introduced within the managed care organization, such as computer developments and internal system changes
- The need on occasion to interpret complex Medicare coverage rules that often seem overly restrictive, such as those that do not cover both wheelchairs and walkers for the same patient, even though patients in transition might benefit from having both; and the need occasionally to contradict what enrollees report being told by marketing staff

6. Conclusions About Care Management Processes and Structures

Care management was a key element in the efforts all four MCOs made to address the needs of high-risk seniors. Yet the care management programs they implemented were generally more limited than those for which Chen et al. (2000) found some evidence of effectiveness. The case-study organizations developed care

management that was typically time limited and focused on assessment, coordination of medical care, and referral to community organizations for social support services. They placed less emphasis on ongoing activities such as monitoring and adjusting the initial care plan. Their choices appear to reflect a view of care management as supplementing the efforts of primary care physicians. In particular, the role of long-term monitoring and re-referral to care management was usually left to the primary care physicians at all four organizations. Their choices also reflect the fact that at the time of our site visits care management is not part of the Medicare benefit package and therefore not something they are directly paid to provide or required to provide. Finally, their choices reflect the general lack of empirical evidence about what it takes for a care management program to generate net savings.

The limited nature of the care management efforts fielded by the case study organizations was often reflected in the perceptions of the directors of the local Area Agency on Aging. In most cases, the directors knew little about the specific care management programs fielded by the MCOs. Instead, the agency directors were unhappy with the general level of care management that managed care plans provided. In particular, they felt that the plans often left a lot of the work for the agency. This perception was correct in the sense that the MCOs focused on coordinating Medicare-covered medical services and referred members to the Area Agencies and other community organizations for help with many support services, including transportation assistance and respite care for caregivers. In essence, the MCOs took the initiative to identify high-risk seniors who would benefit from social support services, to refer those seniors to appropriate community agencies, and to follow-up to ensure that the referrals resulted in services. This effort appears to have helped the seniors, but may have also increased the overall demand for services from the community organizations. Such increases in demand could be expected to be met with lukewarm enthusiasm from the Area Agencies who were often struggling to keep up with requests for assistance.

The four case study organizations made different decisions about caseloads and the extent to which their care managers could provide individual attention. Care managers at Keystone East had high caseloads and contacted patients only by telephone, which avoided the need for care manager travel. Keystone East and Aspen also pursued efficiency by using specialized staff. At Keystone East, in-home assessments were conducted by home care nurses. At Aspen, a patient might see one care manager in the hospital, someone else while receiving home care, and a third person when they were home after the home care ended. The efforts of the specialized staff were then coordinated by an Integrated Services Coordinator. HMO Oregon concentrated its care management efforts on the seniors who had not selected a capitated practice for their primary care. It also relied on care management efforts developed by some of the health systems with which it contracted.

A common element in all the care management programs was that many seniors enrolled in care management did not seem to be aware of their enrollment. We saw this in our focus group discussions with seniors who the organizations had indicated were in care management (we saw the same result in our survey data which are discussed in

the next chapter). The level of awareness varied among the four organizations, with care-managed seniors at Kaiser Colorado having the clearest connection with their care managers. Not only did most know the name of their care manager, but they seemed to view care management as a means for helping them get the care they required, rather than a series of unconnected events in the care delivery process. Care-managed seniors who participated in focus groups at the other organizations tended to remember receiving care and monitoring telephone calls, but saw these services more as isolated events than as part of a care management process. This is not to say that care for seniors at the other sites went uncoordinated, merely that the care coordination and information provision roles of care managers went largely unnoticed by seniors at these sites.

The differences in seniors' perceptions seem to be related to different choices the MCOs have made about the structure of care management. Keystone East's use of telephonic care management and high caseloads may have made it hard for patients to understand care management or to distinguish it from many other MCO or provider interactions. The use of specialized care management staff at Aspen may also have inhibited patients' awareness of care management. In particular, the coordination provided by Aspen's Integrated Services Department may not have been visible to the seniors. This pursuit of efficiency at both Keystone East and Aspen seems to have reduced the sense that seniors had of care management as a source of ongoing advocacy, information, and care coordination. In contrast, care-managed seniors in our focus group at Kaiser Colorado reported more direct contact with between care managers. Seniors understood care management better as a result of this interaction and the fact that each senior dealt with only one care manager rather than a team. However, even at Kaiser Colorado, there seemed to be variation among seniors who were managed by different care managers. This implies that the personality and individual styles of care managers can affect seniors' perceptions.

Primary care physicians seemed to have the best understanding of care management at Kaiser Colorado and Aspen. At these sites, physicians who participated in our focus groups tended to know about the ways in which care management could help their patients and how to refer patients to it. At Keystone East, the physicians who participated in our focus group were generally unaware of the plan's care management program. Physicians serving seniors at HMO Oregon showed a pattern that is consistent with this plan's use of both the group and IPA models. In particular, physicians in capitated practices at HMO Oregon knew about the care management of their own practice, while individual physicians did not appear to know much about the care management provided by HMO Oregon. It seems likely that the differences in perceptions are due to clinic-based provision of primary care at Kaiser Colorado, Aspen, and in some practices in HMO Oregon. The clinics enabled these organizations to place care managers in close working proximity to the primary care physicians. They thereby helped to identify high-risk seniors and to manage care for such seniors. This approach was more efficient at the IPA model health plans because there are so many independent practices. Keystone East tried to address this issue by assigning care

managers to specific sets of physicians, but the lack of direct contact with physicians seems to have reduced the effectiveness of this approach.

C. Disease Management and Other Assistance Programs

Disease management programs typically assist people who have a single or dominant condition, generally chronic, and entail processes for identifying patients, educating them or their doctors on the management of the condition, and using ongoing monitoring. In many ways, disease management programs vary along the same dimensions as care management programs. Thus, the programs differ primarily in terms of how comorbidities are handled, whether there are face-to-face interactions with the patient, the relationship to the primary care physician, and the extent of the focus on medication compliance. Addressing medication issues is easier if the plan covers prescription drugs and thus has access to a database that describes the medications received by each patient. Such a database can help the organization assure that medications are used effectively.

All the disease management programs at our case study organizations were created internally, although such programs can be purchased from a pharmaceutical company or a freestanding company. The MCOs did not make age distinctions (for example, elderly or nonelderly) in determining eligibility for disease management, although some conditions (such as congestive heart failure) are particularly prevalent among elderly people. The case study organizations had programs relating to heart disease, diabetes, depression, and joint replacement, among others. What is described below are only examples; many of the programs were of recent origin at the time of our visit and were still evolving.

1. Cardiac Care

Keystone East, HMO Oregon, and Aspen have programs for congestive heart failure (CHF). At Keystone East, practice guidelines have been developed for its management. In addition, each CHF patient undergoes an assessment that includes obtaining information on the family or other support systems and on problems the patient might have in accessing community-based resources. Also, specialized nurses, employed by a home health agency, perform home assessments, and patients undergo educational training on such topics as nutrition and the need to monitor weight and take medication as prescribed. Patients also receive printed materials--for example, on fluid intake, weight, and medication issues. Several home visits by nurses are typical, with the enrollee being monitored thereafter by telephone. The CHF program was reported to have reduced inpatient admissions by 50 percent. Most of the patients in the program have significant comorbidities, which the staff has been trained to address.

The program at HMO Oregon emphasizes the use of ACE inhibitors for treating CHF. Primary care physicians are sent lists of members based on analyses of claims indicating the presence of CHF and asking whether the patients are on ACE inhibitors.

The guidelines for treatment of CHF issued by the Agency for Health Care Policy and Research are also distributed. Finally, nurse care managers call CHF patients to discuss weight and other health issues. The frequency of the calls can vary from weekly (typical for patients when they first enter the program) to once every few weeks.

Kaiser Colorado has a program for patients admitted to the hospital with ischemic heart events. It includes both one-on-one counseling and group classes that focus on cholesterol levels, beta blocker therapy, aspirin therapy, smoking cessation, exercise, and diet. Also, Kaiser Colorado initiated a Clinical Pharmacy Anticoagulation Service several years ago to decrease the morbidity associated with anticoagulation, principally with heparin and coumadin. The most frequent conditions requiring these agents are atrial fibrillation, deep venous thrombosis, and valvular heart disease. The service has a caseload of about 3,700 patients. Staffed by seven pharmacists (three PharmD's and four with BS degrees) and two technicians, it assumes responsibility for dosing, monitoring, and redosing patients who receive anticoagulants. One of the seven pharmacists takes calls 24 hours a day, on a rotating basis, by carrying a cell phone and laptop, thus allowing providers to contact the service at any time to obtain a consult regarding the patient's therapy. To reduce the need for inpatient care, the service collaborates with the local visiting nurses association to arrange for home monitoring of patients with deep vein thrombosis who are being treated with low molecular weight heparin as outpatients.

2. Diabetes Management

At the time of our visit, Kaiser Colorado had undertaken a pilot that was being evaluated for planwide implementation. It was staffed by two nurses who devoted nearly full time to the pilot. A diabetes registry has been developed, and a risk stratification process has been implemented to identify enrollees who need special attention, including one-on-one counseling. Risk factors that are tracked through the registry include (1) high hemoglobin A1c test results, (2) no evidence that tests were conducted, (3) repeated emergency room and inpatient use, (4) no evidence of an LDL (cholesterol) test in the previous two years, and (5) no diabetes-related visit within the previous year.

These two nurses provide patient education and proactively call on members at high risk. Reflecting Kaiser Colorado's objective to improve medical practice quality, outcomes are tabulated for each primary care physician and are shared within the clinic, with the names being listed, thereby letting each physician know how he or she compares with colleagues. Measures include hemoglobin A1c test results, percentage of patients with eye exams, LDL levels, and urine protein levels. Empirical results of the pilot, based on both a comparison with nonparticipating clinics and analysis of performance before and after the pilot, reveal significant improvements in a number of measures, including better hemoglobin A1c control, more foot care, and higher member satisfaction. The health plan intends to expand the program to other sites.

The program at HMO Oregon entails less direct contact with the patient. PCPs receive mailings listing patients for whom there is no record of hemoglobin A1c tests,

and patients are surveyed to inquire if they have had foot exams. Also, a pamphlet on self-care is sent to diabetics, along with a wallet card that provides a checklist of medical tests that should be performed. A diabetes registry is being developed. A sample of 800 members who were surveyed before and after the intervention experienced significant increases in the number of members reporting having had their eyes examined during the year, self-performing foot exams, performing blood glucose testing, and correctly identifying the purpose of the hemoglobin A1c test.

3. Depression

HMO Oregon has a program that entails raising primary care physicians' awareness of depression. The program, which disseminates instruments to measure depression and issues practice guidelines, was initiated because there is extensive evidence in the literature that primary care physicians often overlook subclinical depression and frequently have difficulty with appropriate pharmacologic management of the condition. For enrollees with prescription drug coverage, physicians are provided lists of patients on their respective panels for whom claims for antidepression drugs have been received. Such lists are particularly helpful for ensuring that a senior's primary care physician is aware of any medications prescribed by other physicians.

4. Replacement

At Keystone East, once an enrollee has been identified as requiring joint replacement, a nurse care manager who specializes in orthopedics telephones the patient prior to surgery, and assesses his or her condition, asks about the layout of the house, and gauges the pain and discomfort level. This is followed by two separate home visits. The first is by a nurse who reviews the patient's physical and social needs, evaluates the safety of the home, and provides education about the surgery, such as instruction on postsurgery breathing techniques. The second is by a physical therapist who evaluates gait and postsurgery needs for durable medical equipment. The physical therapist may also provide instruction on presurgical strengthening exercises and on how to use the equipment. Once the patient is discharged from the hospital, a care manager and physical therapist follow the patient as needed.

5. Other Programs for Seniors

The four case study organizations all had special programs for seniors generally, to help seniors maintain their health and avoid the need for medical care. They included patient education and medication review programs. There were also programs to promote better mental health either through formal treatment or through having volunteers call potentially isolated seniors to give them someone with whom to talk. This section summarizes a few examples of the programs we saw during our site visits.

Health Education and Disease Prevention. Keystone East and Kaiser Colorado had health education and prevention programs, mostly for elderly members who did not have significant illness. At Keystone East, enrollees classified as being at moderate or

high risk for adverse health outcomes were given the brochure “Eating Right” to promote healthful nutrition. Keystone East also had the following programs oriented toward Medicare members:

- Each quarter, enrollees receive an attractive, multicolored magazine devoted to wellness topics for seniors as well as to plan procedures. For example, the September 1997 issue included information on nutrition, mental alertness, exercises to enhance flexibility, calcium intake, periodic screening, sleeplessness, and hypothermia. It also contained information on selecting a primary care physician, when to access the emergency room, financial/retirement planning, the plan’s goal that physicians see patients within 30 minutes of the appointment time, and the availability of discount golf passes.

- Around their birth dates, women enrollees are sent reminders to obtain mammography screens.

- *The A to ZZZZZs: Easy Steps to Help You Sleep*, a booklet designed to promote good sleeping habits, is offered at no charge to enrollees, along with an audio cassette tape that contains sleep information and muscle relaxation exercises.

Both Keystone East and Kaiser Colorado conducted campaigns to promote influenza and pneumococcal inoculation. Keystone East sends out annual mailings to Medicare members to encourage receipt of influenza inoculation. In the winter prior to our visit, 80 percent of Kaiser Colorado senior members received flu shots through the health plan; some unknown proportion of the others may have received vaccinations in community settings. To achieve such a high rate, the plan mailed postcards to members and held flu shot clinics. In addition, volunteers telephoned members who had joined the health plan recently to encourage them to be inoculated. Plan records also indicate that at least two-thirds of seniors have had pneumococcal inoculations.

Kaiser Colorado employs six health educators. Only recently, however, has there been a focus on the senior population. Meetings for members who are caregivers, called “When Your Parents Need You,” were initiated in March 1997. Between 30 and 40 members attend each session. More recently, classes entitled “Care for Caregivers,” “Wellness as We Age,” and “Yoga for the Great Years” have been held. Members who attend pay nothing or a small fee, depending on whether they have enrolled in the basic or the high option. More recently, intergenerational sessions have been held that deal with stress management, heart problems, arthritis (in conjunction with the local chapter of the Arthritis Foundation), and diabetes. Some of the classes are open to nonmembers.

Pharmacy. Many health plans serving the elderly have “tote bag” or “brown bag” programs that entail members’ collecting all their medications, prescription and nonprescription, and having them reviewed by a health professional. Keystone East encourages new Medicare members to review all their medications with their primary care physicians.

Kaiser Colorado has undertaken several pharmacy-related initiatives, some of which are discussed in the "Disease Management" section. In addition, several of its clinics have doctorate-level pharmacists, and there are approximately 15 such people throughout the Kaiser Colorado system. Most of these 15 pharmacists are board certified in pharmacotherapy,[18] and some have specialized training in oncology and infectious diseases. The plan is rapidly adopting mechanisms to allow professionals at both BS and PharmD levels greater opportunities to deliver clinical services directly.

The clinical pharmacy service of Kaiser Colorado has focused on a number of areas that are relevant to the frail elderly, including the prescription of benzodiazepines, which are sedative-hypnotic medications that have been associated with falls and hip fractures. The pharmacy service screens enrollees for whom these medications have been prescribed and encourages physicians to consider alternatives or shorter-acting benzodiazepines (for example, Lorazepam). Also, the formulary has been restricted for some of these drugs that pose the greatest risks of side effects (such as Dalmane) to minimize their use. Finally, the service has also sought to identify seniors with the diagnosis of depression, to ensure that the appropriate antidepressant has been prescribed.

Behavioral Health. All of the case-study organizations allow enrollees to self-refer for behavioral health services. HMO Oregon and Keystone East, as for many other health plans, "carve out" behavioral health services and contract with a managed behavioral health organization on a capitated basis. Kaiser Colorado has a separate mental health service, which is treated like any other specialty department. Also, at Kaiser Colorado, a pilot project was initiated in September 1996 that entails placing a psychologist at one of the larger primary care clinics, both to see patients and to consult with physicians. One reason for the on-site presence is to overcome resistance of some patients receiving mental health services. None of the plans visited has made a special effort in geropsychiatry.

Volunteers. Some plans have volunteer programs. Kaiser Colorado, at one of its 14 clinics in the Denver-Boulder area, has initiated a friendly telephoning program on a pilot basis known as "Caring Callers." Three volunteers--all of whom are more than 70 years old and one of whom is over 80--meet at the clinic every Monday morning and, between them, call a panel of some 20 members who are chronically ill and socially isolated. Many of these members have been identified as depressed or lonely, through the assessment process described above. Each call takes between 20 and 30 minutes. A "Caring Caller" volunteer training manual has been prepared, which includes information on protocols and guidelines for making calls, as well as phone tips and a script for answering some frequently asked questions. Volunteers receive a half-day of training. The program may be expanded to other clinics.

[18] Only 1,200 PharmD's are board certified in pharmacotherapy nationally.

D. Networks

The case study organizations illustrated ways in which the development, organization, compensation, and monitoring of provider networks can promote better care for high-risk seniors. The organizations established quality criteria for skilled nursing facilities and home health agencies in their networks. They developed ways to promote more intensive monitoring of facility-resident patients than would typically occur in the fee-for-service sector. They found ways to introduce more flexibility into the care process and so ended up covering some activities that rarely would be paid for under Medicare fee-for-service policies. Finally, the group model organizations, Aspen and Kaiser Colorado, promoted a culture of experimentation where their physicians felt comfortable proposing and testing new ways of improving the care delivered to high-risk seniors.

1. Skilled Nursing Facility and Rehabilitation Hospital Services

All the case study organizations made extensive use of skilled nursing facilities. They used them to substitute for hospital-based care for those patients who no longer required intensive services. In fact, three of the four organizations admitted patients directly to skilled nursing facilities, in contrast to the standard Medicare program, which requires a minimum three-day prior hospitalization as a condition for receiving skilled nursing facility benefits. Only Aspen did not waive this requirement, which is stipulated in their contract with the Medica health plan.[19] Conditions that lend themselves to a direct admission to a skilled nursing facility include new stroke, wound infection, pneumonia, falls, urinary tract infection, dehydration, nutritional deficiencies, and need for intravenous antibiotics.

To ensure adequate treatment of people admitted to skilled nursing facilities, the organizations imposed special requirements on the facilities in their networks. These requirements go beyond those imposed by Medicare. For example, Keystone East requires that the facility be accredited as a subacute unit by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), be able to administer antibiotics intravenously, and have heart-monitoring capacity. For all the nursing homes with which Kaiser Colorado contracts, the health plan examines performance on state surveys and requires that the home be accredited by JCAHO as a subacute unit or that it demonstrate that it meets the requirements. It also examines enrollee satisfaction surveys in deciding whether to renew a contract. Aspen requires that skilled-care facilities in its network be able to admit patients 24 hours a day (including weekends) and that they offer rehabilitation services at least six days a week. Aspen also imposes staffing requirements: skilled nursing facilities must have their clinical functions provided

[19] Medica's decision to not waive the 3-day rule appears to have led Aspen physicians to keep some seniors in the hospital longer than the physicians would have preferred. Aspen staff indicated that their physicians wanted to ensure that beneficiaries would have their skilled nursing stays covered by Medica which might not have been the case if the physicians had acted aggressively to move patients from the hospital to a skilled nursing facility in fewer than three days.

by permanent staff rather than outsourced, and they must be staffed primarily with registered nurses rather than licensed practical nurses.

