The Impact of Managed Care on The Delivery of Health Care Services to Rural Elders

by

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STATEMENT BY AUTHOR

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ABSTRACT

Rural Medicare managed care serves one of the most vulnerable populations. What impact has it had on the delivery of health care services to the rural elderly? This Master’s report is an integrated literature review covering the years between 1990 and the present. It reviews 138 documents including three previous reviews. The framework is Cooper’s *Five Stages of Literature Review*. Themes and simple percentages are used in the analysis. While the full impact cannot be determined at this time because of inadequate research literature, it appears that the trend is more negative than positive.
THE IMPACT OF MANAGED CARE ON THE DELIVERY OF HEALTH CARE SERVICES TO RURAL ELDERS

During the last quarter century, and especially during the last decade, many changes have occurred in health care. Some of these changes include Medicare, Medicaid, Diagnostical Related Groups (DRGs), the Resource-Based Relative Value Scale (RBRV Scale), and the rise of managed care especially in the public venues of Medicare and Medicaid. Most of these changes evolved as efforts to control the cost of health care. Because Medicare serves one of the most vulnerable of the U.S. health care populations, the elderly, the impact of managed care on the delivery systems to this segment of the population is of consequence. This review will try to determine what impact managed care has had on the delivery of services to Medicare beneficiaries in rural settings where delivery of health care services has always been an issue. An integrative review is one where the reviewer is “primarily interested in inferring generalizations about substantive issues from a set of studies directly bearing on those issues” (Jackson, 1980, p. 438). Such reviews may have suggestions for “new theoretical issues, and the identification of needed research” (Ganong, 1987, p. 1). This review focuses on the delivery of health care by examining practice, systems, access and utilization, and policy. It also looks at the cost and quality of health care services. The first part of this Master’s report presents a short background history of modern health care; a very brief background on managed care and Medicare managed care (MMC) or
“Medicare+Choice” programs, rural health and demographics; a short discussion of rural access, the rural elderly and MMC; and a statement of the significance and purpose of this review. The following sections discuss methodology, the literature review including findings and outcomes, and the author’s conclusions and recommendations.

BACKGROUND

General History of Modern Health Care

The target population of this review is the elderly and because they have lived through many changes in health care, this short history covers more than the 15 years of the review. This will help the reader understand a little better the point of view of the elderly, and some challenges they have faced with Medicare and managed care. In the early twentieth century, U.S. health care was simple and direct. Most physicians were in practice by themselves and made decisions without the benefit of complex testing and procedures (Roth, 1997). Expectations of medical care were modest and care was only sought for serious illness or injury. These expectations held steady until mid century, when attitudes started to change (Roth, 1997). This change in attitude was due to the advances made during the periods of war in drugs and technology. Americans began to demand more from their physicians and health care providers. During this period medical care started to become regarded as a right for all instead of a privilege that could be bought. Unions and employers became involved in underwriting some of the costs of health care premiums. During this period most Americans obtained insurance coverage,
mainly through employment, and there was an increase in the use of health care. Without checks on supply and demand, medical costs began to rise and resulted in double digit inflation for health care. Ultimately, business called a halt to the runaway growth.

By the 1960s it had become apparent that if a person were elderly or unemployed, he or she had no health insurance (Sullivan, 1999). In 1965, Medicare and Medicaid were created to solve the problem. Between 1960 and 1990, due to increased insurance coverage, an individual’s out-of-pocket expenses for health care dropped from 50% to barely 20% (Ganske, 1995).

Taylor (as cited in Cesta, 2002) documented trends in health care delivery in the U.S. She broke the trends into three major stages: (a) World War II to 1965 saw the rise of modern medicine; (b) 1965 to 1983 was the development phase when cost containment efforts and commercial interest began playing major roles; and (c) 1983 to the present, was the post modern medicine phase where health care became increasingly “commercialized and commodified.” Following is a brief summary of the major changes presented by Taylor, from the first stage to the present.

1. Health care stopped being something for “human good” and became a commodity.
2. Delivery went from a social service to a complex for-profit industry.
3. The system went from an individual practitioner to an integrated delivery network.
4. There was a vast increase in technology.
5. There was a shift from adequate economic resources to inadequate resources.

6. There was also a shift from financial incentives to do more (fee-for-service) to incentives to do less (managed competition).

7. Regulation went from licensing to a complex matrix of accountability.

8. Orientation shifted from disease/illness to integrated health care.


10. Decision-making went from the physician to third-party payers with some small participation from the provider and patient.

11. Ethics changed from the Hippocratic Oath to the good of the community and business.

12. Professionalism shifted to a “trade mentality.”

The greatest concerns over the three stages have been the cost of health care and the shift from adequate to inadequate resources. Managed care (MC) was introduced to address these concerns. MC was intrinsic to many of the changes seen.

**The Development of Managed Care**

Managed care is a system of health care delivery that aims to provide high-quality care that is cost-effective and accessible. The definition of managed care depends on the training of the author (Peak & Barush, 1999). Its roots are found in the prepaid health plans for immigrants during the 1800s (Frakes, 1997). Traditionally a health maintenance
organization (HMO) was an organized system of care that put the emphasis on health mainly through preventative measures, and MC was the umbrella entity that focused on cost management. Today, the terms MC and HMO are being used interchangeably and indeed the lines that distinguish the two are blurring. In trying to be true to the authors, this review will use the terminology used by the authors of the articles or papers; therefore, in this review MC and HMO will be used interchangeably to reflect the literature and the industry.

Managed care represents, overall, the changing trends in modern medicine (Taylor as cited in Cesta, 2002). In Taylor’s first stage, the continuous increase in health care costs initiated various methods, including managed care, in the hope of stopping or at least slowing the trend. President Truman, in the 1940s, was the first to try to stem runaway health care costs.

During the second stage the government recognized the potential of managed care as a solution to health care inflation. Government spending on Medicare and Medicaid had aggravated health care inflation (Sullivan, 1997). In 1969, President Nixon declared a “massive crisis . . . in our medical system” and began to look to HMOs to control inflation. The Health Maintenance Organization Act, which required employers with more then 25 employees to offer HMO coverage, became law in 1973. HMOs were thus introduced as a MC strategy to address the crisis and for a while slowed health care inflation with their cost control measures. Because HMOs tended to have lower premiums than the fee-for-service plans, many employers had enrolled in an HMO plan.
by the early 1980s (Roth, 1997; Sullivan, 1997).

The third stage saw health care becoming more for-profit, with managed care and third-party payers gaining power, and health care becoming a commercialized commodity. The nonprofit organizations became increasingly fewer and had less decision-making power within the system. The changes presented by Taylor, driven by managed care, resulted in the for-profit organizations becoming the driving force in health care that they are today. By July 1998, 652 HMOs were serving 78.8 million HMO enrollees (Medscape, 1999).

The Employee Benefit Research Institute, a Washington, D.C. research organization, states that 87% of Americans are covered by some form of managed care (Medscape, 1999). This would include Medicaid, Medicare, and private and employee health care. This figure appears high as the Census Bureau in October 1999 stated that 16.3% or 44.3 million Americans had no health insurance in 1998 (Number of Uninsured, 1999) and the census figure may not include the 5.9 million people who were serving jail sentences (Prisoners Poor, 1999), who are often missed in statistics.

Managed care organizations have developed at different rates in various parts of the U.S. (Roth, 1997). In 1998, 15 states had a greater than 35.1% enrollment in HMOs (Medscape, 1999). Eleven states had a 24.5-35.1% enrollment. Nine states had an enrollment of 15.2% to 24.5% and fifteen states had less than 15.2% enrollment, including Alaska, which had a 0% enrollment rate.

Kersbergen (as cited by Cesta, 2002), identified five predominate attributes of
managed care and their defining properties. The first attribute is a business framework characterized by capitated contracts, preauthorizations and care reviews. The second attribute is the organization of the delivery of health care services featuring the integration of health care systems, as seen by managed care organizations (MCOs), HMOs, preferred provider organizations (PPOs), and point of service plans (POSs). The third attribute of managed care is the control of services and resources. This is defined by standardized practice patterns and gatekeepers. The fourth attribute is the use of incentives to control cost by such means as (a) limiting provider and consumer choice and (b) providers and consumers assuming part of the financial risk. The last attribute is that decisions are usually based on business parameters that are bound by (a) a non-health care provider, usually a third-party payer, deciding the allocation or denial of services and (b) the shifting of models from an altruism-based to a business-based model.

Kersbergen (as cited by Cesta, 2002), also identifies three consequences of managed care and the traits that define them. The first is a changing base of power. This is seen by (a) payers using incentives to dictate clinical decision-making, (b) payers limiting the consumer’s choice of providers, and (c) payers becoming the real “customers” of providers and organizations. The second consequence is the ethical dilemmas each provider and organization must face. The most common dilemmas are: (a) is the quality of care being jeopardized? (b) is there access to appropriate care? and (c) is there a disruption in the therapeutic relationship? Third are the conflicts that arise. Some interpersonal conflicts are: (a) providers are torn between personal and
professional values and practice guidelines and decisions imposed by payers; and (b) provider-payer-patient/consumer conflicts regarding values, perceived health care needs and parameters of care allowed by payers. There are group conflicts over the community values, health care needs, and market economics. Professional conflicts concern scope of practice, past and emerging roles, and values. Finally, there is the financial conflict of the provider providing care beyond the contracted amounts resulting in the loss of income.