Aspen and Kaiser Colorado went beyond these special requirements to limit their network of skilled nursing facilities. Aspen used only four skilled facilities, while Kaiser Colorado used just five. In contrast, HMO Oregon and Keystone East contracted with any facility that met their standards. At Kaiser Colorado, we were told that cost was not a significant factor in selecting its limited network of facilities. Instead, Kaiser Colorado looked for nursing facilities that wanted to establish a long-term partnership in which Kaiser Colorado would participate in the facility's continuous quality improvement process. Aspen and Kaiser Colorado also felt that limiting their network of facilities gave them more leverage with the facilities with regard to the shaping of care. It also enabled these two organizations to use a small dedicated medical staff to care for patients in nursing facilities. For example, Kaiser Colorado used only five physicians (4.5 FTEs) and a nurse practitioner to monitor care for its members in skilled-care facilities, custodial nursing homes, and rehabilitation hospitals. Each of these Kaiser Colorado physicians typically follows 35 skilled-level and 150 custodial- level patients. The physician, physical therapist, nurse, and social worker hold weekly meetings to review the status of patients. Some 35 patients might be reviewed during an hour-and-a-half meeting.

For Aspen and Kaiser Colorado, the concentration of subacute care in a few facilities and reliance on a small number of physicians dedicated to nursing home patients permits a high level of patient care (including daily rounds) that would not be reimbursed conventionally through traditional fee-for-service Medicare Part B payments. The daily visits also enable physicians to monitor patients who receive long-term custodial care at the facilities that provide the skilled nursing care. Finally, the frequent contact between facilities and physicians fosters a working relationship that can enhance flexibility in care delivery. For example, the facility directors with whom we talked noted that their staff have considerable discretion regarding length of stay. They can use this flexibility to provide a slightly extended stay if that will facilitate teaching a family how to help care for a family member who is being discharged. Aspen physicians promote the use of nursing homes as a substitute for some hospital care by talking to patients before their hospital stay and explaining that a nursing home stay will be part of their overall plan of treatment.

2. Care for Custodial-Level Nursing Home Patients

For custodial-level nursing home patients who are health plan members, the plan is not liable for routine nursing home charges. Rather, these are typically paid by the patient or Medicaid. However, the health plan is responsible for the full range of Medicare benefits, including hospital care; physician services; durable medical equipment; and speech, physical, and occupational therapy. Also, the enrollee, not the health plan, selects the nursing home. As a result, the residents are distributed throughout the service area, which poses a challenge to the health plan in the delivery

of services. For example, Kaiser Colorado has 500 enrollees spread over 35 nursing homes, and Aspen served 1,600 patients in 72 facilities.

Kaiser Colorado, Keystone East, and Aspen have made a special effort to provide primary care to long-term (custodial) nursing home patients. At Kaiser Colorado, the five physicians who serve patients at subacute or skilled nursing facility levels of care also have responsibility for the care of custodial-level nursing home patients. A physician or nurse practitioner routinely visits each patient roughly once every six weeks. This level of interaction is greater than typically provided under the Medicare fee-for-service rules which require a minimum of a physician visit every three months. Also, the physicians telephone family members of nursing facility patients, whether at skilled or custodial levels of care, to make themselves available. Typically, more time is spent with families of subacute/skilled patients than with custodial patients.

Keystone East has identified primary care physicians who have a special interest in monitoring and treating long-term nursing facility patients. The plan encourages its members who reside in nursing homes to enlist on the panel of one of these physicians. The physician receives a capitation payment of $40 a month, higher than the $24 paid on average for Medicare beneficiaries in the community (an amount that varies, based on enrollee age and sex). The $40 amount is intended to approximate the fee-for-service payment for a monthly visit, a level of frequency that Medicare carriers would often question in the standard Medicare program. These physicians are required to visit the patient at least monthly but may use nurse practitioners to perform some of the visits. A physician who manages the care of patients admitted to a hospital or skilled nursing facility receives an additional payment of $350 per admission.

Aspen uses the Evercare program to manage care for about 800 custodial-level patients. It receives a capitation payment for these seniors and is responsible for their medical care. Aspen's program relies heavily on nurse practitioners who focus on treating facility-resident seniors. When they enter the program, patients receive a thorough assessment of their medical, functional, and mental status. The nurse practitioner also meets with the family to discuss what the family should expect as the patient ages. After the initial evaluation, the nurse practitioners see patients routinely, with the supervising physician accompanying the nurse practitioner on the visits once every four months. The nurse practitioners visit each nursing home at least weekly and are on call 24 hours a day. They also attend care conferences held by nursing home staff each quarter. Aspen administrators felt that this process produced a close relationship between the nurse practitioners and the nursing home staff and helped to promote the health of the participating seniors.

3. Rehabilitation Hospitals

While all the case study organizations expanded the types of uses for skilled nursing facilities, they differ in their use of rehabilitation hospitals. Keystone East and Kaiser Colorado make little use of rehabilitation hospitals, relying instead on skilled nursing facilities able to handle subacute patients. Keystone East uses rehabilitation

hospitals mostly for patients with brain injuries, those with multiple traumas, and those requiring weaning from breathing aids, such as respirators. Kaiser Colorado uses them principally for enrollees with head trauma, spinal cord injury, and complex strokes. In contrast, HMO Oregon makes considerable use of rehabilitation hospitals, applying the standard Medicare coverage rules--for example, that the enrollee show potential for functional improvement and be able to tolerate three or more hours a day of therapy.

4. Home Health Services

The four organizations used different approaches to the delivery of home health care. Aspen and Kaiser Colorado were similar, in the sense of concentrating delivery of home health care to their members in a single agency. Aspen used its agency to deliver home care services, with the exception of some specialized care such as occupational therapy and IV therapy. Kaiser Colorado relied exclusively on the Visiting Nurse Corporation of Colorado, for which Kaiser represents 40 percent of patient volume. The concentration of responsibility with one agency at Aspen and Kaiser Colorado appears consistent with their general philosophy of fostering close working relationships with a limited number of providers and facilities. For example, Kaiser Colorado and the Visiting Nurses Corporation were jointly developing a new home health referral form, to ease the paperwork burden and ensure the transmission of all relevant information about patients. They were also developing a computerized home health information system that will link with the Kaiser Colorado data system. In contrast, Keystone East contracted with more than 150 agencies, including the agency owned by its parent company, to deliver home care in its five-county service area. This approach gives Keystone East physicians and members more choice, but it does not permit much close planning between the agencies and the MCO.

The case study organizations generally did not exceed Medicare home health coverage guidelines, the major exceptions being for home IV therapy and, in the case of Kaiser Colorado, blood transfusions for patients who did not meet the Medicare homebound requirements. The organizations also arranged for home health nurses to assess the living environment in terms of personal safety and caregiver availability for people who did not meet the homebound requirement. Finally, Kaiser Colorado patients who were discharged from a skilled nursing facility routinely received at least one home visit regardless of this homebound status.

5. Physician Networks

The four organizations also illustrate different ways that physician networks can influence care for high-risk seniors. In particular, the two group models, Aspen and Kaiser Colorado, recruited physicians comfortable with the philosophy of managed care and the flexibility and constraints it brings. Both the Aspen and the Kaiser Colorado physicians in our focus groups indicated that they and their colleagues were committed to finding ways to improve the delivery and quality of care. In Aspen’s case, the acquisition of another medical practice failed because its culture clashed with that of the Aspen physicians.

One example of the innovation produced in these physician networks is the cooperative health care clinic program developed by physicians at Kaiser Colorado. These clinics have received national attention and represent a new paradigm for delivering primary care to people with chronic illnesses. The clinics schedule a group visit for persons who have chronic illnesses but who are still capable of traveling to a Kaiser Colorado clinic. Groups have 15 to 20 members who all see a particular primary care physician. The groups meet each month for two and a half hours for an education presentation, a group discussion, a question-and-answer session, and time to check vital signs and provide flu shots or other brief appropriate preventive interventions. Group participants also have an opportunity to meet briefly with their primary care physician, typically for five minutes or less. If more physician time is required, a follow-up visit is scheduled. These clinics appear to increase primary care costs, decrease total costs, and lead to higher levels of satisfaction among participants and physicians (Beck et al. 1997). Particularly relevant to high-risk seniors, the clinics seem to enhance participants' sense of self-efficacy and increase their willingness to ask questions of physicians.

The cooperative health clinics came about because Kaiser Colorado physicians were looking for more efficient ways to treat chronically ill patients who often scheduled monthly office visits. It also came about because Kaiser Colorado was receptive to new ideas and gave the physicians the opportunity to experiment with new service delivery methods.

It would be more challenging for an IPA or mixed model like Keystone East or HMO Oregon to encourage this type of innovation. First, they typically cover only a small or modest fraction of their network physician's patients. As a result, their policies are likely to have a smaller effect on the overall practice patterns on the physicians. Second, the clinic- based systems of the group models mean that they often have the critical number of chronically ill or high-risk patients required to support special targeted programs. Individual physicians may have only a few such patients, not enough to support development of a program aimed at those patients' specific needs. We will return to this structural difference between the group and IPA models when we look at the experiences of high-risk seniors in the next two chapters.

E. Summary

The case study MCOs went beyond the Medicare fee-for-service benefits in all the I-CAN areas: identification, care management, assistance programs, and networks. They clearly used the flexibility provided by capitation to implement efforts that they thought would improve care and generate savings. These efforts tended to be fairly focused, however. For example, their care management programs emphasized assessments, feedback to primary care physicians, and referral to appropriate community-based social service providers. They did not include the long-term monitoring, patient education, and advocacy that have been part of many other care

management efforts that have received major policy attention, such as the National Long Term Care Demonstration (Carcagno and Kemper 1988). In the next chapter, we will see how our sample of high-risk seniors enrolled with these organizations viewed the net effect of these innovations.

V. HIGH-RISK SENIORS' PERCEPTIONS OF THEIR MANAGED CARE EXPERIENCES

The high-risk seniors included in our study generally held very favorable opinions of their managed care organizations (MCOs). More than 90 percent indicated that they would recommend their MCO to another person with similar health conditions. This figure is much higher than the overall satisfaction level previously reported for a national sample of high-risk groups in Medicare + Choice plans (Nelson et al. 1996). In fact, it is approximately equal to the level reported by the largely unimpaired general Medicare population in Medicare + Choice plans. This high satisfaction level is testimony for the potential of managed care to serve high-risk populations well.

We found that the perceptions of high-risk seniors in care management programs generally reflected the structure of the programs that the case study organizations fielded. These organizations tended to provide care management that focused on short-term interventions. As a result, many of the seniors who had been enrolled in care management did not remember being enrolled when we interviewed them. When they did remember, they tended to report being satisfied, although very few would have turned to their care manager to resolve a problem with care or coverage.

This chapter reviews the survey data we collected about the satisfaction levels and care management experiences of our sample of high-risk seniors in the three case-study MCOs where we conducted surveys (Aspen, Kaiser Colorado, and Keystone East). For the sample members at Aspen, we asked separate questions about their satisfaction with their Medicare + Choice plan (Medica) and with care at Aspen. When discussing characteristics of Medica, rather than those that pertain only to Aspen, we will use the term Medica/Aspen.

We begin with a review of the reasons that our sample of high-risk seniors gave for enrolling in a Medicare + Choice plan. We also investigated whether these seniors felt that they had enough information to make a good choice of MCO. This information provides useful insight into the context in which people enroll. Also, their expectations about managed care are likely to influence their satisfaction levels. For example, an early study of Medicare managed care found that enrollees saw many disadvantages of being in managed care but also felt that the savings they received by enrolling outweighed those disadvantages (Brown et al. 1993).

The chapter then turns to the estimated satisfaction levels, including satisfaction with the MCO overall, as well as with specific aspects of care delivery. We then present the findings, including an analysis of the generally high levels of satisfaction among subgroups of the seniors and among all three MCOs.

Finally, the chapter turns to seniors' care management experiences. That analysis begins with the subsample of seniors who we know were enrolled in care management

(although not all were still actively involved with care management at the time of the survey). Data from this sample highlight the fact that care management is often not salient to many of the seniors who receive such services. These data also illustrate how the three MCOs differed with respect to the people they enrolled in care management. Moving from that specific care management sample, the chapter proceeds to examine the experiences of all sample members who reported receiving care management. While this sample undoubtedly excludes those seniors for whom care management was not salient, their experiences and perceptions illustrate the successes and challenges facing the highly focused types of care management implemented by the three case-study MCOs.

A. Potential Savings and MCO Reputation Were Primary Reasons That High-Risk Seniors in Our Sample Enrolled in Managed Care

The seniors in our sample gave a diverse mix of reasons for enrolling in their Medicare + Choice plan, but the potential for savings and the reputation of the plan were the most frequently cited (Table V.1). About 55 percent of our sample named one of them as the most important factor in their enrollment decision. The other reasons varied. About five percent of the sample reported enrolling because their physician or a desired hospital was in the plan's network. In addition, a few seniors had been enrolled in the plan before they became eligible for Medicare, and decided to stay with their plan. Others gave a variety of responses, including that they joined because their spouse was already a member. Finally, a substantial number gave no specific reason for enrolling.

Among the three MCOs, the most noteworthy difference is between Keystone East and the two other MCOs in the fraction of members who said that they enrolled to save money. Whereas about 18 percent of Kaiser Colorado and Medica/Aspen members reported that saving money was the most important reason for enrolling, 41 percent of Keystone East's members gave that reason. Based on discussions during our site visits, this difference appears to reflect differences in the Medicare payment rates and the resulting differences in the managed care prices and benefit package. Medicare rates are substantially higher in the Philadelphia area served by Keystone East than in the areas served by the other two MCOs (Table II.2). As a result, Keystone East can offer a more generous benefit package and lower premiums than other two organizations. In contrast, staff at Medica/Aspen indicated that Medicare supplemental policies could be purchased in the Minneapolis-St. Paul area for approximately the same premiums charged by the managed care plans. Thus, the Medica plan could not offer any savings relative to the Medicare fee-for-service sector, and correspondingly, seniors had to enroll for reasons other than a desire to save money.

TABLE V.1. High-Risk Seniors' Most Important Reason for Enrolling in Their MCO (Percentages)						
Sample Group	Most Important Reason for Enrolling in Medicare + Choice Plan					
	Potential for Savings	Plan's Reputation	Network Characteristics	Pre-Medicare Enrollment in Plan	Other Specific Reason	No Specific Reason Given
TOTAL SAMPLE	35	22	5	2	28	9
MANAGED CARE ORGANIZATION						
Medica/Aspen	14	14	4	3	39	26
Kaiser Colorado	16	27	6	3	40	8
Keystone East	42	21	5	2	23	7
SOURCE: MPR telephone survey of 1,657 selected high-risk seniors in three managed care organizations. **NOTE**: In some cases, the percentages for the individual reasons sum to more than 100 percent because of rounding. Data are weighted to reflect the relevant populations in each MCO, including corrections for survey nonresponse.						

The vast majority of our sample of high-risk seniors (85 percent) thought that they had had enough information to select the MCO that would serve them best (Table V.2). There were no important differences among the three organizations on this measure.

TABLE V.2. High-Risk Seniors Who Generally Report Being Informed for Selecting Their MCO (Percentages)	
Sample Group	Had Enough Information About All Available Plans to Pick the Best Ones
TOTAL SAMPLE	85
MANAGED CARE ORGANIZATION	
Medica/Aspen	81
Kaiser Colorado	85
Keystone East	87
SOURCE: MPR telephone survey of 1,657 selected high-risk seniors in three managed care organizations. **NOTE**: Data are weighted to reflect the relevant populations in each MCO, including corrections for survey nonresponse.	

Nevertheless, policymakers might be concerned about the 15 percent of the sample who felt that they had not had enough information to select the best plan. It is particularly troubling that in our sample, the seniors who reported having poor health were more likely to report not having had enough information, although they may not have been in poor health at the time they made their enrollment decision (Appendix Exhibit A.2).[20] Those who had a representative proxy complete the survey (an indication that they were not managing their own medical affairs) or a recent stroke were *less* likely to say they lacked sufficient information. This finding may reflect the active role a representative proxy plays in arranging the care for the sample member. While these results pertain specifically only to our case study MCOs, they suggest that it

[20] The characteristics that predict whether a person lacks sufficient information were identified using a regression analysis that estimated the relationship between all the characteristics shown in Table II.6 and the probability that a person reported not having enough information to choose the best plan. This analysis enabled us to look at the effect of each characteristic while holding all others constant. The regression analysis included only those seniors who live in the community. Seniors who were in nursing homes at the time of the survey were asked a shorter set of questions and thus cannot be included

may be worthwhile for policymakers to pay special attention to ensuring that information is provided to people with poor health. Other studies (Gold and Stevens 2001) suggest that special efforts should target seniors with low education, although we found no independent effect of low education per se on whether a senior reported not having enough information.

B. The Case-Study MCOs Produced High Satisfaction Among High-Risk Seniors

The high levels of satisfaction reported by our sample of high-risk seniors are particularly noteworthy since high-risk seniors generally report relatively low satisfaction with managed care. For example, Nelson et al. (1996) found that:

- While 91 percent of Medicare beneficiaries enrolled in Medicare risk plans said that they would recommend their plan to their families and friends, only 74 percent said they would recommend their plan to someone with a serious or chronic health problem.

- The fraction recommending their plan to someone with a serious or chronic health problem was slightly lower among the high-risk groups identified in that study (70 percent, compared with 74 percent for the full sample). These risk groups includes seniors with advanced age, those with functional limitations, and those who reported their health as only fair or poor (as opposed to good, very good, or excellent).

In addition, Nelson et al. found differences in satisfaction among seniors in different types of MCOs. Specifically, they found that enrollees in plans where the predominant model was group or staff were more likely to recommend their plan to someone else who had serious our chronic health problems (80 percent for group/staff, 71 percent for network, and 74 percent for IPA).

Given these prior findings, we were particularly interested in whether the case study MCOs could generate high satisfaction among high-risk seniors. We wanted to know whether it was feasible for these seniors to receive care under a Medicare + Choice plan in a way that yielded satisfaction levels comparable to the generally high levels observed among Medicare + Choice enrollees. While such a finding says little about the overall performance of managed care for high-risk seniors, it does give policymakers a sense of what is possible.

As noted, our findings suggest that an MCO can indeed generate high satisfaction among a sample of seniors with disabilities and chronic conditions. While there are pockets of dissatisfaction, we found that almost all the high-risk seniors in our sample would recommend their MCO to someone with similar conditions. This finding holds among subsamples defined by their risk-group or impairments, and for all three MCOs.

1. Satisfaction Measures Developed for the Case Studies

Members' reports of their satisfaction with the managed care plan are increasingly used to assess plan quality (National Committee for Quality Assurance 1999; Cleary and McNeil 1988; and Donabedian 1985). While there are other important measures, satisfaction is useful because it captures a person's assessment of the net benefits and costs of the plan. It can also be measured straightforwardly in surveys and does not require collection of clinical information.

We measured overall satisfaction by asking seniors whether they would recommend their MCO to another person with the same conditions (Table V.3). We also measured key components of satisfaction with the MCO network and policies. In particular, we asked about satisfaction with the choice of provider, as the lack of provider choice may be problematic for seniors who have chronic conditions or disabilities that require specialized care. We also included measures of the seniors' confidence that the MCO would provide needed services, as well as of their satisfaction with out-of-pocket costs for medical care.

We also looked at satisfaction with health care providers, including questions about access and the perceived quality of physician care. We included measures of access to the primary care physician, specialist physicians, as well as therapists, because high-risk seniors are likely to see a multitude of providers. Asking only about access to a primary care physician might miss important information about high-risk seniors' experience accessing care. Our measures of perceived quality of physician care include frequency of receiving needed tests and treatments. We also include physician-patient communication, such as satisfaction that the physician explained tests results, treatments, and medications. Physician-patient communication is an important measure of perceived quality for high-risk seniors, as many have chronic problems that require self-treatment regimens and numerous medications. For example, better communication would help ensure that patients and caregivers are sufficiently educated and mindful of the contraindications of their prescriptions.

In addition to questions about satisfaction, we asked the seniors an open-ended question about what they would do if they were dissatisfied with medical care or a service coverage decision. In particular, we identify those high-risk seniors who do not give any concrete action they would take in these instances. Such seniors are of concern because they may be unable to advocate effectively for themselves if they believe their care to be inadequate. As with the seniors who reported not having sufficient information to choose the plan best suited for them, those seniors who do not know how to make their complaints heard represent a potential target for policymakers and plan administrators interested in making managed care work better.

When analyzing differences in member satisfaction among the three MCOs, we control for differences in the characteristics of the seniors enrolled in each organization (Table II.4). We could not control, however, for differences in the practice patterns either

in the three sites or in the benefit packages offered by the MCOs. Thus, the satisfaction differences among MCOs may not be due solely to differences in their operations.

TABLE V.3. Satisfaction Measures
OVERALL SATISFACTION
Would Recommend the MCO to Another Person with Similar Health Condition
SATISFACTION WITH COSTS
Amount of Out-of-Pocket Costs for Medical Care Very satisfied Somewhat satisfied Somewhat dissatisfied Very dissatisfied
Plan Will Pay for Needed Health Care Very satisfied Somewhat satisfied Somewhat dissatisfied Very dissatisfied
SATISFACTION WITH PROVIDERS
Satisfied with Location of Physician's Office
Level of Satisfaction That Can See Primary Care Physician When Wants to Very satisfied Somewhat satisfied Somewhat dissatisfied Very dissatisfied
Amount of Choice with Health Care Providers Very satisfied Somewhat satisfied Somewhat dissatisfied Very dissatisfied
Had Difficulty Seeing Specialist When Wanted to See One
Had Difficulty Seeing Therapist
Frequency Primary Care Physicians Spent Enough Time with Plan Member Never Sometimes Usually Always
Frequency Member Thought Got Needed Tests or Treatments Never Sometimes Usually Always
Frequency Member Involved as Much as Wanted in Care Decision Never Sometimes Usually Always
Frequency Satisfied with Explanations of Test Results, Medications, and Other Treatments Never Sometimes Usually Always
MCO = managed care organization.

2. *Satisfaction with Their MCOs Was High Among Our Sample of High-Risk Seniors*

Overall Satisfaction with the MCO. Our sample of high-risk seniors seemed quite happy with their MCO. Overall, 93 percent reported that they would recommend their MCO to another person with a similar health condition (Table V.4). While there was some variation among the three risk groups (care management, advanced age, and recent hip fracture or stroke) and among the three MCOs, those differences are generally small. The result is not surprising, given that we sought to include in the study only MCOs with good reputations for care delivery.

In addition to asking about whether the seniors would recommend their MCOs, we asked about other MCO features that we expected might be important for high-risk seniors (Table V.5). These include:

- Whether they were satisfied that their MCO would pay for needed health care
- Their satisfaction with their level of out-of-pocket medical expenditures
- Their satisfaction with the choice of providers offered by their MCO
- Their perception of the difficulty involved in changing primary care physicians if they wanted to make a change

TABLE V.4. Percent Reporting Would Recommend the MCO to Another Person with a Similar Health Condition

Sample	Percentage
All High-Risk Seniors	93
Risk Group	
Advanced age	92
Care management	95
Hip fracture/stoke	87
Managed Care Organization	
Kaiser Colorado	93
Keystone East	91
Medica aspen	90

SOURCE: MPR Telephone Survey of 1,657 high-risk seniors in three managed care organizations.
NOTE: The percentages reported by risk group are weighted to reflect the underlying populations. The percentages reported by MCO are adjusted for differences in case mix.

Almost all our sample of high-risk seniors expressed confidence that their MCO would pay for care that they might need. Among the full sample, 73 percent said they were very satisfied, and another 20 percent said that they were somewhat satisfied. Similarly, our sample of high-risk seniors expressed high levels of satisfaction about the amount of money they had to spend out of pocket for health care. On both measures, seniors in the hip fracture and stroke sample were slightly more likely to express dissatisfaction than the seniors in care management or those with advanced age, but the differences were not large.

TABLE V.5. Components of Satisfaction with the MCOs, by Risk Groups				
Satisfaction Measures	**All High-Risk Seniors**	**Seniors of Advanced Age**	**Seniors in Care Management**	**Seniors with Hip Fracture/Stroke**
MCO Will Pay for Needed Health Care				
Very satisfied	73.0	72.5[a]	74.2[c]	67.5
Somewhat satisfied	19.8	20.2	19.5	21.7
Somewhat dissatisfied	3.5	3.7	2.5	4.1
Very dissatisfied	3.7	3.6	3.8	6.7
Amount of Out-of- Pocket Costs for Medical Care				
Very satisfied	67.6	70.9[a]	63.1[b]	62.2
Somewhat satisfied	19.0	16.8	22.7	22.1
Somewhat dissatisfied	7.5	6.8	8.4	7.7
Very dissatisfied	5.8	5.4	5.8	8.1
Amount of Choice with Health Care Providers				
Very satisfied	72.4	72.3	74.6	67.2
Somewhat satisfied	19.5	19.9	17.1	22.6
Somewhat dissatisfied	5.2	4.7	6.2	6.1
Very dissatisfied	2.9	3.1	2.1	4.1
Level of Difficulty Changing Doctors				
Very satisfied	42.6	42.7	42.5	49.4
Somewhat satisfied	19.1	20.2	16.8	25.9
Somewhat dissatisfied	17.1	15.7	19.8	5.9
Very dissatisfied	21.2	21.4	20.8	18.7

SOURCE: MPR Telephone Survey of 1,657 high-risk seniors from three managed care plans.
NOTE: Figures in the table are percentages weighted to reflect the underlying populations.

a. Based on a $\chi 2$ tests, the distribution for seniors of advanced age is significantly different from that of seniors in care management and with hip fracture/stroke at the .01 level.
b. Based on a $\chi 2$ test, the distribution for seniors in care management is significantly different from that of seniors with hip fracture/stroke at the .10 level.
c. Based on a $\chi 2$ test, the distribution for seniors in care management is significantly different from that of seniors with hip fracture/stroke at the .01 level.

We found larger differences among the MCOs with respect to satisfaction with out-of- pocket medical costs (Table V.6). Our sample from Kaiser Colorado had the highest satisfaction with this dimension, with the sample from Keystone East expressing less satisfaction and the sample from Medica/Aspen expressing substantially less. It is impossible to determine the exact reason for this pattern of reported satisfaction with out- of-pocket costs. Our site visits, however, identified a few possible factors. One is the difference in coverage for medications. Kaiser Colorado offered the most comprehensive coverage and Medica/Aspen the least. While the specific benefits differed in many dimensions, a key difference was that Kaiser Colorado's enhanced benefit option offered unlimited coverage for medications (with a small copayment) for a premium of $39 per month (all benefit descriptions correspond to the time of our site visits). In contrast, Medica covered medications only on its most expensive option, which has a premium of $212 per month and which few of its members purchased. Keystone East was in the middle, covering up to $1,500 a year in medication costs with a $5 to $10 copayment (Keystone's coverage closely resembled that provided by Kaiser's basic option). Thus, it seems likely that seniors at Kaiser actually had lower out-of-pocket expenditures for medications and possibly lower out-of-pocket

expenditures overall. The differences in coverage reflect the low Medicare payment rates for Medica, as well as the decisions Kaiser Colorado and Keystone East made about the structure of their benefit plans.

We also noted an interesting difference between the IPA and group model MCOs with respect to sample members' satisfaction with their choice of health providers and with the ease of changing physicians (Table V.6). The sample from Keystone East reported the highest level of satisfaction with overall choice of providers but then expressed substantially lower satisfaction with their ability to change physicians easily.[21] While there are many possible factors that might underlie this finding, our site visits suggested that the differences may stem from variations in the IPA and group models used at the three MCOs. Keystone East offered the largest network, with more than 2,600 primary care physicians and 10,000 specialists. At the same time, many of its primary care physicians practiced alone or with only one other physician. In contrast, the Kaiser Colorado and Aspen MCOs had a limited number of clinics where primary care could be obtained. However, the two group models made it fairly easy to switch among physicians within a clinic. While this explanation fits the general pattern of results, it was hard to understand why sample members at Medica/Aspen reported lower levels of satisfaction with provider choice, since Medica offers a very large provider network in addition to Aspen. We suspect that the sample members at Medica/Aspen may have answered the question of choice only in reference to the Aspen group rather than for the entire Medica system.

TABLE V.6. Satisfaction with Costs, by MCO (Percentages)

Satisfaction Measures	Kaiser Colorado	Keystone East	Medica/Aspen
Very Satisfied Plan Will Pay for Needed Health Care	71.3	71.7	67.4
Very Satisfied with Amount of Out-of-Pocket Costs for Medical Care	74.4	64.8	48.9
Very Easy to Change Doctors	66.1	34.7	55.2
Very Satisfied with the Amount of Choice with Health Care Providers	67.1	72.3	64.2

SOURCE: MPR Telephone Survey of 1,657 high-risk seniors in three managed care organizations.
NOTE: The percentages reported by risk group are weighted to reflect the underlying populations. The percentages reported by MCO are adjusted for differences in case mix.

3. Satisfaction with Providers Was High Among Our Sample of High-Risk Seniors

Satisfaction Among the Full High-Risk Sample. Virtually all (95 percent) our sample of high-risk seniors reported having a primary care physician. While the case study MCOs assigned all their members to a primary care physician, some seniors may

[21] While the fraction who were *very* satisfied with provider choice varied among the MCOs, we found virtually no difference in the percentage of our sample who reported *dissatisfaction* with choice. Thus, the differences among MCOs pertain to the distinction between being very satisfied and somewhat satisfied.

not remember their physician. Also, at any one time, a few seniors are probably in the process of changing physicians. The rates observed for our sample of seniors are slightly higher than for all Medicare beneficiaries. For example, while 95 percent of our sample reports having a primary care physician, only 91 percent of community-resident Medicare beneficiaries in 1998 reported that they had a usual source other than an emergency room or hospital outpatient department, and 92 percent of those in poor health had such a source of usual care (Health Care Financing Administration 2001; Tables 5.1 and 5.10). Results for our high-risk sample are just below those found for all Medicare beneficiaries in risk plans during 1998, when almost 97 percent of all beneficiaries in risk plans reported having a usual source of care other than an emergency room or hospital outpatient department (Health Care Financing Administration 2001; Table 5.13).

We asked those sample members who reported having a primary care physician a series of questions about their ability to obtain care from that physician and about aspects of the quality of the care provided. In general, only a few high-risk seniors in our sample reported difficulty accessing their primary care physician (Table V.7). Ninety-six percent of them were satisfied with the location of their physician's office. Similarly, 96 percent reported being very or somewhat satisfied that they can see their primary care physician when they want. Only one percent report being very dissatisfied in that area.

The satisfaction rate among our sample of high-risk seniors compares very favorably with estimates for the broader Medicare population, even though slight differences in question wording make comparisons imprecise. For example, 95 percent of community-resident Medicare beneficiaries surveyed in the 1998 Medicare Current Beneficiary Survey reported being satisfied with the ease of access to their physician's office (Health Care Financing Administration 2001). This figure is approximately equal to the 96.4 percent of our high-risk sample who reported satisfaction with the location of their primary care physician's office.

Satisfaction with access to specialists and therapists was also high, although there was more dissatisfaction in this area than there was with primary care physicians. We assessed access to specialists by comparing the number of sample members who said they had difficulty seeing a specialist with the number who had either actually seen a specialist or indicated that they wanted to see one but could not. Access to therapists was measured similarly. Overall, we found that about 61 percent of the full sample either saw or wanted to see a specialist in the six months prior to the interview (for seniors in the hip fracture and stroke sample, we asked about the time since they left the hospital). Of those, six percent reported having difficulty seeing a specialist. There was less use of therapists in our sample, but about the same level of reported access difficulties (23 percent of the sample saw a therapist, and of those, 11 percent reported difficulty).

TABLE V.7. Member Satisfaction with Providers Among All Seniors and by Risk Group				
Satisfaction Measures	**All High-Risk Seniors**	**Seniors of Advanced Age**	**Seniors in Care Management**	**Seniors with Hip Fracture/Stroke**
Satisfied with Location of Primary Care Physician's Office	96.4	96.8	95.7	Not Asked
Level of Satisfaction That Can See Primary Care Physician When Wants to				
Very satisfied	82.7	80.6	87.9	77.6
Somewhat satisfied	13.1	14.9	9.0	14.7
Somewhat dissatisfied	3.2	3.6	2.2	4.6
Very dissatisfied	1.0	0.9	0.8	3.1
Fraction Reporting Problems Among Those Who Wanted a Specialist[a]	5.9	5.5	6.0	9.1
Fraction Reporting Problems Among Those Who Wanted a Therapist[a]	11.0	11.9	9.7	10.0

SOURCE: MPR Telephone Survey, of 1,657 high-risk seniors from three managed care plans.
NOTE: Figures in the table are percentages weighted to reflect the underlying populations. Some subgroup percentages do not sum to 100 percent because of rounding. A total of 31.0 percent of all high-risk seniors have a physician who is a geriatrician or specializes in treating seniors. All physician satisfaction measures are defined only for enrollees who have a physician.

a. The percentage wanting to see a specialist is defined as those who actually saw a specialist plus those who did not report seeing a specialist but did report a problem seeing one. The percent wanting to see a therapist was computed similarly.

In addition to general access questions, we asked about the sample members' satisfaction with their primary care physicians and other health care professionals (Table V.8). We asked about the frequency with which:

- Health professionals spent enough time with the sample member during appointments
- The sample member received tests or treatments he or she thought necessary
- The sample member was adequately involved in care-planning decisions
- Health professionals fully explained test results, medications, and treatments

Approximately 80 percent of the high-risk seniors in our sample reported that their physicians and other health professionals met these criteria always or usually. At the same time, there is some dissatisfaction: for each of the measures, 5 to 15 percent of our sample reported that their physician *never* met that criterion. This dissatisfaction is mirrored in the findings from our focus groups with primary care providers. Most providers spoke of the need to have extra time for dealing with some high-risk seniors, particularly those with multiple chronic conditions or communication difficulties, and having trouble always finding that extra time.

TABLE V.8. Satisfaction with Provider Interactions, by Risk Group[a] (Percentages)				
Satisfaction Measures	**All High-Risk Seniors**	**Seniors of Advanced Age**	**Seniors in Care Management**	**Seniors with Hip Fracture/Stroke**
Frequency Physicians Spent Enough Time with Plan Member***				
Always	60.6	58.3	64.7	61.3
Usually	19.3	20.3	16.8	20.2
Sometimes	12.0	12.4	11.8	12.8
Never	8.2	9.0	6.8	5.7
Frequency Member Thought Got Needed Tests or Treatments***				
Always	66.5	64.1	72.7	58.8
Usually	15.5	16.2	13.0	19.0
Sometimes	8.0	8.5	6.3	12.7
Never	10.0	11.2	7.9	9.6
Frequency Member Involved as Much as Wanted in Care Decision***				
Always	54.7	51.4	60.8	57.2
Usually	15.1	15.5	14.0	16.3
Sometimes	15.9	17.7	11.9	17.8
Never	14.4	15.3	13.3	8.7
Frequency Satisfied with Explanations of Test Results, Medications, and Other Treatments***				
Always	66.3	64.0	71.0	62.6
Usually	19.3	20.3	17.7	18.5
Sometimes	9.5	10.5	6.7	15.3
Never	4.9	5.2	4.5	3.6

SOURCE: MPR Telephone Survey of 1,657 high-risk seniors from three managed care plans.
NOTE: Subtotals do not sum to totals because of rounding. Data are weighted to reflect the relevant populations in each MCO, including corrections for survey nonresponse.

a. These satisfaction measures pertain only to the 95 percent of sample members who reported having a primary care provider.

** A $\chi 2$ test indicates that the differences among risk groups are statistically significant at the .05 level.
*** A $\chi 2$ test indicates that differences among risk groups are statistically significant at the .01 level.

The problem a few seniors have in getting information from their providers is also illustrated in data from the 1998 Medicare Current Beneficiary Survey (Health Care Financing Administration 2001; Table 5.2). The survey found that approximately 5 percent of beneficiaries were dissatisfied with the information their physicians gave them about their illnesses and conditions. This is generally consistent with our data that show 5 percent of the high-risk seniors in our sample report never being satisfied with their physician's explanations of test results, medications, and other treatments. While the proportion of seniors reporting problems is relatively small, the lack of accurate and complete information could have serious consequences, particularly for the high-risk seniors.