**Medicare Managed Care**

Medicare managed care (MMC) evolved from the private sectors. Today, most elderly are on the traditional Fee-for-Service (FFS) Medicare (86%, Kaiser Family Foundation, 2001) or a Medicare+Choice plan, which is managed care. If the elderly have a supplement to the FFS Medicare, it is most likely to be some form of managed care.

By the 1960s, the government recognized the potential for controlling cost and enhancing quality (Sullivan, 1997). During the 1980s, cost containment had become a major concern for U.S. companies and the government (Frakes, 1997). In 1983, Medicare adopted the prospective payment system based on DRGs. Hospitals were now paid a fixed amount based on diagnosis rather than on services provided. In 1992, Medicare established the RBRV Scale, which reformed the physician payment system. Private insurance carriers quickly adopted both systems. During the 1990s Medicare and Medicaid followed industry and started turning to managed care to control cost further.
The managed care industry promised that it could control Medicare costs as it had done in the private sector (Goldreich, 1998).

The 1997 Balanced Budget Act (BBA) simultaneously gave Medicare managed care plans many more requirements aimed at stopping fraud and protecting beneficiaries, and gave them less money to do it with (Rovner, 1998). Under the BBA of 1997, the government planned to control cost while encouraging seniors to enroll in HMOs. The BBA re-carved the Medicare managed care pie in an effort to draw more plans to areas with historically lower payments (Rauber, 1998). Previously, HCFA had paid Medicare HMOs rates that ranged from a base of $367 per enrollee per month in many rural counties to more than $700 per month in urban centers such as New York and Miami. The BBA broadened the health plans’ options, changed the way payments were calculated, and introduced a new risk adjustment policy that was to be phased in over five years. To understand some of the challenges Medicare and the government face, the demographics of the older population needs to be taken into account.

Demographics: The Older Adult and Rural Populations

General

Increasing population and age

At the same time the health care (HC) system was reeling from increasing costs, and adopting systems to control these costs, the changing U.S. demographics added to the problem. From 1990 to 2000 those 65 years of age and older increased by 12% or from
31.2 million to 35 million, while the total population increased by 13.2% (Hetzel & Smith, 2001). “Census 2000 was the first time in the history of the census that the 65 years and over population did not grow faster than the total population” (Hetzel & Smith, 2001, p. 1). The segment of the elderly population with the most rapid growth was the 85 and older segment, which increased by 38% or from 3.1 million to 4.2 million. In 2000, there were 50,454 centenarians. California had the largest number of elderly (3.6 million), including centenarians (5,341), but Florida had the highest percentage (17%), unchanged since 1990. By 2050, the elderly population could be 80 million—one in five Americans may be elderly.

Thus, we must ask, with the number of elderly increasing and living longer, can Medicare and MMC meet the service demands for this population?

*Income*

In 2000, 9.9% of the elderly were living in poverty as compared with 12.2% in 1990 (Federal Interagency Forum on Aging, 2001a). In the age 85 and older segment, poverty also decreased from 20.2% in 1990 to 14.5% in 2000. Income for the elderly came from social security (38%), pensions (18%), and sources such as asset income (18%), earnings (23%), or other sources (3%). For the lowest two-fifths income levels of the elderly, Social Security accounted for more than 80% of the income. Black (33%) and Hispanic (22%) elderly were poorer than the white elderly (U.S. Department of Commerce, 1995). In 2001, women tended to be poorer (12.4%) than men (7.0%).
More men tended to live with their spouses (72.6%) while more women tended to live alone (39.6%) (Federal Interagency Forum on Aging, 2001b). While only 21.4% of men age 75 or older lived alone, 49.4% women age 75 or older lived alone.

While spendable income has improved for the elderly, it is apparent that the majority still depends on Social Security and Medicare. Minority elderly are still more dependant on government programs than white males. With the threats to Social Security and Medicare, the promise of managed care (MC) to control cost becomes important.