Satisfaction Patterns Among the Risk Groups. Our sample of seniors with a recent hip fracture or stroke reported lower overall satisfaction with their MCO than did the advanced age or care management sample (Table V.4). Correspondingly, they tended to have lower reported satisfaction on other measures. For example, they tended to be less satisfied that their MCO would pay for needed medical care and with their out-of-pocket medical expenses (Table V.5). They also seemed less confident that they could see a physician when they wanted to and reported a higher level of problems seeing a specialist (Table V.7). However, the differences are generally not large, and all the measures record at least 75 percent either somewhat or very satisfied. Our focus

group discussions suggest that part of the explanation for this pattern is that these seniors receive a lot of care from many providers. This organizational complexity presents more situations where problems may arise. Several of our focus group participants with hip fractures or strokes reported that their care was so complex that they needed to have an advocate or adviser to help them obtain the care they needed. Another part of the explanation is that all the seniors in the hip fracture and stroke sample had experienced a recent and severe illness, while many of the advanced-age sample members and some of the care management sample members had required relatively little care recently. Finally, that seniors who had hip fracture or stroke are less satisfied than seniors of advanced age is one indication that high-risk seniors can experience more difficulty than other seniors accessing care, owing a to greater need and urgency for appointments among multiple providers (primary care physicians, specialists, and therapists).

Satisfaction Differences Among the MCOs. MCO differences in satisfaction with care providers suggest that the experience of high-risk seniors in managed care depends on the structure of benefits, care delivery, and other MCO idiosyncrasies. Members in the three MCOs differed on some measures of satisfaction with provider access (Table V.9). There were no MCO differences in satisfaction with physician location or with difficulty seeing a specialist. The largest difference between MCOs in provider access was in the proportion of members who reported being very satisfied that they could see the physician when they wanted to. The proportion of Aspen members and Keystone East members reporting being very satisfied with their ability to see their physician when they wanted substantially exceeded the proportion of Kaiser Colorado members who reported such satisfaction (80 percent for the Aspen sample, 85 percent for Keystone East, and only 65 percent for Kaiser Colorado).

TABLE V.9. Satisfaction with Providers Among Seniors Who Reported Having a Primary Care Physician

Satisfaction Measures	Kaiser Colorado (Percent)	Keystone East (Percent)	Medica/Aspen (Percent)
Satisfied with Location of Primary Care Physician's Office	96.8	95.8	95.4
Very Satisfied that Can See Primary Care Physician When Wanted	64.9	85.1	80.4
Had Difficulty Seeing Specialist When Wanted to See One	7.8	7.1	6.1
Had Difficulty Seeing Therapist When Wanted to See One	8.5	11.1	5.5

SOURCE: MPR Telephone Survey of 1,657 high-risk seniors from three managed care plans.
NOTE: All measures have been adjusted for case mix.

a. These satisfaction measures pertain only to the 95 percent of sample members who reported having a primary care provider.

It is possible that the difference in members' confidence that they could see their physician reflects Kaiser Colorado members' difficulty using an automated telephone

appointment system. Virtually all the seniors who participated in our focus group at Kaiser Colorado expressed strong dissatisfaction with this system.[22]

Despite the difference in satisfaction with getting appointments, there were essentially no differences among the MCOs with respect to sample members' satisfaction with the quality of care they received (Table V.10). More than half of the high-risk seniors we interviewed at all three MCOs reported the highest level of satisfaction with respect to appointment length; getting needed tests; involvement in care decisions; and explanation of tests, medications, and treatments. Interestingly, sample members from Kaiser Colorado were often the least likely to report the lowest level of satisfaction (these estimates are not shown in the tables). For example, only 16 percent of Kaiser Colorado members thought their physician spent too little time with them, a figure that was as much as six percentage points higher for the other two MCOs. Similarly, the proportion of Kaiser Colorado members who reported never getting needed tests or treatments was only 3 percent, in comparison to 10 percent for Keystone East and 8 percent for Aspen.

TABLE V.10. Satisfaction with Provider Interactions, by MCO[a] (Percentages)

Satisfaction Measures	Kaiser Colorado (Percent)	Keystone East (Percent)	Medica/Aspen (Percent)
Physicians Always Spent Enough Time with Plan Member	60.9	59.8	59.5
Always Thought Got Needed Tests or Treatments	64.7	64.7	64.8
Always Involved as Much as Wanted in Care Decision	54.5	55.7	57.5
Always Satisfied with Explanations of Test Results, Medications, and Other Treatments	60.7	66.0	62.3

SOURCE: MPR Telephone Survey of 1,657 high-risk seniors from three managed care plans.
NOTE: Data are weighted to reflect the relevant populations in each MCO, including corrections for survey nonresponse.

a. These satisfaction measures pertain only to the 95 percent of sample members who reported having a primary care provider.

In general, the lack of large systematic differences among the MCOs with respect to seniors' satisfaction with physicians reflects the absence of any difference in their satisfaction with their plans in general. Our overall sense was that the case study MCOs managed to arrange for care in a way that produced satisfaction levels at least equal to those observed in the entire Medicare population. There were a few differences among

[22] The automated system was designed to get members the first available appointment, even if that appointment was not with the member's regular primary care physician. Furthermore, the system was understaffed early in its operation, which resulted in longer wait times for a response. Since our site visits, Kaiser Colorado has changed the system to give members a choice of the first available appointment or the first appointment with their physician.

the case study MCOs, but nothing that would indicate that one model provided care that was systematically different from that provided by the others.

4. A Substantial Fraction of Our Sample of High-Risk Seniors Seemed Unsure of How to Resolve Problems with Care

If they had been dissatisfied with their care, many high-risk seniors in our sample did not know what recourse they would take (Table V.11). When asked an open-ended question about what they would do if dissatisfied with medical care or service coverage decisions, more than one in five sample members said they did not know. In addition, a sizable number gave fatalistic or vague courses of action, including one fellow who said that if his medical care was bad, he would "just get sick and die." Combining these two types of responses, 33 percent could not state a concrete course of action if they were dissatisfied with medical care, and 46 percent did not site a concrete action to take if they were unhappy with service coverage decisions. Among the seniors who had a plan, most would complain to their physician or directly to the MCO. Only a few (six percent) would change MCOs over dissatisfaction with medical care, and nearly no one would change MCOs over dissatisfaction with service decisions.

TABLE V.11. Seniors' Reported Actions to Address Dissatisfaction: Overall and by Risk Group

Action Measures	All High-Risk Seniors	Seniors of Advanced Age	Seniors in Care Management	Seniors with Hip Fracture/ Stroke
If Dissatisfied with Medical Care, Most Common Action Would Take				
Contact physician	11.8	11.3	13.2	11.0
Complain to plan	18.7	19.0	16.5	26.6
Change plan	6.1	6.0	6.8	2.9
Other vague actions	9.4	9.7	9.0	8.7
Does not know	23.1	25.7	19.4	14.6
If Dissatisfied with Service Coverage Decision, Most Common Action Would Take				
Contact physician	4.1	4.2	4.0	2.7
Complain to plan	24.2	23.5	24.1	32.0
Change plan	0.2	0.0	0.7	0.3
Other vague actions	15.9	16.1	14.9	14.5
Does not know	29.9	32.9	25.9	18.0

SOURCE: MPR telephone survey of 1,657 selected high-risk seniors in three managed care organizations.
NOTE: Because of rounding, subtotals do not sum to totals. Data are weighted to reflect the relevant populations in each MCO, including corrections for survey nonresponse.

There are, however, noteworthy differences by risk group in actions in response to dissatisfaction with medical care and service coverage decisions. Beneficiaries with hip fracture or stroke were more likely to contact their plan if dissatisfied and less likely to say they did not know what to do than were seniors in our other sample groups. For example, whereas 26 percent of the seniors in our advanced-age group did not know what to do if dissatisfied with medical coverage, only 15 percent of seniors with hip fracture reported that they did not know. There was a similar pattern of differences with respect to not knowing how to respond to dissatisfaction with coverage decisions.

Based on our site visits, we identified two possible reasons for this difference in knowing concrete steps for addressing dissatisfaction. First, seniors who had a hip

fracture or stroke may have more interactions with physicians and other care providers, which might give them more experience with complaint processes. Second, many seniors in the other groups had relatively few contacts with providers, and most expressed great satisfaction with their care. As a result, they may have had no experience with complaints and had never bothered to identify effective complaint methods.

There are some differences across MCOs in the actions that members would take over dissatisfaction with medical care and coverage decisions (Table V.12). Kaiser Colorado members were the least likely to contact the physician and the most likely to contact their plan if dissatisfied with medical care. This may reflect the Kaiser members' perception of health providers as an extension of the MCO. Only six percent of Kaiser Colorado's members would contact their physician--six to eight percentage points lower than the proportion of members in Keystone East and Aspen. The same general pattern holds for responding to dissatisfaction with service coverage decisions.

TABLE V.12. Seniors' Reported Actions to Address Dissatisfaction, by MCO

Action	Kaiser (Percent)	Keystone (Percent)	Medica/Aspen (Percent)
If Dissatisfied with Medical Care, Most Common Action Would Take			
Contact physician	5.94	13.79	12.12
Complain to plan	23.57	19.28	17.59
Change plan	4.54	6.57	2.10
Does not know	22.11	20.30	24.48
If Dissatisfied with Service Coverage Decision, Most Common Action Would Take			
Contact physician	1.66	4.11	5.79
Complain to plan	22.78	27.11	20.51
Change plan	0.01	0.69	0.01
Does not know	30.51	25.49	29.34

SOURCE: MPR telephone survey of 1,657 selected high-risk seniors in three managed care organizations.
NOTE: Because of rounding, subtotals do not sum to totals. Data are weighted to reflect the relevant populations in each MCO, including corrections for survey nonresponse.

Very few members of any MCO would change MCOs over dissatisfaction with medical care, and virtually no one would change MCOs over dissatisfaction with service coverage decisions. At seven percent, Keystone East members are the most likely to report they would change MCOs. Fewer members from Kaiser Colorado (five percent) and Aspen (two percent) report that they would change MCOs over dissatisfaction with service coverage decisions. This pattern may reflect the fact that changing MCOs would mean changing physicians for all Kaiser members and many Aspen members. Such an action would be unexpected for high-risk seniors, who generally value continuity of care. The pattern also seems likely to reflect the availability of alternative MCOs that offer similar benefit packages and premiums in the Philadelphia market served by Keystone East. Thus, Keystone members could, in many cases, change plans while keeping their physician and maintaining their benefits.

There are no MCO differences in the proportion of members who report not knowing how to handle dissatisfaction with medical care or service coverage decisions.

Despite differences in the structure of care delivery and benefit packages, more than one in five high-risk seniors report not knowing what they would do. This suggests a problem that is common among high-risk seniors and not related to specific types of plan features, at least for our small set of well-regarded MCOs.

We found that seniors who were more than 85 years old were substantially less likely to give a concrete plan for addressing dissatisfaction with medical care (Appendix A, Table A.2). In contrast, those with some college education and those for whom a representative proxy answered our survey were more likely to have such plans. (These findings are based on a regression analysis that looks at the effect of each characteristic while controlling for any effects of the variables listed in Table II.6.) This suggests that special efforts may be required to help enable seniors with advanced age. The representative proxies appear to help address information needs, since they were also less likely to report having insufficient information for selecting the best managed care plan.

C. Seniors' Perception of Care Management

Care management was the most noteworthy innovation fielded by the case study MCOs. In general, the MCOs used their care management programs to assess the needs and capabilities of seniors with high risks for adverse health and functioning outcomes. The assessments, which often included home assessments, were followed by efforts to coordinate care delivered by the MCO network. The care managers also referred seniors to community- based social service agencies when they needed assistance and services beyond what was covered in the MCO's Medicare benefit package. In making referrals, the care managers typically followed up to see that seniors had met with the service agencies and that efforts to meet their needs were under way.

While there were many similarities, there were also some important differences among the MCOs' care management programs. In particular, care management at Kaiser Colorado and Aspen took advantage of their clinic-based approach to primary care. Care managers at these organizations were located in the clinics, where they could interact with physicians and patients on a face-to-face basis as well as by telephone. In contrast, Keystone East's care managers used the telephone exclusively to contact seniors, although they could order home health visits to assess seniors' home situations and deliver some medical social work services.

These care management efforts went beyond the basic Medicare benefit package, but they were also more limited than some of the models put forth to assist high-risk seniors. They included some efforts at patient education and advocacy, but those efforts were limited by the general short-term nature of the programs. Kaiser Colorado usually completed its case management episodes within 6 weeks, and Aspen generally completed its in 12. Keystone seemed to take longer but delivered care management only over the telephone, and its care managers had higher caseloads than those of the

other two organizations. In contrast, many prior care management demonstrations and literature include longer-term advocacy and monitoring as part of their service package (Chen et al. 2000).

In assessing the care management experiences of our sample of high-risk seniors, we first noted that the three MCOs where we conducted the survey differed in the fraction of elderly Medicare beneficiaries they enrolled in care management. Also, the characteristics of the care-managed seniors differed substantially among those MCOs. Second, we noted that many of the seniors whom we knew to have been enrolled in care management did not know that they had a care manager at the time of our survey. This appears to reflect both a lack of salience of care management and the fact that some seniors may have received their major care management services months before we interviewed them. Third, we found that those seniors who knew they had a care manager were generally quite satisfied with the assistance the manager provided. However, almost none of them would contact their care manager for help resolving problems with medical care or coverage decisions. Finally, we asked the seniors who did not know they had a care manager whether they would want one and if so, whether they would be willing to pay for such a service. These questions revealed a substantial demand for care management. Thus, from the perspective of the high-risk seniors in care management, the help provided by their MCO generates some benefits but also leaves some demands unfilled.

1. The Case-Study MCOs Differed in the People They Enrolled in Care Management

The populations enrolled in care management differ systematically between Keystone East and the other two organizations, Aspen and Kaiser Colorado. Based on an analysis of the characteristics of the seniors included in our care management sample (who were identified from care management enrollment lists provided by the MCOs), we found different rates of enrollment among the organizations. Keystone East enrolled approximately five percent of its Medicare enrollees into its care management program, while the other two organizations enrolled less than three percent (Table V.13). This differential targeting is seen in the characteristics, health, and functioning levels of the seniors enrolled in care management at the three organizations. In particular, we noted the following substantial differences:

- Seniors in care management at Keystone East are, on average, younger, more likely to be a racial/ethnic minority, less educated, and less likely to live alone than the seniors in care management at the other organizations.

- Seniors in care management at Kaiser Colorado were more likely to have functional limitations than care-managed seniors at the other organizations.

- Among the Kaiser Colorado care management sample, 20 percent had dementia or related impairments. This is more than twice the fraction in the care management samples at the other organizations.

TABLE V.13. Enrollment in Care Management at the Case-Study MCOs			
	Aspen Medical Group	**Kaiser Health Plan of Colorado**	**Keystone East Health Plan**
Medicare + Choice Population	13,000	38,400	102,000
Beneficiaries for Whom Care Management Was Available[a]	13,000	11,000	102,000
Beneficiaries Enrolled in Care Management[b]	272	360	5,070
Fraction of Beneficiaries Enrolled in Care Management	2.1	3.3	5.0

SOURCE: Information collected during the site visits and from the lists of members in care management supplied by the three MCOs (Stapulonis et al. 2001).

a. At the time of our site visit, Kaiser Colorado provided care management in only two clinics.
b. The figures shown are the number of seniors included on the lists of seniors in care management that were supplied by each MCO. Some of the seniors on the list may no longer have been receiving active care management services. Stapulonis et al. (2001) provide details of the specific time periods covered by the care management lists.

Because of these differences, we make comparisons only among the three MCOs on the basis of regression-adjusted means. This is the same method used throughout this report for comparing MCOs. It provides estimates that describe the care management programs as if all MCOs served seniors with the same characteristics (see Table II.6 for a list of the characteristics for which the regression controls).

2. Many Seniors Were Unaware That They Had Been Enrolled in Care Management

Many people in our care management sample seemed to be unaware that they were in care management. Even though this sample of seniors was selected from MCO-provided lists of members in care management, only 21 percent knew that they had a care manager from their MCO (Table V.14). This fraction varied from 19 percent at Keystone East to about 40 percent at Aspen and Kaiser.

TABLE V.14. Percentage of Sample Members in Care Management Who Knew They Had a Care Manager				
Measure of Whether Sample Members Knew They Had a Care Manager	**All MCOs**	**MCO**		
		Aspen	**Kaiser Colorado**	**Keystone East**
Reported Having a Care Manager from Their Plan	21.4	40.1	36.3	19.3
Reported Having a Care Manager from Outside Their Plan	9.7	11.6	7.3	9.8
Reported Any Care Manager	28.1	45.5	40.1	26.3

SOURCE: Telephone survey of 740 seniors selected from MCO-provided lists of members in care management. The interviews were conducted between March and December 1999 by MPR.
NOTE: Values are percentages, with standard errors in parentheses.

Because there may have been confusion about whether the care manager worked for the MCO, we also asked if sample members had a care manager from outside their plan. This was particularly important for sample members from Aspen, where the care managers were part of the medical group, not the Medica plan. An additional 10 percent of the sample members reported such a care manager. When responses to both questions are combined, they indicate that only 28 percent of the seniors in the care management sample knew that they had a care manager.

The fact that many seniors were unaware that they were in care management reflects, in part, the timing of the survey. In particular, the care management samples for Kaiser Colorado and Keystone East were drawn from a list of seniors who had been in care management at some time during the first three quarters of 1998. The Aspen program had been initiated more recently, so the sample included seniors who had received care management services from November 1998 through February 1999. The interviews were conducted from March to December of the following year. Because of this timing, many of the seniors may have received the bulk of their care management services well before they were interviewed. With the amount of care these seniors receive, it is not surprising that they did not remember the earlier care management services.

The organizationally complex care may also make it difficult for care managers to stand out from all the other providers who work with high-risk seniors. These seniors receive care from their primary care physician, specialists, therapists, nurses, community-agency staff, and the office staffs of these providers. Each care manager at the case-study MCOs was a nurse and may have appeared to the seniors as just another nurse who was working with their physician. This suggests that it can be hard to make care management salient among high- risk seniors unless the care managers have the time to build a personal relationship with their patients. In our focus groups with seniors in care management, many of the seniors remembered getting help from a nurse and often associated that nurse with the MCO. They did not, however, think of that nurse as someone who could provide ongoing help or someone to call if they had a problem with care coordination or access. However, this does not mean that care management was never salient to the seniors. Many of the seniors in our care management focus group at Kaiser Colorado spoke in very positive terms about their care manager, whom they knew by name and cited as the answer to most of the access or coordination problems that might arise.

The differences in the MCOs' care management programs probably accounts for some of the differences among MCOs in the fraction of seniors who knew they were in care management. After our site visits and focus groups, we felt that the clinic-based care management programs operated by Aspen and Kaiser Colorado were more likely to promote a close relationship between care manager and senior. This is borne out by the data: seniors in our care management sample were about twice as likely to know they were in care management at these two MCOs as they were at Keystone East.

Also, the lower recognition rate at Keystone East may reflect the higher caseloads at that site (Table V.15). In addition, Keystone East care managers only contacted seniors by telephone; different nurses from a home care agency made any home visits. Thus, seniors at this MCO would have had less direct contact with their care manager and, correspondingly, would be expected to have less of a sense of being in active care management.