**Health care expenditure**

The average health care expenditure for the elderly in 1999 was $9,352 compared with $7,757 in 1992 (Federal Interagency Forum on Aging, 2001c). Health care expenditures increased with age. While the 65- to 69-year-old segment averaged $6,711 for health care, the 85-year-olds or over averaged $16,596. Women tended to spend more than men, $9,519 compared to $9,117. Those with the lowest levels of income tended to spend more for health care. The lowest level of income spent an average of $11,672 for health care while the highest spent only $8,052. While most facility costs decreased between 1992 and 1999, skilled nursing facilities and home health care costs rose 0.7%, prescription drugs rose 3.1%, and dental and hospice care rose 0.9%. In the 65 to 84 age group the majority of health care spending was for inpatient hospital and outpatient care, while the over 85 age group spent the majority of its health care dollars on nursing home care. Between 1992 and 1998, perceived access to care improved. In 1998, the 65 to 74
age group was more likely to delay seeking care because of cost than any other elderly age group (Federal Interagency Forum on Aging, 2001c). Black people were also more likely to delay seeking care, due to cost.

Cost and the need for services increase with age. Can MMC control cost as promised while still meeting the demands for this population?

Education

The elderly are becoming more educated (Federal Interagency Forum on Aging, 2001b). In 1950, only 17.6% had a high school diploma or above and only 3.6% had a bachelor’s degree or above. Education steadily increased until 2000, when 69.5% had a high school diploma or above, and 15.6% had a bachelor’s degree or above.

Higher education usually means better jobs. More of the elderly have been paying into the “system” for years. This causes a feeling of “I paid for it, I deserve it,” and strengthens the belief that health care is right rather than privilege. Also, the higher the education the more a person is likely to follow and understand the political process; therefore, the elderly are now more likely to use the political system to meet their needs. Can MMC meet the service demands and keep satisfaction levels high while controlling costs for the elderly population? Does the literature document how well MMC is doing on these three criteria?
Rural Demographics

In examining the impact of MMC on the rural elderly, an understanding of the demographics of the rural population, and especially of the rural elderly, is essential. Between 1980 and 1999, the non-metropolitan population of the U.S. increased from 49 million to 54 million (Economic Research Service, 2000). Between 25-33% of the population was rural (AHRQ, 1996; Make Home, 1999). According to the U.S. Census Bureau, 25.3 million (72.2%) elderly lived in a metropolitan area in 2000, and 7.4 million (21%) lived in a non-metropolitan area (U.S. Census Bureau, 2001). Of the total elderly population, 30.6% were metropolitan males and 41.6% were metropolitan females, while 9.1% were rural males and 11.9% were rural females. These percentages are based on the total population figure of 34,991,753 elderly. The elderly population figures in the Census Bureau’s Table 21, sorted by residence, age and sex (U.S. Census Bureau, 2001), totaled 32,621,000 (rounded to thousands); therefore, 2,378,000 or 6.8% of the elderly population is unaccounted for.

Access to Care in Rural Areas

There have been numerous studies over the years that have documented problems with the rural health care system. To understand the impact of managed care on the rural elderly, one must examine the general, state of the rural health care systems. Access to care has been a major concern over the years.

Access to health care is defined differently at different stages of development
(human, system, and community) and therefore is often inconsistent and unclear (Gulzar, 1999). According to the World Health Organization (WHO, 1978):

Accessibility implies the continuing and organized supply of care that is geographically, financially, culturally, and functionally within easy reach of the whole community. The care has to be appropriate and adequate in content and in an amount to satisfy the needs of people and it has to be provided by methods acceptable to them. (p. 58)

Therefore, when choice is taken away and possible hardship results, the problem of access increases. Almost 12% of all families in 1996, stated they experienced problems accessing medical care (AHRQ, 1998). About 60% stated they were not able to afford the care they needed. Other barriers included insurance-related problems (19.5%), and transportation and child care (21%).

Rural residents tended to have had fewer health resources, a larger percentage of elderly people, been in poorer health, had a higher poverty rates and faced more difficulty in getting to health services (AHRQ, 1996). More than 43 million people in the U.S. could be classified as medically under-served and were heavily concentrated in the inner cities and rural areas (Aaron, 1995).

In rural areas therapists are almost nonexistent and only 18% of nurses and 11-12% of physicians practice in rural areas (NACH, 1999; Orloff, 1998). In rural communities health care services are interdependent; when a rural hospital closes,
doctors, physical therapists, and pharmacists also leave (NACH, 1999). When there are no emergency services or laboratories in the community the rural hospital tends to keep patients for longer periods. Home care and case coordination is difficult without the needed support services. The cost and time alone can be considerable for some rural home care agencies when it can take hours just to reach the patient. The distance problem takes a toll on family members as well, especially when a hospital stay is lengthened just because there are no community resources available for home care.