TABLE V.15. Care Management Caseloads at the Case-Study MCOs

	Aspen Medical Group	Kaiser Health Plan of Colorado	Keystone Health Plan
Approximated Care Manager Caseload	70	50	130

SOURCE: Information collected during the site visits to the three MCOs

Finally, there are a few general reasons why care managers may not be salient to seniors in care management. These include:

- At group models, the care managers and primary care physicians are more likely to think of each other as a team. This may promote the perception among seniors that the nurse care manager is only an extension of the primary care physician rather than someone who can provide direct assistance on a wide array of issues

- In contrast, at IPAs the MCO may have to avoid creating an impression that they are interfering with the care provided by network physicians. Therefore, the MCO's care managers may actively seek to remain in the background.

- In some IPAs the primary care physicians may be contractually required to managed care for patients. If the MCO feels that those physicians are not doing as well as they could, they may not want to embarrass them by having highly visible care managers working with patients.

Nevertheless, some care management programs can produce salience, even with a time- limited care management intervention. Some programs have achieved nearly 100 percent familiarity with care managers' names among the seniors served by the program, even when the average length of stay was under 75 days (Aliotta 2001). Those programs feel that a key factor in promoting salience is the extent to which the program makes it a priority to have care managers develop a close relationship with the seniors.

3. General Perceptions of Care Management

Among those seniors who knew they had a care manager from their plan, most were satisfied with the help they received and generally agreed that their care manager knew enough about them to plan care effectively (Table V.16). At the same time, less than half these seniors knew the name of their care manager, a measure we used to capture the closeness of the relationship between a senior and care manager.

Furthermore, only four percent would contact their care manager if dissatisfied with medical care or with the plan's coverage decisions.

While seniors in all three risk groups had the same general pattern of results, the group with a recent hip fracture or stroke differed in a couple of noteworthy ways. First, they were more likely to know their care manager's name. With the high level of care this group receives, this greater familiarity may reflect a higher level of interaction with their care manager for this group (care management satisfaction questions for the hip fracture and stroke sample pertained only to the time since the fracture or stroke). Also, seniors in this group who did not know they had a care manager were substantially more likely to say that they wanted one. This is likely to reflect the organizationally complex care received by seniors with hip fractures or strokes. In our focus groups with these seniors, several mentioned the value of having an advocate who could help them obtain all the required care and to perform all the self-care required for a good recovery. In most cases, these focus group participants said family members had filled this role, but it was easy to see how a care manager would make the process easier for the seniors and their families.

TABLE V.16. Satisfaction with Care Management Among Seniors Who Report Having a Care Manager: All Seniors and by Risk Group

Satisfaction Measures	All High-Risk Seniors	Seniors with Advanced Age	Seniors in Care Management	Seniors with Hip Fracture/Stroke
Gets Enough Help from Plan Care Manager	91.7	90.8	90.9	Not Asked
Agrees Plan Manager Knows Enough About Personal Situation to Plan Care Effectively				
Strongly agree	64.8	63.9	67.0	66.8
Somewhat agree	22.9	22.0	23.5	24.1
Somewhat disagree	6.0	6.2	6.5	6.2
Strongly disagree	6.3	7.8	3.0	3.0
Knows Plan Care Manager's Name	55.4	58.0	49.3	63.3
Would Contact Care Managed if Dissatisfied with Medical Care	2.1	1.9	2.4	2.2
Would Contact Care Manager if Dissatisfied with Service Coverage Decision	1.7	1.2	2.6	2.3
Would Like to Have Care Manager, Among Those Lacking a Care Manager	23.8	22.3	24.0	39.5

SOURCE: MPR Telephone Survey of 158 high-risk seniors who reported having a care manager from their plan.
NOTE: Figures in the table are percentages weighted to reflect selection probabilities and survey nonresponse. A total of 22.0 percent of all high-risk seniors have a plan care manager, and 8.1 percent have a care manager outside the plan.

There was no significant pattern of differences among MCOs with respect to satisfaction with care management (Table V.17) Thus, while care management may have been more salient among the seniors at Aspen and Kaiser Colorado, all three MCOs produced equivalent levels of satisfaction among those seniors who realized they had a care manager.

TABLE V.17. Satisfaction with Care Management, by MCO			
Satisfaction Measures[a]	**Kaiser Colorado (Percentage)**	**Keystone East (Percentage)**	**Aspen (Percentage)**
Gets Enough Help from Plan Care Manager	87.57	92.59	96.03
Strongly Agrees Plan Manager Knows Enough About Personal Situation to Effectively Plan Care	67.17	62.12	58.02
Knows Plan Care Manager's Name	57.49	54.79	61.39
Would Contact Care Manager if Dissatisfied with Medical Care	1.82	2.48	1.68
Would Contact Care Manager if Dissatisfied with Service Coverage Decision	1.91	2.04	1.71
Would Like to Have Care Manager, Among Those Lacking a Care Manager	35.21	29.06	31.41

SOURCE: MPR Telephone Survey of 1,657 high-risk seniors from three managed care plans.
NOTE: All measures have been adjusted for case mix.

a. Unless stated otherwise, all care manager satisfaction measures are defined only for enrollees who have a plan care manager.

D. Summary

Overall, we found that the case study MCOs produced very high levels of satisfaction among a group of high-risk seniors. This is consistent with our efforts to study MCOs with strong reputations. It also contrasts sharply with prior findings for the Medicare + Choice program, where these seniors have traditionally reported lower-than-average satisfaction. Thus, the case study shows that MCOs can produce strong results for this group.

In looking at some of the factors that influence overall satisfaction, we noted instances where the benefit package and the structure of an MCO's physician network made a difference in plan members' experience. Many high-risk seniors in our sample, like many managed care enrollees in general, enrolled to save money. Savings arise because the MCOs' Medicare contracts often covers things for which the beneficiary would have to pay in the fee-for-service sector, including co-payments for hospital care and in some cases prescription medications. In our sample, we saw somewhat lower satisfaction with out-of- pocket medical expenses among the seniors at Aspen. The Aspen sample was enrolled in the Medica Health Plan, which received lower Medicare + Choice rates than Keystone East or Kaiser Colorado. As a result, the benefit and premium package Medica offered was not substantially different from that available to seniors who had fee-for-service Medicare and a supplemental policy. We also found evidence that seniors were more satisfied with their choice of providers in Keystone East, an IPA with a very large network, than in the two group models.

While the seniors in our sample seemed happy with their choice of plans, sizable minorities had no concrete plan for addressing dissatisfaction with medical care or

coverage decisions. Some of the lack of information may be a product of their generally high satisfaction levels. Seniors who are happy with their care and coverage may not bother to find out how to file a complaint effectively. Nevertheless, to the extent that these groups represent a broader population in all Medicare + Choice program, policymakers should consider way to promote their access to information and their ability to act on that information.

We also noted that the care management offered by the case study MCOs was often not salient to seniors. This does not mean that the care management was ineffective in coordinating care, but it does imply that the care management program will not be a major ongoing source of information, monitoring, and advocacy for the seniors. Less than half the seniors who were identified on MCO-provided lists as having been enrolled in care management said that they knew they were in care management. This lack of salience probably reflects the focus of the MCOs' care management programs, which emphasized short-term assessment, care coordination, and referral to community-based service agencies. Given this structure, it is not surprising that many of the seniors did not remember their prior care management at the time we interviewed them. The lack of salience also reflects the difficulty in getting the care manager to stand out from the mix of other nurses and providers who care for the high-risk seniors.

In general, the levels of satisfaction were high among all three of our risk groups, seniors with advanced age, seniors in care management programs, and seniors with a recent hip fracture or stroke. However, seniors with a recent hip fracture or stroke tended to be somewhat less satisfied on some measures, although most of those differences were not statistically significant. In the next chapter, we examine the experiences of this group and the ways in which the MCOs attempted to meet their organizationally complex care needs.

VI. MANAGED CARE EXPERIENCES OF SENIORS WITH RECENT HIP FRACTURE OR STROKE

Among high-risk seniors, those with a recent cerebrovascular accident (CVA, or stroke) or hip fracture represent a particularly relevant group in the study of organizationally complex care. Both conditions trigger a cascade of events that can lead to multiple transitions between home, hospital, and institutional settings and involve treatments from many providers. While both conditions are precipitated by acute events, they often lead to long- term disabilities. In addition, the nature of their treatment shifts over time, beginning with an emphasis on acute medical care because of a sudden, catastrophic event, and shifting to an emphasis on chronic therapy, rehabilitation, and in some cases, long-term custodial support. Managed care organizations (MCOs) appear to offer opportunities to reduce the medical costs of this care while still producing outcomes comparable to those observed in the Medicare fee-for-service sector (Retchin et al. 1997; and Kramer 1996). They may also be able to foster access to community-based social services that can promote functioning and independence for seniors with one of these conditions.

CVAs are common, life-threatening events among elderly people, and they can lead to chronic disabling consequences (Alter et al. 1986). With disability and loss of health status following the acute event, patients with CVAs often lose their functional independence and require institutionalization. Thus, the post-acute rehabilitation of patients with CVAs, and the subsequent optimization of functional status, is of paramount importance to these patients. While the urgency of hospitalization arises from the need for diagnostic specificity, stroke patients frequently require expensive resources for post-hospital care. There is also some evidence that post-hospital services have been performed less often, or less intensively, for some MCO patients with strokes (Retchin et al. 1994). This has led to concern that this type of decline in service, or other restraints on clinical care that may result from financial disincentives, could lead to reduced functional recovery for beneficiaries with CVAs (Webster and Feinglass 1997).

Hip fractures are associated with the highest and most well-defined rates of morbidity and mortality among all fractures related to osteoporosis and falls. Not only are they costly to treat, but the overall burden of illness due to these fractures could grow as a result of the increasing prevalence of osteoporosis and the rising incidence of falls among seniors. The lifetime risk of a hip fracture is 16 to 18 percent among white women and 5 to 6 percent among white men. At the age of 80 years, approximately 20 percent of women have suffered a hip fracture (Kannus et al. 1996). The burden of illness for those with hip fractures is large. Many have prolonged rehabilitative stays, on average greater than two months in specialized units (Schurch et al. 1996). Mortality is high, with one-year mortality estimated at approximately 24 percent. Only 50 percent of patients with hip fractures regain the mobility and independence they enjoyed 12 months earlier Costs are also high, especially during the first year (Johnell 1997). The

largest costs are attributable to hospitalizations, nursing home stays, and rehabilitation services (Brainsky et al. 1997). Total U.S. health care expenditures attributable to osteoporotic fractures in 1995 were estimated at $13.8 billion, of which approximately 63 percent were attributable to hip fractures (Ray et al. 1997), and these costs are likely to continue to rise. Within 50 years, the cost of hip fractures alone in the United States has been estimated to exceed $240 billion (Lindsay 1995).

As in many other areas, we found that our case studies of the four MCOs revealed a number of innovations used by patients with a stroke or hip fracture. However, those innovations generally were not designed specifically for seniors with these two conditions, nor did they substantially alter the overall approach to treating hip fractures and strokes. The innovations generally reflected the organizations' efforts to deliver some types of care in skilled nursing facilities rather than in hospitals. They also reflected the organizations' use of care management services to foster referrals to community-based social service agencies.

Our site visits also found that the innovations of the group model organizations (Aspen and Kaiser Colorado) were different from those of the IPA model organizations (Keystone East and HMO Oregon). In particular, the group model organizations made a greater effort to arrange for postacute care to be delivered by a small set of selected skilled nursing facilities. This included requiring these facilities to meet certain quality and service standards, such as being able to provide therapy six days a week. The two group models in our study also used a hospitalist-type approach for delivering physician services in the hospital. In contrast, the IPA models appeared to make less use of network restrictions. Keystone East, however, tried to promote continuity of care by providing financial incentives for a senior's primary care physician to manage any hospitalizations.

As noted in Chapter II, we collected data from site visits, focus groups with seniors and providers, and a survey. Our analysis of how seniors with hip fracture or stroke fared in our case study MCOs draws on all these sources. In particular, it uses information collected during focus groups with seniors (or their spouses) who had experienced a hip fracture or stroke, and with primary care physicians in the MCOs' networks. Further, Chapter V reports on levels of satisfaction and dissatisfaction among patients with hip fracture or stroke. These quantitative data from the surveys are particularly worth noting in the context of the findings that follow from the focus groups of patients with hip fracture or stroke.

A. Focus Groups of Beneficiaries with Hip Fracture or Stroke

The focus groups of seniors who experienced hip fracture or stroke reported having intensive interactions with the MCOs and readily provided opinions on the nature of the services received. While the participants in the hip fracture and stroke focus groups were generally satisfied with their care, their discussion concentrated on the costs of care and on whether the level of care was appropriate. In addition, they raised

many issues that reflect broad trends in the health care system rather than unique features of the case study MCOs.

For example, many of the focus group participants complained about the length of their hospital stay and the timing of their hospital discharge:

> I just want to know why, when you're in the hospital, they can't continue your physical therapy there. They told me the insurance doesn't allow it, and the only reason I stayed longer in the hospital--which was a blessing to me--was that I was keeping a low-grade temperature so they wouldn't release me.
>
> They wouldn't keep her in the hospital for observation. Now, to me, an 87-year-old lady that has blood in her bladder and has brain damage and has to be put on medication to control seizures has no right going home at three in the morning with somebody like me who is not a medical person.
>
> Is there a limit that they can keep you in the hospital for something other than being close to death? . . . I was in the hospital for four days. And then they moved me over into a rest home or whatever, a care center. And I was having trouble at that time because of my heel. . . . I mean, it doesn't make any difference to me. But it seemed to me that they seemed to be in some sort of hurry to get you out of the hospital.

These concerns about hospital length of stay show how the general trend toward shorter hospital stays can create anxiety among seniors with serious health problems. Efforts to shorten hospital stays have been common in the Medicare fee-for-service and managed care sectors for years. Yet for many of the seniors in our focus group, the discharges seemed too quick for the patients and their caregivers. Some of this concern may reflect the seniors' expectations for hospital lengths of stay. These expectations may be based on personal experiences from prior decades and may therefore be unrealistic for current practice. Concern may also stem from anxiety that a senior's spouse might have about their ability to provide any required home care for someone discharged from the hospital with a serious illness. Even when adequate home-health care is available, many spouses will be asked to help with patient monitoring and provide some assistance with activities of daily living. Such care may be difficult and quite anxiety provoking for many seniors. Discussions with the focus group participants also suggested that the discharges occurred at a time when the seniors and their families were confused about their conditions, expectations for recovery, and treatment plans. They were adjusting to a major, potentially life-altering injury, and that made it hard for them to understand the options. As the wife of a man who was still recovering from his stroke at the time of our focus group put it:

> I think maybe he could have stayed [in the hospital] longer. I think one of us should have said no way. But you see, we don't know. This is a new experience. Nobody tells you anything. You have to go by-guess-and-by-golly. Once he was out, we did have a therapist. They were very good about sending a therapist in. She first came two days a week, and now she's coming three days a week.

These comments highlight a concern of many focus group participants that they did not understand their course of treatment, particularly when they were being transferred from one treatment setting to another. Their uncertainty may reflect the fact that many seniors, particularly those over 85 years old, have difficulty understanding medical care options and may require individually tailored explanations (Gold and Stevens 2001). This uncertainty seemed to raise anxiety among the seniors and may have also reduced the effectiveness of some treatments.

For the most part, participants in the hip fracture and stroke focus groups appeared to be pleased with the frequency and quality of the rehabilitative therapy they received in the MCOs. This therapy was received largely in nursing homes, not rehabilitative hospitals, situation that previous studies have shown is common among MCOs (Retchin et al.). The paucity of complaints about the rehabilitative experience of our focus group participants suggests that the MCOs were successful in their efforts to screen nursing homes for their ability to deliver appropriate rehabilitative care (Kramer 1996).

In addition to the comments on hospital and short-term nursing home stays, home care services drew some favorable comments. One man who was helping his wife recover from a hip fracture said:

> We were very pleased going into this, because we made phone calls to the plan, and they set up the date and got the referrals and everything. Everything was in order. They sent a nurse beforehand to take blood, temperature, blood pressure. They sent another therapist. She came and looked around. We live on all one story, but then we have a basement. . . . She came to see the setup of the house and everything. We thought this was really wonderful.

Many participants in focus groups for hip fractures and strokes also commented on the ability to secure durable medical equipment. These are especially germane to the care of these patients, because of their needs for adaptive devices to ensure that the home environment is safe. For some, the ability to get these items was selective:

> When we were in what they call the occupational therapy in the hospital, they showed you how to get in and out of the tub with a bench that you had to buy. [The plan] did not pay for that, so I had to get a bench. They ordered the commode because of getting up and down on the toilet, and of course you had your walker and a cane, which were provided for by the plan.

Clearly, many participants in the focus groups felt that one of the major benefits of the MCOs was the reduction in costs. Since many stroke patients require multiple medications, usually to control hypertension and other cardiac comorbidities, this appeared to be a special attraction enjoyed by stroke patients in the MCOs that provided prescription benefits. Furthermore, because of the many expensive resources used by these patients, the absence of a deductible was also appealing:

> Well, I wasn't too keen on going into [the MCO], because of the having to get a referral all the time, but now I like it. And looking back over some of my records, I

remember when you would get your "this is not a bill" from Medicare, where it would say you have met so much of your deductible.

We've been very pleased with the fact that we've gotten prescriptions, and that has been wonderful. Now I've been talking to my neighbor. She pays $70 for a prescription, and I said, "Marie, you've got to get into this [MCO]." I'm very thankful for that, very thankful.

B. Characteristics of the Survey Sample of Seniors with Hip Fracture or Stroke

We also used information collected in the survey of 301 seniors, 104 of whom had a recent hip fracture and 201 of whom had experienced a recent stroke (4 respondents had both a hip fracture and a stroke). These seniors are a representative sample of all the hip fracture and stroke cases at the MCOs during the months in 1999 when we selected the sample. Thus, our samples provide a good indication of the experiences of hip fracture and stroke cases at these MCOs, despite the fact that the overall samples are small.[23]

This survey had two waves, one 3 to 4 months after the event and the other 10 months after (see Appendix A Exhibits A.3 through and A.6). This length of follow-up should be sufficient to capture the recovery period for the vast majority of hip fracture and stroke patients. While a proportion of hip fracture patients do not regain pre-fracture activity levels by this time, most recovery in ability to walk and to perform activities of daily living occurs by six months (Magaziner et al. 1990). Similarly, studies suggest that the best functional recovery is achieved within 8.5 weeks of a mild stroke, within 13 weeks of a moderate stroke, within 17 weeks of a severe stroke, and within 20 weeks of a very severe stroke (Jorgensen et al. 1995).