Almost one third of the rural adults are in poor to fair health and one half have at least one major chronic illness (AHRQ, 1996; Health & Human Services (HHS), 2002). Traumatic injuries are more common and because of transportation problems and the lack of advanced life support, rural residents face worse outcomes and higher mortality rates than do their urban counterparts. In many cases modern medical technology is available only at major hospitals in large cities (Goodman & Musgrave, 1991). Add to this the fact that due to fiscal restraint rural hospitals try to admit less and have shorter lengths of stay than the urban facilities, and the picture becomes even more dismal. The populations of rural areas are frequently of a lower socioeconomic status, which may cause further challenges to the health care system.

The rural elderly are even more at risk for access problems associated with decreased mobility due to chronic illness and age-related problems. They tend to have fewer financial resources with fewer options to increase their fixed incomes. Because of
lower levels of income they tend to spend more for the health care that is available. Can MMC overcome all the challenges that caring for the rural elderly presents and still maintain cost-effective, appropriate care; and does the literature document the status and outcomes in meeting these challenges?

**Rural Elderly and Medicare Managed Care**

Finally, after looking at modern health care, MC, MMC, demographics of the older adult population, rural areas, and access to care in rural areas, we will take a brief look at the rural elderly and MMC. This section aims to clarify the underlying problems and concerns, and along with the review of the literature should facilitate a more accurate determination of the impact MMC has had on the rural elderly.

As of 1996, 23.9% of all Medicare beneficiaries lived in rural areas and 4.3% were enrolled in managed care plans (Unknown, 1996). Though only 45.9% of all enrollees lived in large metropolitan statistical areas (MSAs), almost 75% of all MMC enrollments were concentrated in these areas. Most of the MMC market growth was in established areas instead of through expansion. In 1998, 15% or six million of Medicare’s 38 million beneficiaries were enrolled in HMOs (Goldreich, 1998).

A study by the American Association of Retired People (AARP) Public Policy Institute (Pallarito, 1999) states that Medicare beneficiaries would pay an average of $2,400 apiece for out-of-pocket health care expenses in 1999. For 25% of the beneficiaries the cost was projected to reach $3,000 or more. Out-of-pocket spending
would consume half the income of 1.5 million elderly poor people who did not have additional Medicaid coverage. Prescriptions would account for 17% of the total out-of-pocket expenses, equal to physician care, vision services and medical supplies combined. In 2003, Congress and President Bush passed the Medicare Modernization Act. The impact this will have on seniors, Medicare, and MMC cannot be envisioned at this time.

**SIGNIFICANCE OF THE STUDY**

The American Nurses Association (1980) proposed that nursing is accountable for the accessibility of health care. Nursing tasks include understanding and providing equitable access or accessibility, affordability, and quality of care. To meet the expectation of patients and improve outcomes, quality of care is essential (Lang, Kraegel, Rantz, & Krejci, 1990). Integrative reviews contribute to the process of analysis of results from independent studies to create a comprehensive body of literature (Ganong, 1987). In trying to determine the impact on the delivery of services to the rural elderly population we can assess the accessibility, affordability, and quality of health care. In synthesizing the information from the last 15 years and the changes that have occurred, we can understand where we have been, where we are now, and perhaps where we are headed.

**STATEMENT OF PURPOSE**

Rural areas historically have always had a health care access problem. While affordability is a major factor of accessibility in general, the lack of health care services in
rural areas may be more of an issue for this particular population. Adding in the factors that the rural population may have the tendency to have poorer health, higher poverty rates, and a higher percentage of the elderly, this lack of services makes access even more of a dilemma. MMC has tried to address some of these concerns. However, how well managed care has handled these problems is in question. The inclination of managed care organizations (MCOs) to stay in urban or adjacent areas due to the greater numbers of possible beneficiaries, the history of MC leaving Medicare+Choice programs, the risks that physicians assume in sole practices and the financial problems of rural hospitals, all contribute to the increased risk of rural elders having poor health care access. The purpose of this literature review is to try to determine and describe the impact of managed care on the delivery of health care services to rural elders. This review will try to assess the impact of MMC on the delivery of health care services to rural elders by addressing the questions below.

- What is the impact of MMC on the availability and use of health care services for elders living in rural areas?
- What is the impact of MMC on the costs of health care services for elders living in rural areas?
- What is the impact of MMC on the quality of health care services for the elderly living in rural areas?
- Does the literature tell us how well MMC is doing on the above criteria by
using health status and outcomes?

Through the analysis of the available literature it can be determined if outcomes are being used to measure the elements of quality of care, and by examining the components of health care delivery, the impact of MMC on the rural elderly may be determined. This information may then be used to form strategies and recommendations to guide changes over the next few years.
METHODS

The Framework

The framework of this review is based on Cooper's (1987) *Five Stages of Review*, which I have modified for this project.