For analytic purposes, we compared the survey responses from the two group MCOs (Aspen and Kaiser Colorado) with those from the IPA model MCO (Keystone East). This analytical grouping reflects the fact that we observed structural differences between these two types of MCOs, as well as the fact that the small sample sizes available for the two group MCOs make it difficult to analyze them separately. The structural differences were described in Chapter IV. We found that the group models appeared to foster a higher level of mutual purpose and vision between the health plan and physicians than did the IPA model, which contracts with independent physicians and group practices. At the same time, the group MCOs appeared to be more restricted in their networks and delivery capacity, while the IPA model MCOs had a bigger network and offered members more choice. (In this discussion, we focus only on Aspen Medical Group and not on the broader network provided by Medica. As noted in Chapter V, our sample of high-risk seniors from Aspen appeared to think of choice in terms of what the medical group could provide rather than what Medica could provide).

[23] We were able to interview between 33 and 61 percent of all hip fracture and stroke cases during our sample selection period.

Our samples of seniors with hip fracture or stroke differed substantially between the group and IPA MCOs (Table VI.1), although those differences generally reflect differences in the overall populations at the MCOs and the populations in their service areas. For example, seniors in our sample from the IPA model MCO (Keystone East) were more likely to be nonwhite, reflecting the population differences between Philadelphia (where Keystone East is based) and the other two sites. Similarly, the hip fracture and stroke samples from the group models tended to be slightly older than those from the IPA model. This reflects the high average age among all enrollees at Aspen and Kaiser Colorado (Table II.6).

It is particularly interesting to note that a substantial fraction of our sample of seniors report having had a hip fracture or stroke prior to the one that led to their inclusion in our survey. Among the group MCOs, about a quarter of the sample had a prior stroke, and almost as many had a prior hip fracture. The sample from Keystone East was slightly more likely than the sample from the two group MCOs to have had a prior stroke and about half as likely to have had a prior hip fracture. This differential experience should be kept in mind when comparing the experience of our samples from the two types of MCOs.

TABLE VI.1. Characteristics of Members with Hip Fracture or Stroke Three Months Prior to Their Event, by Type of MCO (Percentages)

	Group or Delegated Model MCO (n=109)	IPA Model MCO (n=278)
Age		
65 to 84	71.4	81.1
85 or older	27.4	18.9
Race White	85.4	76.5
Education High School or Less	58.5	81.2
Reports Having Medicaid Coverage	27.6	15.7
Income Less than $20,000/year	58.5	72.0
Married	51.0	47.0
Lives Alone	31.7	20.7
Previous Stroke	27.1	32.1
History of Hip Fractures	21.3	11.0
History of Dementia	11.7	14.0

We also find substantial evidence of the organizational complexity of the care received by seniors who have had a stroke or hip fracture (Table VI.2). As would be expected, most of these sample members have seen a specialist and a therapist in the four months since their event.

TABLE VI.2. Organizationally Complex Care Among Sample Members with Hip Fracture or Stroke in the Three Months Following Their Event, by Type of MCO Model (Percentages)		
	Members with Hip Fracture or Stoke (n=395)	
	Group or Delegated Model HMO (n=112)	IPA Model HMO (n=283)
Four or More Prescription Medications	59.0	58.7
Uses More than One Assistive Device	59.4	58.6
Has One or More Caregivers	24.9	30.7
Received Transportation to Medical Appointments in Past 12 Months	13.5	9.9
Received Home Health Services in Past 12 Months	59.8	71.0
Received Home-Delivered Meals in Past 12 Months	9.6	5.3
Seen by One or More Specialists Since Event	65.7	75.4
Seen by One or More Therapists Since Event[a]	73.7	76.5
a. "Therapists" includes physical therapists, occupational therapists, and speech therapists.		

We noted that a fair number of seniors (13 to 14 percent) in our hip fracture and stroke sample reported instances where a lack of assistance led to a problem, such as being unable to bathe as often as they wanted (Table VI.3). In general, the pattern of problems was similar for the two types of MCOs, although sample members from the group MCOs were more likely to have reported lacking assistance with transferring. This difference may be due to chance, because we saw nothing in our site visits or focus groups that would explain why there should be more transfer-related problems at the group models. The estimates in Table VI.3 were regression adjusted to ensure that the differences in unmet need among MCOs were not due to underlying differences in the characteristics of the sample members.

TABLE VI.3. Unmet Needs of Members with Hip Fracture or Stroke, Three Months After Their Event, by MCO Type		
	Members with Hip Fracture or Stoke (n=395)	
	Group or Delegated Model MCOs (n=112)	IPA Model MCO (n=283)
Identified Inadequate Assistance with One or More ADLs	14.8	13.1
Unable to Bathe Due to Inadequate Assistance	20.4	23.5
Unable to Transfer Appropriately Due to Inadequate Assistance	30.2	12.7
Unable to Take Recommended Dose of Medication Because of Financial Reasons in Past 12 Months	8.7	9.4
Unable to Afford Prescription Medication in Past 12 Months	4.9	4.0
NOTE: Estimates have been regression adjusted to control for case mix differences among the different types of MCOs. The control variables are listed in Appendix Table A.1.		

We also found that many of the seniors in our sample would have been willing to pay an additional premium to obtain additional services, particularly for help traveling to medical appointments (Table VI.4). Between 20 and 25 percent of the seniors would have paid an extra $5 a month for transportation assistance, and 9 to 14 percent would have paid $20 a month extra. At the same time, the survey data imply that most of the seniors in our sample would not be willing to pay extra for these services, despite dealing with their recovery from a recent hip fracture or stroke. None of the small differences between the group and IPA model were statistically significant.

TABLE VI.4. Willingness to Pay Out-of-Pocket Expenses for Additional Services Among Members with Hip Fracture or Stroke, Comparing Group or Delegated Model HMO with IPA Model HMO

Service and Price Options	Members with Hip Fracture or Stoke (n=395)	
	Group or Delegated Model HMO (n=112)	IPA Model HMO (n=283)
Proportion of Members Willing to Pay Additional Fee for Professionals to Assist with Treatment Compliance		
Willing to pay $5 a month	7.2	12.2
Willing to pay $20 a month	4.5	7.5
Proportion of Members Willing to Pay Fee for Regular Exercise Program		
Willing to pay $5 a month	15.9	19.0
Willing to pay $20 a month	5.8	6.6
Proportion of Members Willing to Pay Additional Fee for Transportation Service to Medical Appointments		
Willing to pay $5 a month	24.8	20.0
Willing to pay $20 a month	13.8	9.4
Proportion of Members Not Enrolled in Care Management Who Would Pay Additional Fee for Similar Services		
Willing to pay $5 a month	17.3	15.7
Willing to pay $20 a month	8.8	8.5

NOTE: Estimates have been regression adjusted to control for case mix differences among the different types of MCOs. The control variables are listed in Table II.6

C. The Case Study MCOs Did Not Establish Disease-Specific Programs for People with Strokes and Hip Fractures

As noted previously, many health plans are implementing disease management services to target specific chronic illnesses common among high-risk seniors, such as congestive heart failure and diabetes. Disease management techniques use practice guidelines and feedback to manage these conditions (Ellrodt et al. 1997). They are often focused on preventive care that will lower the chances of future hospital admissions. These programs have been widely adopted in and out of managed care (Chen et al. 2000).

However, we did not observe any management programs that were designed specifically to help patients recover from a stroke or hip fracture. This situation may reflect the opinion of physicians in our focus groups that many high-risk seniors need help dealing with a wide range of issues, not a specific disease. As a result, many of the

physicians expressed concerns about the specificity of disease management programs, as reflected in the statement of one primary care physician:

> I'm skeptical about the disease-specific projects. . . . With elderly people, all the literature is pretty clear that function is the thing to be addressed and not really specific disease states. It's almost seductive to separate it out, diabetes or heart failure, things that are common diagnoses for people who end up in the ER or however you want to set the marker. . . . I don't know that the outcomes necessarily justify the kind of disease-specific model.

While specific disease management programs were not found for these two chronic conditions, other disease management approaches might have assisted in the care of these patients. For example, the Kaiser MCO had established a very innovative program to manage patients receiving anticoagulation therapy. Many stroke patients receive anticoagulation therapy, and the management of these patients can be very difficult. Antithrombotic therapy can prevent strokes in carefully selected elderly patients who have chronic nonvalvular atrial fibrillation (Gage et al. 2000). The underuse of antithrombotic therapy in Medicare beneficiaries who have nonvalvular atrial fibrillation is well documented, as are iatrogenic events due to overuse of anticoagulation, and both are associated with serious long-term adverse outcomes. Disease management programs that could have influenced the care of these patients were not limited to the Group MCOs. At Keystone, there were disease management programs for diabetics and congestive heart failure, both of which could be applicable to the postacute care of stroke patients. One physician was particularly enthusiastic about the home visits offered at Keystone East for his high-risk senior patients:

> I've come to be able to use the HMO to my advantage by having visiting nurses go the patients' houses and make house calls. Let the HMO pay for the service. Rather than have a doctor go out, you have a nurse visit the patient. They do provide that service. Keystone provides congestive heart failure programs, diabetic programs, physical therapy at the home, and visiting nurses at the home, and we utilize as much of that as possible.

There were also instances where the MCOs had programs that might be useful for treating hip fracture or stroke patients, but those programs did not appear to be widely used. For example, all the MCOs had the opportunity to waive the Medicare requirement for a three- day hospitalization prior to admission to skilled care nursing facilities, and three of the four case study MCOs did this. With stroke patients, this could have been a particularly useful strategy by using the case managers that were co-located in physician's offices to coordinate the diagnostic evaluation of stroke patients, as well as the admission and followup to skilled nursing facilities. However, we did not find that the MCOs in our case studies frequently took advantage of this alternative approach to the management of stroke patients. In fact, very few patients appeared to be admitted directly to nursing homes, regardless of the case management approach.

Despite the applicability of the broader care management programs to patients with hip fractures and strokes, and of disease management programs representing

comorbid illnesses or therapies (such as anticoagulation service), enough of these patients may require extensive resources to warrant more explicit focus. We believe that there may be opportunities to design more specific programs targeted to the chronic management of hip fracture and stroke patients. For example, the rapid, pre-hospital diagnostic evaluation of incident strokes could more efficiently triage these patients (for example, hemorrhagic versus embolic etiologies) into specific protocols that could both reduce costs and improve effectiveness of care. Further, these patients could also be more effectively assigned to rehabilitative interventions based on severity and likelihood of benefit (Bates and Stineman 2000). Disease management programs for hip fracture patients could also ensure that recurrences are potentially mitigated through evidence-based interventions such as home care evaluations for risk of falls (Gill et al. 1999; Close et al. 1999), geriatric assessments (Boult et al. 2001, Ruben et al. 1999), and osteoporosis treatments for reductions of fracture thresholds (Villareal et al. 2001; Neer et al. 2001).

D. Structural Features of MCOs That May Affect Care for Seniors with Hip Fracture or Stroke

In the overall structure of the MCOs we studied, one of the benefits that is germane to the care of patients with hip fractures and strokes was that all the MCOs paid specific attention to evaluating the quality of care delivered in skilled nursing facilities. This is often overlooked as a beneficial aspect to the imposition of a formal, coordinating structure to the care of high-risk senior beneficiaries in the Medicare program, and is especially vital to the transitional care needs of patients with hip fractures and strokes. For both these conditions, there is a critical juncture following the evaluative and interventional phase of acute care, marked by a transition to a rehabilitative setting. In conventional Medicare, the transfer to rehabilitative settings can be poorly coordinated (Rosenberg and Popelka 2000), and the choice of facility is often left to the physician and family, although a caseworker may assist in the informed choice. In contrast, the case study MCOs established specific quality criteria for the skilled nursing homes in their network. This attention to quality was particularly important because the MCOs relied heavily on skilled nursing facilities as alternative, less expensive options for the postacute care of both patients with hip fractures and those with strokes.

The two group-model MCOs also tried to promote quality in their network by using a set of specialized physicians and nurse practitioners to coordinate care in the hospitals and skilled nursing facilities. The physicians who specialize in the delivery of hospital care, the “hospitalists,” have the potential to improve care by developing specialized medical expertise as well as valuable institutional knowledge of the hospital staff and facilities (Auerbach et al. 2001). Similarly, the use of a small core of physicians and advance practice nurses to manage all the MCO’s patients who require care in skilled nursing facilities offered several advantages. At both Aspen and Kaiser Colorado, the physicians assigned to work exclusively with the nursing homes provided

a high level of patient contact and worked with facility staff to develop more effective and efficient procedures.

At the same time, the use of facility-based specialized staff had the potential to fragment care. Most hip fracture and stroke patients moved from the community to the hospital to a skilled nursing facility and then back to the community. At each stage of this process there was a corresponding hand-off from one physician to another. While the group model MCOs made an effort to ensure that a patient's medical record was moved with them, the physicians and patients in our focus groups noted some instances where the patients arrived in a facility before the records. Furthermore, the facility-specific physicians may not have enough interaction with a patient to determine the best way to communicate with them or their abilities to follow through on alternative treatment regimens. Thus, the advantages of specialized staff such as hospitalists must be balance against any loss in the continuity of care.

Keystone East used a different method to promote quality of care in skilled nursing facilities. It provided incentives for primary care physicians to follow institutionalized beneficiaries. In addition to furnishing supplemental payment arrangements for this patient population, they also expedited the referral process:

> [The MCO] has decided that if a patient is in a nursing home where I conduct rounds, I can issue referrals for any of the specialists I want, even though that patient is not capitated to me. That is a very positive view."

E. Conclusion

The lack of management programs specifically designed to assist seniors with a recent hip fracture or stroke appears to reflect several structural limitations at the case-study MCOs. First, the two IPA model MCOs were still fairly new at the time of our visits: one had operated its Medicare risk program for only three years and another for only four, even though they had both served commercial populations for more than a decade. It may take organizations longer than this to develop the expertise, data, and financing required before they are likely to develop new programs for treating conditions such as hip fracture or stroke. In fact, at one of the MCOs, an executive administrator lamented (at the time of our visit) that it was only recently that the senior management had recognized that the revenues and costs associated with their Medicare risk program were disproportionate to the size of enrollment. Previously, senior management had not focused often on their Medicare products, because the commercial population in this MCO dwarfed their Medicare risk enrollment. Difficulty in getting senior management attention can limit the ability of an organization to obtain the resources required to design and implement innovations, such as specific disease management programs for the care of Medicare beneficiaries with strokes or hip fractures.

Management programs targeted specifically to seniors with a hip fracture or stroke seem particularly promising because it is easy to identify an inception point. Both of these events can are well defined and the affected patients can typically be identified in

hospital emergency rooms. While an ideal MCO would take steps to reduce the probability of these events in the first place, such efforts are unlikely to prevent them all. Thus, there will continue to be a need for managing the delivery of services and assisting patients and their families following a hip fracture or stroke. A care management program could rely on the existing MCO hospital admission and discharge systems to identify these cases and start planning for their recovery. The critical issue for these patients would be followup to ensure continuity in the postacute settings and support for the patients and their families to deal with any long-term consequences of their event.

The care transitions inherent in the treatment of hip fracture or stroke also make these conditions good candidates for targeted care management. Each time a patient moves between the community, hospital, or nursing facility there is the potential for problems. Complete medical records may not be available to a physician. A facility-based physician may not have sufficient time to develop a full understanding of a seniors capabilities and attitudes. Hand-offs between providers may be inadequate leaving patients confused, or in the worst cases, without required services. For example, a senior might be sent home without sufficient training for them and their spouse to perform the required monitoring and care. Care management could address many of these problems by providing more continuity to the care, education to patients and caregivers, and help to monitor patients' health and ability to comply with treatment recommendations.

Clearly, our sample of MCOs, particularly the group models, sought to substitute skilled nursing care for the more recuperative aspects of hospital care, by discharging patients early. To ensure quality, they were meticulous to include in their networks skilled nursing facilities that were capable of delivering the required care. Moreover, since it is difficult for physicians, hospitals, or patients to assess the quality of nursing homes, the MCOs supplied a vital missing element in the fee-for-service environment. Therefore, the facility screening and quality monitoring of skilled nursing facilities by the MCOs appears to offer tangible advantages over an unmanaged system. Last, several of the MCOs organized dedicated groups of providers that were assigned exclusively to skilled nursing facilities in the networks constructed by the health plans. Again, this appeared to be a special innovation that may have helped in the difficult coordination of care of these vulnerable subgroups across the transition from hospital-to-rehabilitative settings.

VII. CONTRAINED INNOVATION IN MANAGED CARE FOR HIGH-RISK SENIORS

The four case study managed care organizations (MCOs) all exhibited the innovation, attention to preventive care, and cost-consciousness we expected, given their reputations. They have gone beyond Medicare fee-for-service in an effort to improve care for high-risk seniors. Their new services included screening and other programs to identify these seniors; care management and disease management; network credentialing; and better coordination and more flexible use of inpatient, skilled nursing facility, and home health services. At the same time, their flexibility and willingness to go beyond basic Medicare coverage are limited. The medical focus of the Medicare contract and the lack of clear evidence about the cost- saving potential of many services appears to have led these organizations to proceed cautiously. While their innovations appear to improve care and produce high levels of satisfaction among high-risk seniors, some important needs remain unmet. The experiences of these four organizations thus highlight many ways to enhance care delivery for high-risk seniors. Substantial developments to meet the full spectrum of needs will require more expansive contracts, risk-adjusted payment system, and strong evidence of cost-effectiveness.

The presence of both innovations and unmet needs led us to adopt the concept of "constrained innovation" to describe what was going on in the case study MCOs. We saw many instances where the organizations took advantage of the flexibility provided by capitation to improve coordination of care for high-risk seniors. At the same time, we saw how the Medicare contracts, current practice patterns, and market pressures limited the organizations' innovations. We also recognize that we selected a small set of well-regarded MCOs whose experience may not be indicative of the actions of all Medicare + Choice plans. Thus, we saw not only how managed care could improve care for a group that has often expressed low levels of satisfaction with managed care, but also how these improvements can still leave some important needs unmet.

Overall, we noted a considerable amount of ferment, experimentation, and change among the four case study organizations. Each had developed and implemented a number of innovative programs to facilitate care for high-risk seniors, with care management being a noteworthy example. They also encountered numerous operational difficulties, and they continually refined their programs. There was no single dominant approach; rather, there were many efforts to use the flexibility provided by capitation to improve care within the organizational context of the MCOs' structure and the basic Medicare benefit package.

We also noted several instances where the structure of the group model organizations facilitated the implementation of new service delivery and coordination methods. In particular, these MCOs drew on their clinic-centered primary care delivery systems to field care management and other efforts designed to improve care and to

facilitate communication between physicians and care managers. The group models also developed relatively small networks of hospitals and skilled nursing facilities that met higher quality standards than required in the fee-for-service system. They then sought to make further improvements and efficiencies in care by having a dedicated set of physicians and nurse practitioners manage all care delivered to MCO patients in those facilities. In contrast, the IPA models had less direct interaction with physicians in their networks. While they established quality standards for hospitals and nursing facilities, they developed much larger networks than the group model MCOs and did not use a hospitalist approach to managing care in those settings. Thus, the IPA model MCOs appeared to offer their members with more choices of providers and more locations from which to obtain care. For policymakers, these organizational differences create a potential choice: whether to encourage the service integration and innovation of the group models or to promote greater beneficiary choice by ensuring their access to care through an IPA's larger method of physicians, hospitals, and skilled nursing facilities.