Cooper's Stages

1. Problem Formation
2. Data Collection
3. Data Evaluation
4. Analysis and Interpretation
5. Presentation

*The Problem Formation Stage*

The first stage of review began with the broad research question: What is the impact of managed care on the delivery of health care services to rural elders? From this question, the specific research questions were formulated. The specific questions will form the base for the rules of inference.

The next step was to determine how the study was to be defined. It was determined that the definition of rural would be kept as broad as possible by accepting whatever the author defined as rural. The resulting variety of definitions for rural would broaden the result field and give more robustness to the review. For the definition of
managed care, any type of managed care accepted by Medicare+Choice would be accepted. The delivery of health care was determined to have several components: practice, systems, access and utilization, policy, cost and quality. The definitions and word roots of the key words were obtained to determine the meaning of each word and to guarantee correct usage (see Appendix A).

A search for previous reviews was executed. Other literature reviews provide background and a starting place for subsequent research. Three previous reviews were obtained and examined for content and findings. These reviews, which covered the 1980s and very early 1990s, not only gave a history and an understanding of managed care and health care before the period of this review, but also helped define the variables and formulate the specific research questions. Also of interest were the positions of previous reviewers and their conclusions.

Finally, the development of the coding sheets was accomplished. The study and paper data collection tools were adapted from criteria in Polit and Hungler’s (1999) guidelines for evaluating research reports, critiquing the study design, and evaluating the analysis of data. The work of Kiess (1996) was used to guide the evaluation of the data analysis process. The policy and theory data collection tools were adapted from criteria in Chinn and Kramer’s (1995) guide for the critical description of theory (pp. 121-122) and Chin and Kramer’s (1987) guide for the critical reflection of theory (pp. 138-139). These tools were reviewed by the Master’s Report Committee for reliability and validity,
were revised according to their recommendations and were then resubmitted for approval. 
Each document was reviewed using a specific data collection tool, which was determined 
by type of document (see Appendix B1-4).

*The Data Collection Process*

This review covers the years between 1990 and 2004 and is confined to the U.S. 
health care system. It is limited to only English language, peer-reviewed journals and 
other reliable sources. The search contained the key words of impact, managed care, 
delivery of health care services, rural, and elderly. Also used were words similar to the 
key words, such as old for elderly. It was determined by a process of elimination that the 
use of at least three keys words would not only narrow the list, but also give a satisfactory 
return. The computer search was confined to health-related databases. The first database 
searched was Medline, which yielded results of 71,381 entries. This list was narrowed by 
accepting only the articles that had at least three of the key words. The result was 299 
articles. The database of the Cumulative Index to Nursing and Allied Health Literature 
(CINAHL) was searched next; 46 possible articles were selected by the same process 
from an initial list of 3,302 entries. Then, the HealthSTAR database was searched, 
yielding 667 possible articles from 18,607 entries. These three databases together 
produced a list of 1,012 articles. The list was then examined for duplicates.
The next task was to use the exclusion criteria of pediatrics and the non-elderly to eliminate non-relevant articles. The abstracts were examined or, where an abstract was not available, the title. This process eliminated all but 84 articles.

Professional organizations, governmental bodies and lay journals pertinent to the health care of the rural elderly were searched (see Appendix C). The Arizona Health Science Library Catalog was also searched. While downloading or copying documents, each site or journal was examined for additional documents or articles. From these sources another 74 articles and papers were obtained, for a total of 158 articles for review.

The Data Evaluation Stage

Evaluation

Each document was evaluated during data collection. With the assistance of the data collection tools the documents were evaluated for the following:

1 Relevancy – did the data make sense in relation to rural, elderly or MMC; in other words, was it appropriate to the study?

2 Validity – was the data sound and could the results be transferred to other people and conditions or in other words, was the results true. See the “validity” section below for further discussion.

3 Content – were the data or findings contained within the document and did they make sense?

4 Ancestry – were the articles or papers the author cited properly referenced?
5 Location – what area was represented by the data set?

6 Type – what kind of document was it: study, paper, or data?

7 Classification of contents – what kind of study was it: qualitative or quantitative, theory or opinion?

Because some articles had been chosen on title only, 20 more articles were excluded upon review because of relevancy, leaving 138 documents. The data was then aggregated from the collection tools into tables (see Appendix D1-6). Frequency and simple percentages were computed for category headings, location, type, and classification. Then, topic categories were narrowed to reflect the research questions. Demographics were set aside to use in the first part of this report.

Validity

Validity is measured differently for qualitative and quantitative designs, theory papers, and opinion papers. This not only presents problems in data collection but also in analysis. Different data collection tools assisted with the analysis of this review.