A. Group Model Organizations Had Advantages for Implementing Innovations

The four MCOs we studied represent a mix of managed care models, payment strategies, and marketplaces. Each organization approached the task of delivering care to Medicare beneficiaries differently, building on the unique strengths of their organizations. In particular, the structural characteristics of the four organizations appeared to be very influential in several critical areas that affect the efficiency and effectiveness of care for high- risk seniors. While it is difficult to draw generalizations from our sample of four, the study team was persuaded that several characteristics of the individual plans were significant catalysts in, or sometimes impediments to, the construction of innovative approaches to high-risk seniors. Among the structural factors that differentiated the four sites studied, whether an MCO was organized as a group or IPA model appeared to be the most potent variable in creating an environment conducive to developing and implementing innovative programs for high-risk seniors.

The varied structures of Medicare MCOs and the diverse contractual arrangements of physicians and hospitals led to the creation of different relationships that can foster or hinder initiatives to improve care for high-risk seniors. Specifically, we noted that the group model organizations in our case study (Aspen and Kaiser Colorado) found it easier to develop innovative care methods for high-risk seniors than did the IPA case study organization (Keystone East and HMO Oregon). The noteworthy advantages of the group models included the following:

- By their nature, the two group models seemed to foster a higher level of interaction among primary care physicians and administrators. This led to a cooperative approach to thinking about care for high-risk seniors, an approach that focused on developing efficient, effective care.

- The group models tended to attract a mix of physicians who are comfortable within managed care. The group model physicians to whom we spoke seemed more likely to look for ways to exploit the flexibility of capitated care in order to deliver better care. In one case, a physician said that he “felt sorry for his fee-for-service patients” because he had less flexibility in providing covered care to them.

- The group models delivered primary care through clinics where primary care physicians and care managers could be located together. This co-location seems to promote communication. In comparison to approaches without co-location, the two group models seemed to generate more physician referrals to care management and more subsequent interaction between physicians and care managers. Co-location also facilitated care managers’ efforts to meet face to face with patients.

- The group models in our study contracted with a small set of nursing homes to deliver subacute care. These nursing homes were selected primarily because of their commitment to quality and to developing better-integrated, long-term relationships with the MCOs. The small skilled nursing home network enabled the group model organizations to monitor their members more closely, using a few physicians and nurse practitioners.

The IPA models also introduced a number of innovations, including care management programs. However, they were hampered by their less direct relations with physicians and other providers. For most physicians, the IPA accounted for a modest fraction of their patients and revenue. Also, the physicians often participate in multiple IPAs and maintain a fee-for-service practice. Thus, it is harder for any specific IPA to engage the physicians in care coordination activities or other programs targeted to high-risk seniors.

B. Care Management Was a Major Innovation for Treating High-Risk Senior in All Case-Study Organizations

All four MCOs in our study developed some form of care management among their various innovations. For high-risk seniors, care management appears to be a critical component for coordinating organizationally complex care that involves multiple providers, services, and facilities. For MCOs, care management provides a way to pursue two objectives simultaneously: improving care to high-risk seniors and reducing the need for high-cost services.

The four organizations used different methods to channel between two and five percent of their Medicare seniors into care management. In fact, our discussions with physicians and care managers at all four organizations emphasized that no single method will identify all high-risk seniors, so organizations must use multiple methods, including both physician referral and review of inpatient admissions.

The group model organizations relied predominantly on primary care physicians to identify high-risk seniors. This reflects the inherently close relationship with these organizations and the primary care physicians. It also reflects their decision to locate care management staff in the clinics. This co-location promoted frequent communication among care managers and primary care physicians, which in turn helped produce a shared sense of mission for care management. Care managers at these organizations saw their ongoing interactions with physicians as essential to getting referrals to care management. In particular, they saw it as a way of persuading physicians to start making referrals. Once the care managers had achieved success with a few of a physician's patients, the physician was much more likely to refer additional cases and to participate more actively in the care management process.

In contrast, the IPA model organizations used inpatient admissions as the predominant method for identifying enrollees at high risk for intensive resource utilization. This approach reflects the challenges faced by IPA model organizations with large, loosely integrated physician networks, networks that were much larger than those used by the group model organizations. Thus, it was infeasible to place care managers in office practices or clinics, where there were enough high-risk seniors to warrant such an investment.

While all four case study organizations used surveys to screen their new members, none of them appear to have used that information for clinical purposes. At the extreme, one plan did not share information collected in new-member screening surveys with the primary care providers. In other cases, the screening information was entered into patients' medical records or otherwise made available to physicians or care managers. However, in these cases, the providers preferred to make their own assessments and did not appear to use the screening data.

Therefore, the value of the new-member screening surveys appears to lie in their ability to help MCOs target people who should be encouraged to see their primary care physician as soon as possible. One case study organization also used them as part of its effort to identify members who would benefit from special programs such as care management or disease management. At the same time, there seemed to be little interest among our case study MCOs in using screening surveys to assess existing members. MCO staff indicated such surveys yield a high rate of false positives and are not a cost-effective way of identifying high-risk members. Instead, the MCOs preferred to rely on physician-referral or on using their existing data systems. There is evidence that screening based on claims/encounter data is more efficient than that based on surveys (Coleman et al. 1998).

Another feature that distinguished care management at the group and IPA model organizations was the mode of contact between care managers and the seniors. Both Kaiser Colorado and Aspen located care managers in their clinics, where they could have face-to-face contact with patients. This approach appears to have given patients a

much greater awareness of the care management programs than in the programs where care managers used only the telephone to communicate with patients.

The decision to have face-to-face contact between care managers and patients also seemed to promote better understanding among seniors about the full role of care management, although the evidence on this point comes primarily from the focus groups. All the care management programs seemed to coordinate care among the various providers who might be treating a patient. The programs with face-to-face contact, however, seemed to foster a stronger sense among the seniors that care management was an ongoing source of information and advocacy. In particular, care-managed seniors at all the organizations often were aware of receiving nursing services and assistance, but generally they did not see care management as an ongoing source of help. Only at the Kaiser Colorado focus group did we hear seniors describe their care managers as people to whom they would turn if they needed information or help arranging for care. While there could be several reasons for this, it seems likely that the distinguishing factors at Kaiser Colorado were its combination of face-to-face contact with seniors and its assignment of seniors to a single care manager rather than to a care management team. The survey data tend to support this conclusion. The care management samples at Aspen and Kaiser Colorado were more likely than Keystone East's to report being in care management.

The salience of care management at Kaiser Colorado and Aspen was also fostered by their smaller caseloads: care managers at Aspen and Kaiser Colorado tended to be responsible for 50 to 70 patients at a time, while managers are Keystone East generally had caseloads of 130. Discussions in our focus groups suggest that the smaller caseloads resulted in greater time spent on each case by the managers, and likely also meant higher costs per case and a shorter duration of active care management.

It is noteworthy that the structure of the IPA model type did not necessarily inhibit experimentation. In addition to care management and disease management programs, we also noted other IPA innovations, such as the instance where a capitated provider group in HMO Oregon's network has initiated an experimental program using resource specialists. In that program, staff without nursing backgrounds provide care management for people with functional deficits of a milder nature than most health plans would regard as warranting care management.

One innovation we saw at all case study organizations was care manager referrals to community services, including home-delivered meals, senior centers, transportation assistance programs, personal assistance, subsidized housing, and custodial-level nursing homes. In the fee-for-service sector, community agencies, such as the local Area Agency on Aging, would provide this information, as well as referral assistance, to those seniors who contacted the agency. The case study organizations used their organizational infrastructure to channel high-risk beneficiaries to community services that they may not otherwise have sought. The MCOs do not pay for these services, which are excluded from their contracts with Medicare. However, their efforts can

improve access to these services. The care managers' knowledge of the various community programs can help ensure that seniors get access more effectively than if they tried to obtain those services on their own. In the best cases, the care managers not only provided referrals, but also monitored seniors to determine that services were provided.

C. MCOs Fielded a Wide Mix of Initiatives in Addition to Care Management

All four MCOs went beyond the basic Medicare benefit package. They all implemented disease management programs, although they differed with respect to the disease they targeted. The two most common disease management programs were for congestive heart failure and diabetes. Although some aspects of the organizations' programs were similar, the procedures and pathways used varied in different ways. All the programs were developed by the MCO rather than purchased from external vendors. The programs also emphasized the importance of local physician opinion leaders. Of the disease management programs we reviewed, Kaiser Colorado's were the most extensive. Among the more innovative and pragmatic disease management programs, Kaiser Colorado had developed an anticoagulation service that directly managed the constantly fluctuating anticoagulant dosage requirements of patients taking these medications. This program, with a caseload of about 3,700 patients, utilized seven pharmacy staff, who carried laptops connected to their laboratory information system. Because of Kaiser Colorado's group model structure, pharmacists in the program found it easy to communicate consistently with primary care physicians regarding medication changes. Kaiser Colorado had also developed a diabetes registry through their laboratory information system to identify diabetics with special needs and to ensure coordinated care for this group of enrollees.

Keystone East also developed a noteworthy program for treating patients who needed joint replacements. To help ensure that the program would be accepted throughout its physician network, Keystone East organized a team of respected specialists from its market area to develop its program. The program includes presurgery home visits by a nurse to assess patients' readiness for surgery and to prepare patients and their homes for their subsequent return. The program also includes home visits after surgery to help seniors with their recovery.

It was evident that home health visits were used extensively to conduct home evaluations and interventions beyond those covered by the basic Medicare benefit package. Beneficiaries and their families appeared to be pleased with these services. Even physicians who were not fully familiar with the care management program extolled the virtues of the home evaluations, particularly as a method for evaluating home safety and functional status.

The organization of services for institutionalized enrollees also was a noteworthy innovation in the delivery of care for high-risk seniors. For example, three of the four

HMOs admitted patients directly to skilled nursing facilities, waiving traditional Medicare guidelines requiring a three-day hospital stay. Moreover, all four MCOs used their contracting process as an opportunity to review the quality of care at different nursing homes, and to impose supplementary standards for participation beyond those required by Medicare. These included having accreditation for delivering subacute care, the ability to administer antibiotics intravenously, and the capacity to perform heart monitoring. They also included operational criteria such as being able to admit patients 24 hours a day (including weekends), offering rehabilitation services at least six days a week, having clinical functions provided by permanent staff rather than outsourced, and being staffed primarily with registered nurses rather than licensed practical nurses.

Furthermore, the two group model organizations limited their network to only a few facilities. The small network of skilled nursing facilities made it easier to secure dedicated beds to facilitate transitions from inpatient care, and reduced the burden on discharge planners and care managers for this purpose. Moreover, at the group model organizations, the physicians who cared for patients at skilled nursing facilities were organized into a special subcomponent of the group practice. This facilitated familiarity between the nursing home staffs and physicians and promoted more availability of providers for families, residents, and staff at the facilities. Again, the group model organizations offered the opportunity for this type of physician specialization to foster facility-specific skills and other efficiencies similar to those gained from hospitalist approaches. Although the group model organizations appeared to take particular advantage of their narrower physician network for organizing special programs to help manage care for people in nursing homes, one of the IPA model organizations, Keystone East, also fostered long-term care services by providers through special payment arrangements. This latter effort encouraged physicians with special interests in the nursing home population by giving them increases in their monthly capitation payments.

The two group model organizations used versions of the hospitalist model for inpatient care. These organizations took advantage of the higher degree of organization with their group practices and allowed their physicians to structure the inpatient care in a more concentrated manner. Although this allowed for greater efficiency in delivering inpatient, acute service, it also led to issues regarding continuity of care. For example, some care managers lamented that this often led to difficulties in communicating issues in the transition between outpatient and inpatient settings. The seniors in our focus groups also expressed concern that this type of approach might reduce the continuity of their care.

All organizations took advantage of the flexibility provided by capitation to offer some off-policy benefits. This flexibility, while not routinely exploited, was utilized in special situations. On occasion, physicians were particularly enthusiastic about the opportunities for using this flexibility for specific patients, and some deplored the limitations of the conventional Medicare fee-for-service guidelines. The most commonly provided off-policy benefits were home visits to evaluate seniors who did not meet the Medicare fee-for-service criteria for home health care. Other off-policy benefits included

the provision of durable medical equipment beyond Medicare guidelines or home modifications and help with nutritional issues. Use of these other benefits was generally quite limited, and their use was controlled by the organizations.

At the time of our site visit, Kaiser Colorado was completing its electronic medical record system. This system appears to offer substantial opportunities for improving the delivery of care for high-risk seniors. Since Kaiser Colorado already has a centralized information system, albeit not a paperless medical record, they have had ample experience using this common data source for reducing duplicative tests and medications that can lead to untoward iatrogenic complications. The centralized record also facilitates communication among the many providers who deliver care for high-risk seniors. Kaiser Colorado's electronic medical record illustrates another advantage of the group model HMO. It is hard to imagine how an IPA would finance and implement such a system, because the IPA typically would cover only a minority of the patients seen by any of the physicians in their network.

D. Fostering Further Innovation

The basic finding from this case study is that MCOs in the Medicare + Choice risk program who invest in programs for frail elders can produce high levels of satisfaction among their elderly high-risk members. More than 90 percent of the high-risk seniors in our set of innovative MCOs said that they would recommend their plan to someone with a similar level of health. This satisfaction level is comparable to that found for the general population of Medicare beneficiaries in managed care, and substantially above the approximately 75 percent level previously found for a national sample of beneficiaries with disabilities or advanced age (Nelson et al. 1996).

This high level of satisfaction is evidence of the potential of managed care to serve high-risk populations well. It also establishes a goal for the Medicare + Choice system as a whole to produce equally high levels of satisfaction among beneficiaries with both high- and low-risk for adverse health outcomes. If the general level of satisfaction among high-risk seniors could be raised from approximately 75 percent to the 93 percent level observed in our study, it would generate substantial benefits to a particularly vulnerable group of Medicare beneficiaries. Such a change seems feasible because the MCOs included in our study represent a fairly broad mix of organizations. There are group and IPA models; some operate with relatively high Medicare + Choice payments, others get low payments; some are fairly new to managed care for Medicare beneficiaries, others have been doing it for decades. Thus, their success suggests that similar results could be obtained by other MCOs. While it may take other MCOs awhile to achieve the success of these case-study organizations, it seems reasonable to expect them to take steps in that direction.

Although the case study suggests that it is possible to produce high levels of satisfaction, it does not indicate specific steps to achieve that level. Each of the case study MCOs developed its own programs, designing them in ways that worked for the

plan. Each of the efforts shared common elements, particularly the core elements of the I-CAN approach: Identification and assessment, Care management, Assistance programs, and Network credentialing and support. These core elements enable the MCOs to identify high-risk seniors and to then deliver and coordinate necessary medical care and social supports. At the same time, each MCO developed programs that took advantage of opportunities provided by it structure and community. For example, the group model MCOs built on their clinic-based primary care deliver system to foster communication between care managers, physicians, and the care-managed seniors. The IPA models used their data systems to identify high-risk seniors. This enabled them to provide targeted services ranging from care management to pre-admission home visits to assess and education seniors scheduled for joint replacement surgery. The IPA models also offered seniors a relatively large network.

Our case study identified several factors that may have promoted innovation at the four MCOs:

- Innovation was fostered by a culture of experimentation (Peters and Waterman 1982). All of the case study MCOs exhibited an interest in trying new approaches to coordinating and delivering care. Care management, group clinics, disease management, and other programs were fielded and monitored. Operations were then modified and, possibly, expanded if the pilot seemed to produce favorable results. Not every idea worked, but that did not seem to stop the MCOs from continuing to try new things and assessing how those new approaches might improve care and help control costs.

- Innovation was supported by senior officials in the MCOs. In all cases, there were senior officials in the MCO who encouraged innovation and who often were instrumental in the development and implementation of new approaches.

- The MCOs found ways to draw on community resources. All the case-study MCOs were in areas that had a wide array of community support services available. The MCOs referred high-risk seniors to these service providers in order to meet their needs for services that were outside the MCOs' Medicare + Choice contracts. While there were some waiting lists, directors of the Area Agencies on Aging in these communities indicate that services generally were available for seniors who could pay for them and were often available for seniors who needed subsidized care. It seems plausible that these community supports, assisted by the referral efforts of the MCOs, may have been partly responsible for the satisfaction levels we observed. It cannot be determined from our case study whether similar satisfaction levels could be produced in areas that lacked community support services.

- Innovation was facilitated by having a critical number of high-risk seniors. The challenge is having enough high-risk seniors with similar needs to support a special intervention. While the overall number of high-risk seniors is growing, they are likely to continue to represent a fairly small part of an MCO's overall

business (including both Medicare + Choice and commercial products). Furthermore, high-risk seniors are heterogeneous and will often require individualized education and intervention. These aspects of the population mean that it will often be difficult to identify a sufficient number of people whose needs can be addressed efficiently within a specialized program. Innovation therefore requires the ability to identify seniors with similar needs and to find ways to meet those needs through programs that operate at an efficient scale.

In addition, it appeared that the group models offer several advantages. In particular, the clinic-based approach these types of MCOs use to delivery primary care meant they could assemble a sufficient number of high-risk seniors to support targeted programs. In the IPAs, the MCO typically did not have enough high-risk seniors in one physician's practice to support targeted on-site programs. In addition, it appeared that physicians associated with the group model organizations had a stronger commitment to pre-paid care, which made them more likely to develop and support new care delivery and coordination approaches for high-risk seniors. The challenge facing the IPAs, with respect to innovation, appeared to be the relative difficulty in building physician loyalty and making their programs salient to their network providers. Often, an IPA's, members constitute a small fraction of the practice of most network physicians, who must deal with multiple plans having differing administrative and care management requirements. Nevertheless, the IPAs made a number of innovations regarding care management, disease management, pre-surgery home visits to help patients and their families plan for recovery, as well as development and dissemination of best- practice guidelines.

Although the findings from the Medicare + Choice plans we studied generally were positive, there is still room for improvement. For example, the level of unmet need appears lower than would be found in the general fee-for-service (Allen and Mor 1997), but several seniors in our sample, still experienced problems due to the unmet needs for assistance.

In addition, the innovation we saw was often constrained, in the sense that it did not address the full range of care issues facing high-risk seniors. For example, the care management delivered by the MCOs tended to emphasize short-term interventions and generally did not include longer-term efforts to educate and monitor patients beyond what was done by the primary care physicians. The constraints stem from many sources. One is the lack of clear evidence that many, more ambitious interventions would be cost-effective. Without such evidence, MCOs are likely to be hesitant before making a substantial investment in new services or approaches. Another constraint came from the Medicare + Choice contract, which focuses primarily on medical care and excludes most personal assistance, nutrition, housing, and long-term nursing home care, as well as supports for families and other unpaid caregivers. It does not require or pay for MCO's to address needs for these non-Medicare services. Lastly, the MCOs had to find the resources for targeted programs within the Medicare + Choice capitation payments. There are many demands on the portion of those payments that does not go to care delivery. These include marketing, internal data and financial systems, monitoring compliance with Medicare regulations, and any special efforts to provide

extra services to high-risk seniors. This internal competition for resources constrains the special efforts, particularly in the absence of evidence that they generate savings.

While the case study MCOs show that it is feasible to achieve high satisfaction levels, how likely is it that this can be replicated in a broader set of plans? The findings from our study provide both encouragement and some cautions. The fact that the plans we studied were diverse suggests that improve performance can be achieved by a broad range of plans. But, we found, translating potential into action also requires corporate commitment, the active involvement of physicians, and a culture of experimentation that may not exist in all plans.

Our discussions with MCOs, physicians, and seniors, identified several factors that might encourage plans to invest more heavily in the kinds of programs we studied. They stressed four key factors:

1. **Stabilizing the financial and regulatory environment faced by Medicare + Choice plans**. We came away from our visits with a sense that a MCO's senior management will focus first on the overall performance of the organization and will focus on new care approaches for high-risk seniors only once the financial stability of the organization has been addressed. As a result, MCOs are not likely to pursue programs for high-risk seniors until they have some successful financial and operational experience with their Medicare + Choice risk plan. Outside factors that can affect basic performance, such as rapid growth or decline in enrollment, competition from new insurance products and plans, and mandates for new programs or services, will demand management attention and can divert attention for new innovations. As a result, uncertainty in the financial and regulatory environment can lead MCOs to address new approaches for high-risk seniors are likely to proceed piecemeal in an incremental fashion.

2. **Reducing expectations of improvements in care combined with cost savings**. There is substantial evidence that it may not be possible to improve care for high-rise seniors while saving money at the same time (for example, Kemper 1988). While the experience of the case-study MCOs suggests that marginal improvements are possible in the current Medicare + Choice program, more substantial improvements may require more money.

3. **Risk-adjusted capitation payments**. One way to ensure sufficient funding for programs targeted to high-risk seniors is to implement a payment system that would explicitly recognize the higher costs incurred by such seniors. CMS has already taken some steps in this direction. A possible further step could be use of the individualized, annual screening and risk adjustment payment process used in the second-generation Social Health Maintenance Organizations (S/HMO). That payment system appears to be operationally feasible and to offer a potential model for tailoring payments to the actual risk levels of an MCO's members (Wooldridge et al. 2001). However, only one plan has agreed to be paid under this system; so its wider applicability remains uncertain.

4. **Better cost-effectiveness analysis for mandated services**. Medicare + Choice regulations have mandated that plans provide several services intended to help high-risk seniors. These services include new member screening, assessments, and care coordination. Yet the analytic support for whether the capitation payments are sufficient to support provision of these services remains unclear. The fact that the case-study MCOs fielded many of these services before they were mandated, suggests that at least those organizations believed such services were effective within the capitation system of the mid- to late-1990s. Without stronger research support for the cost-effectiveness of these services within the current capitation system, however, it will be difficult to convince MCOs to embrace the mandates and to find additional ways to improve care for high-risk seniors.

It is ironic, but perhaps fortuitous, that our study is raising these issues today, at a time when the Medicare + Choice program is under substantial stress, with plans withdrawing, enrollment dropping, and policymakers debating the importance of stabilizing the program (Gold 2001). Among options discussed to stabilize the program, payment levels and regulatory requirements factor heavily in the debate. Our study's contribution to the debate on these issues arguably is to highlight how Medicare beneficiaries may be affected by the outcome or resolution of this debate. We show that Medicare + Choice has the potential to enhance care for frail elders, an opportunity that might be lost if the program erodes. Assuming that the Medicare + Choice program remains, the key challenge for policymakers will be to decide how to provide incentives for a more broad-scale adoption of the innovations managed care makes possible, without adding to the regulatory requirements and instability that threaten the program. One promising step currently underway at CMS involves efforts to improve performance measurement (via HEDIS and CAHPS) so that it focuses more heavily on MCO performance for frail elders, then using performance information to inform beneficiary choice. Performance measures specific to high-risk seniors could also be used to revise the payment system, both through enhanced payment and a more adequate risk adjuster that compensates plans seeking to invest in care for the most vulnerable Medicare beneficiaries.

Finally, the Medicare program itself can constrain the ability to coordinate all the medical and other services high-risk seniors may require in order to maintain their functioning and independence. Funding for such services comes from many sources in addition to Medicare and the full range of providers extends well beyond those who deliver medical care. Furthermore, the seniors, along with their families and friends, will continue to provide substantial care. Full integration and coordination of these services will require corresponding efforts to coordinate funding and to look beyond the Medicare program.

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APPENDIX A. SUPPLEMENTAL EXHIBITS

EXHIBIT A.1. Control Variable Means for Hip and Stroke Subsamples			
	Total	**PLAN[a] Aspen/Kaiser**	**Keystone**
Plan			
Aspen and Kaiser Colorado	16.2 (0.2)	100.0 (0.0)	0.0 (0.0)
Keystone East	83.8 (0.2)	0.0 (0.0)	100.0 (0.0)
Sample Indicators[b]			
Hip fracture	26.7 (0.2)	51.0 (0.8)	21.9 (0.2)
Stroke	74.4 (0.2)	49.0 (0.8)	79.3 (0.2)
Respondent Type:			
Sample member	55.4 (2.1)	63.0 (2.3)	54 (2.4)
Proxy	23.4 (1.8)	20.7 (1.8)	23.9 (2.2)
Representative proxy	21.2 (1.7)	16.3 (1.9)	22.2 (2.0)
Age			
Under 85	79.0 (0.9)	69.8 (1.1)	80.8 (1.0)
85 or older	20.8 (0.9)	29.1 (1.0)	19.2 (1.0)
Gender			
Male	44.7 (2.1)	35.9 (2.4)	46.4 (2.5)
Female	55.3 (2.1)	64.1 (2.4)	53.6 (2.5)
Race[c]			
White	82.0 (1.7)	95.1 (1.0)	79.4 (2.1)
Black	16.4 (1.7)	2.2 (0.4)	19.2 (2.0)
Other	1.6 (0.5)	2.7 (0.9)	1.4 (0.6)
Education			
Did not complete high school	36.9 (2.1)	24.1 (2.2)	36.5* (2.4)
High school graduate or above	63.1 (2.1)	75.9 (2.2)	60.5* (2.4)
Total Household Income			
Less than $10,000	26.9** (2.2)	23.5 (2.4)	27.7** (2.6)
$10,000 or over	73.1 (2.2)	76.5 (2.4)	72.3** (2.6)
Health Assessment			
Excellent or good	68.0 (1.8)	70.7 (2.5)	67.5 (2.2)
Fair or poor	32.0 (1.8)	29.3 (2.5)	32.5 (2.2)
Lives Alone	22.1 (1.8)	32.1 (2.7)	20.2 (2.0)
ADL Limitations[d]			
Two or fewer	77.5 (2.0)	84.8 (2.2)	76.2 (2.3)
Three to five	22.5 (2.0)	15.2 (2.2)	23.8 (2.3)
Number of Chronic Conditions[e]			
Two or fewer	35.7 (2.0)	36.5 (2.6)	35.6 (2.3)
Three or four	40.2 (2.1)	40.6 (2.6)	40.1 (2.4)
Five or more	24.1 (1.8)	22.9 (2.4)	24.3 (2.1)
Alzheimer's or Other Dementia	14.0 (1.5)	13.2 (1.5)	14.1 (1.7)

EXHIBIT A.1 (*continued*)

SOURCE: Sample of 387 respondents in the hip fracture or stroke subsamples taken from a telephone survey of 1,657 high-risk seniors from three managed care organizations, conducted between March and December 1999 by MPR.
NOTE: Values are percentages, with standard errors in parentheses.

a. Aspen and Kaiser Colorado are combined for the hip and stroke subsamples because of their small sample sizes.
b. Percentages will sum to more than 100 because some seniors are in multiple sample frames.
c. Race categories are different from those in Table II.4 because we were unable to control for ethnicity, as a result of the small number of Hispanics. Ethnicity is therefore ignored as a control variable, and Hispanics are classified into their corresponding race category.
d. ADL limitations involve the need for help or supervision with the five activities of daily living: bathing, eating, dressing, transferring, and toileting. These questions were asked of the 1,399 community residents only.
e. People were asked whether they had been diagnosed with any of the following chronic conditions: arteriosclerosis, hypertension, heart attack, other heart disease, previous stroke, depression, cancer, diabetes, arthritis, asthma, previous hip fracture, or Alzheimer's or other dementia.

* 5 to 20 percent nonresponse.
** Over 20 percent nonresponse.

EXHIBIT A.2. Marginal Effect of Selected Characteristics on the Probability of Reporting Inadequate Information for Plan Selection, Dissatisfaction, or Uncertainty About Addressing Complaints (Percentage Point Change)

Individual Characteristics	Whether a Senior Reports Having Inadequate Information for Selecting the Best MCO	Whether a Senior Would Not Recommend Their MCO to a Senior with Similar Health	Whether a Senior Has No Concrete Plan for Addressing Dissatisfaction with Medical Care
Aspen Member	3.4	4.1	5.3
Keystone Member	0.2	2.7	- 0.6
Survey Completed by a Proxy Respondent	2.9	5.1**	- 0.2
Survey Completed by a Representative Proxy	- 7.7***	6.3**	- 15.4***
Female	- 2.1	--	3.1
Self-Reported Good Health	2.5	0.8	- 3.9
Self-Reported Fair Health	2.6	5.7**	- 1.9
Self-Reported Poor Health	8.3*	4.7	--
Age 75 to 84 Years Old	4.2	4.0	2.9
Age 85 Years or Older	6.8	- 1.6	15.4***
Race: Black	2.5	1.7	1.8
Race: Other Nonwhite	- 2.0	3.6	2.1
Annual Income: $10,000 to $20,000	- 3.2	-4.4**	- 2.7
Annual Income: More than $20,000	- 1.6	- 3.7	- 4.6
Annual Income Variable Missing	--	- 1.9	4.4
Medicaid Coverage	- 1.8	- 1.5	2.9
Medicaid Variable Missing	8.7*	- 2.8	8.2*
Married	0.7	- 1.8	6.9*
Living Alone	5.2	1.6	0.3
Living Arrangements Missing	- 1.9	- 1.9	- 6.2
3 to 4 Chronic Conditions	0.2	- 1.8	- 1.3
5 or More Chronic Conditions	2.5	1.8	- 6.7*
Educational Attainment: High School	0.4	1.8	- 4.4
Educational Attainment: at Least Some College	3.2	2.3	- 6.0*
Limited in 3 to 5 Activities of Daily Living	2.9	7.8**	- 0.4
Activity of Daily Living Measure Missing	6.5	10.2**	5.8
Selected in the Advanced Age Risk Group	- 4.2	4.6	- 6.0
Selected in the Hip Fracture Risk Group	- 10.7***	1.3	- 9.7**
Selected in the Stroke Risk Group	- 4.2	3.4	- 4.9
Alzheimer's Disease or Other Dementia	- 3.8	- 0.8	- 2.2
Constant	- 28.1	- 29.3	20.7

SOURCE: MPR telephone survey of 1657 selected high-risk seniors in three managed care organizations.
NOTE: The marginal effects shown in the table indicate the percentage point change in a dependent variable that would result from changing each of the independent variables from 0 to 1. For example, in the first column, the coefficient on the variable ASPE shows that a person who was a member of Aspen rather than Kaiser Colorado (the excluded category) would be 3.4 percentage points more likely to report having had inadequate information for selecting the best MCO. Given the way the dependent variables are defined, a negative sign on a marginal effect would reflect a more desirable situation.

- Value is less than 0.5 percent.
* Significantly different from zero at the .10 level, two-tailed [or one-tailed] test.
** Significantly different from zero at the .05 level, two-tailed [or one-tailed] test.
*** Significantly different from zero at the .01 level, two-tailed [or one-tailed] test.

EXHIBIT A.3. Time Lapse Between Hip Fracture and Wave I Interview

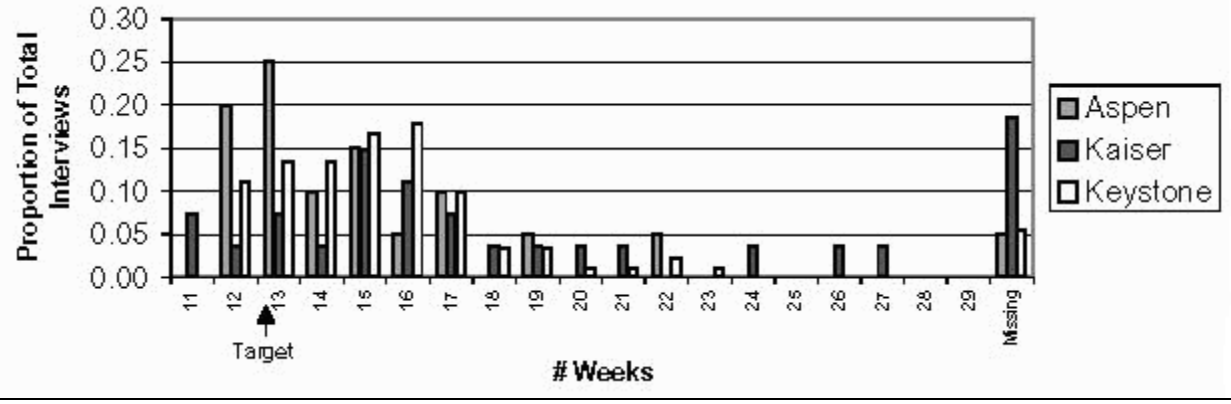


EXHIBIT A.4. Time Lapse Between Stroke and Wave I Interview

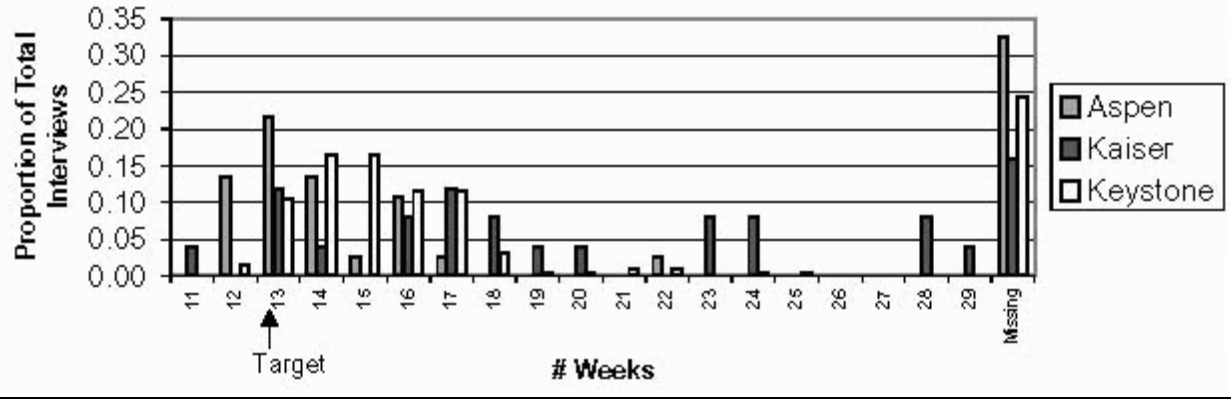


EXHIBIT A.5. Time Lapse Between Hip Fracture and Wave II Interview

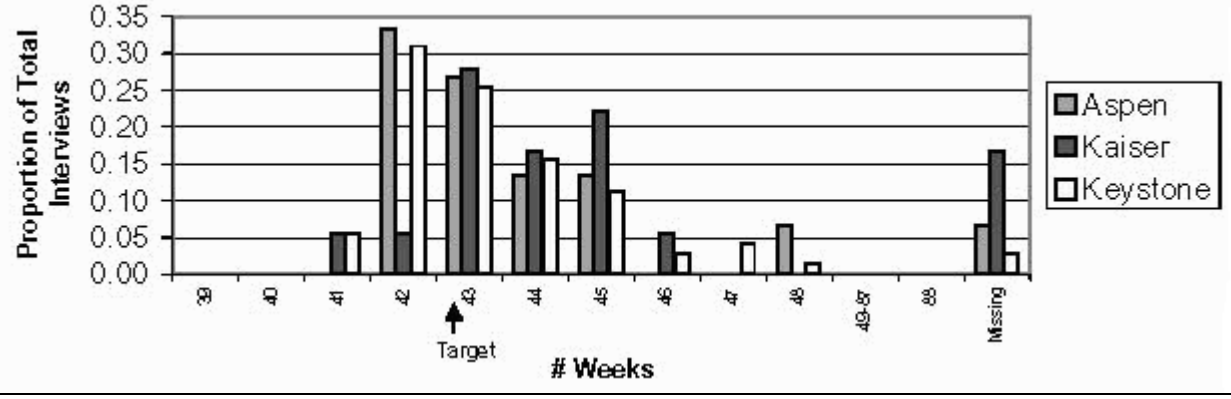
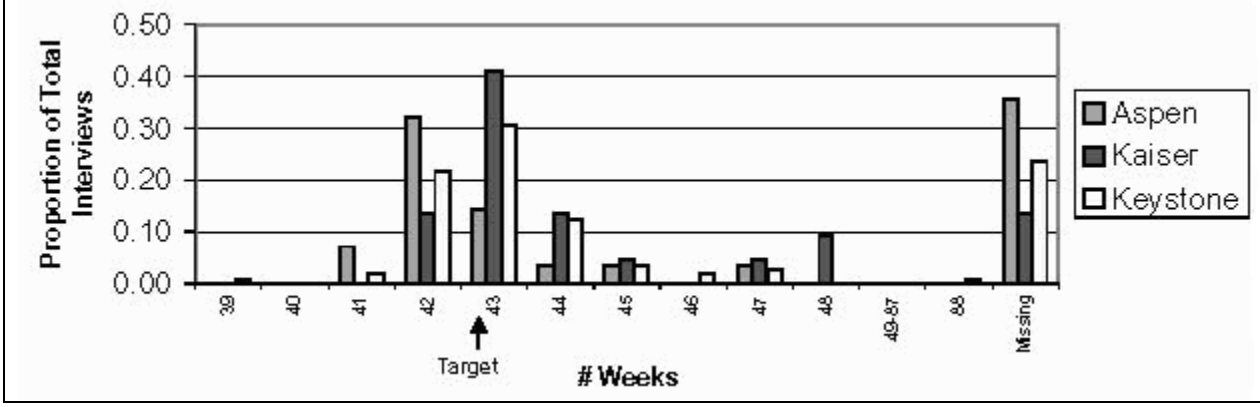


EXHIBIT A.6. Time Lapse Between Stroke and Wave II Interview



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