For quantitative studies validity encompasses reliability and internal and external validity. Reliability involves the ideas of stability, repeatability or replicability in judging the clarity of the written report (Power & Knapp, 1995) or whether a person can follow the “audit trail” (Lincoln & Guba, 1985). In other words, from the information provided in report does the study seem logical; and could one repeat the study if desired with similar results? Internal validity is concerned with whether the effect on the dependant
variable can be attributed to the independent variable. External validity concerns
generalizability or transferability of the results (Power & Knapp, 1995; Halloway, 1997);
can the findings be transferred to similar situations or populations, such as the general
elderly population in this case?

The criteria for evaluating qualitative studies encompass trustworthiness and
authenticity (Halloway, 1997). Trustworthiness involves the following: (a) credibility,
which corresponds to internal validity, and involves the recognition of the truth of the
findings, or the truth value; (b) transferability; (c) dependability, which is another term
for reliability; and (d) confirmability, or objectivity, meaning the findings are a result of
the research (Halloway, 1997; Lincoln & Guba, 1985). Triangulation, or the use of
different methods or evidence from different sources, is another check on trustworthiness
(Halloway, 1997). This review uses triangulation. Authenticity is present when the
strategies used are appropriate (Halloway, 1997), and not influenced by bias. Bias means
the author was not objective in pursuing his or her research, or the findings do not
represent the population sampled. The data in this review was also examined for bias.

Review validity was guarded by only using the inclusion/exclusion criteria. By
searching as many sources as possible, multiple realizations were actualized; That is to
say, examination of multiple views provided an improved understanding and gave form to
the concept of Medicare managed care’s impact on the delivery of health care to the rural
elderly. Generality, also, was improved through inclusion of a wide range of sources, but
to ensure greater generality and robustness, the broadest possible definition of rural and any form of MMC were used in this review. The operation was detailed, so the review could be duplicated. The methodological quality and the design quality of each study were examined to ensure validity of the outcomes, and any obvious problems in reliability were noted. To support the accuracy of the interpretation, all documents were reviewed and any inadequacies were made note of. Any obvious incomplete reporting of data by the researchers was noted. To ensure the reliability of the coding, the same steps were followed in the data collection, using the data collection tools. To protect the validity of this review assumptions were explicitly stated, and the evidence was distinguished as study- or review-generated.

_The Data Analysis Stage_

During analysis of classification and type, it was found that of the 138 documents, 57.97% dealt with what the authors defined as rural areas, 36.95% dealt with mixed locations of urban and rural areas, and 5.07% dealt with urban areas. Documents that had a national or general orientation comprised 71.01%, while 23.18% dealt with state or local areas, and 5.79% were other or undeterminable.

Researched-based studies were 46.65%, of which 37.68% were quantitative studies and 7.97% were qualitative studies. Discussion or opinion papers comprised 26.08%, policy papers accounted for 18.11%, 1.11% were theory papers, and 8.69% were government data or fact sheets. Most quantitative studies used some form of
multivariate statistical model for analysis. The qualitative studies were mostly ethnographic in nature.

Of the 126 documents that were not government data or fact sheets, the proportion that covered elderly health care services were 30.64%, elderly MC health care services were 26.61%, MC health care services were 13.70%, health care services were 10.40%, elderly MC were 5.64%, elderly were 5.64%, and urban elderly MC health care services were also 5.64%. There was one study on rural MC and one opinion paper on rural populations. Below is a summation of the above categories broken down by location. Also charted is the enumeration of each type (study, paper, or policy) broken down by location. The frequencies were tabulated from the tables.
Figure 1: Type by Location

Figure 2: Content by Location
The frequency of citations for each content section follows below. (Note: number of citations does not match number of documents as an author may be cited in more than one section. If an author was cited more than once in the same section it was counted as only one citation. Percentages were calculated on the total number of citations.) Delivery of health care services (DHCS) was broken into the four components: practice, systems, access and utilization, and policy.

Table 1

<table>
<thead>
<tr>
<th>Topic</th>
<th>Number of Citations</th>
<th>Percentages</th>
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<td></td>
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<tr>
<td>Systems</td>
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<tr>
<td>Access and Utilization</td>
<td>51</td>
<td>26.29</td>
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<td>Quality</td>
<td>18</td>
<td>9.28</td>
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<tr>
<td>Health Status and Outcomes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>194</td>
<td>99.92</td>
</tr>
</tbody>
</table>

Note: DHCS is Delivery of Health Care Services.

Percentages are rounded off therefore do not equal 100%.
REVIEW OF LITERATURE

Since all articles came from peer-reviewed journals and the other documents from government or other reliable sources, most appeared to be valid. One notable exception was McLaughlin, Chernew, and Taylor, 2002, whose design and analysis appeared to be fine; however, some of their assumptions were incorrect and therefore the rules of inference and the conclusions were questionable. They used only one Medigap premium for data comparison, but did recognize this as a limitation to the study. Another study that had questionable validity was Braxton, 2002, who appeared biased. Though she tried to be objective, her study was slanted toward the HMO more than towards the elderly patients. Although her title was The Impact of Managed Care on Elders, and her abstract stated some problems the elderly face with managed care and described a negative impact she did not go on to address these problems in her article. For most of the article she tried to reason that total quality management would be the solution to the problems stated in the abstract, but did not explain why or how total quality management would solve these problems. The study was, however, interesting for what it did cover. Braxton gave some reasons why MMC was having trouble, and noted some current legislation that could affect MMC. She stated case managers would be at the forefront of the new era and gave a couple of suggestions of how case managers could assist the elderly.
Every study, indeed, could have some small issue that might affect validity or reliability, but this is not the focus of the literature review. Following is a list of some other notable articles:

- Berenson and Horvath (2003) gave an excellent step-by-step outline of the process to get approval for policy-covered services. They also gave some good suggestions on chronic care management and Medicare.

- Coburn, Cordes, Crittenden, Hart, Mueller, Myers, and Ricketts (1994) described a framework or methodology that can be applied to assessing the rural implication of any health care reform proposal. They gave criteria and critical areas of inquiry. It would be interesting to see the model in action or to see more written about it.


- Grimaldi (1999) presented an excellent article. It was very well organized and thorough on managed care in the rural areas.

- Gross and Brangan (1998) gave a good explanation of the Medicare Program and a short history. The cost and benefits are now dated, but the authors explained funding, delivery, provider payment and reimbursement.

- Peak and Baruch (1999) wrote a good history of managed care.
• Rice, Biles, Brown, Diderichsen, and Kuehn (2000) gave a good summary of competitive market theory, what it should do and what the health care market is doing. They summarized their points in a useful table.

• Riley, Ingber, and Tudor (1997) should have included rural beneficiaries, but made no mention of them.

• Sidorenko (2001) discussed frameworks on aging.

• Wennberg, Fisher, and Skinner (2002) were strong proponents of classical HMOs.

• White (1997) presented his ideas rather vaguely, and his writing was choppy in some areas. However, he did present an alternative payment system that makes good sense. He suggested true reform by way of a “coordinated payment” system, but added such reform is unlikely with so many participants in the health care reform debate having an economic interest in selective contracting. Also, selective contracting appeals to ideological trends against traditional government methods.

• Wilsford (2000) explained the concept of health care systems.

Summary of Previous Reviews

The examination of previous literature reviews is similar to the literature review in a study. It allows a familiarity with the subject matter before the researcher starts collecting data. Three previous literature reviews were found that covered the 1980s and early 1990s. The first discussed health status, utilization of health services, and informal care of the elderly (Dwyer, Lee, & Coward, 1990). The review, found that though there
was little research that focused on the rural elderly and most of it was contradictory, nine
studies found evident differences in the health status between rural and urban elderly. In
addition, rural elders did not depend on informal support, such as family, any more than
other elders; and rural areas in general remained underserved.

Christianson and Grogan (1990) discussed alternative models to the solo fee-for-
service (FFS) physician. Four models were covered: group practice, community health
centers, community-oriented primary care, and MC systems. Their findings were that
these models had been implemented with little empirical evidence to support them. They
found that studies on the performance of group practices and community health centers
used dated data that raised more questions than it answered. Furthermore, no
quantitative, cross-organizational studies of the impact of community-oriented primary
care and HMOs had been conducted. Their recommendation was that a longitudinal
cross-organizational study needed to be done.

The third review of research articles discussed the health issues of the rural elderly
(Hassinger, Hicks, & Godino, 1993). The authors reviewed migration patterns,
availability, accessibility, utilization and modifications of alternatives to formal health
care services. Eight studies found that the rural elderly were at a disadvantage compared
with their urban counterparts when it came to availability and accessibility. The authors
concluded that the impact of poverty was an important variable in utilization by the rural
elderly. Furthermore, knowledge was discovered to be a key factor in utilization. In
addition, elders needed to know what services were available and how to access them. The authors found that while swing beds were a step in the right direction for alternatives to formal care, hospitals needed to expand more into home care, preventive care and primary care. Also, preventive care needed to make a distinction between urban and rural situations. Finally, the group found much of the research focused on informal care networks, in which some authors reviewed said there needed to be more balance, while other authors reviewed maintained that the need for formal health care services in rural areas was not urgent because of the informal networks.

Models of Health Care Delivery for the Elderly

“Rural models of service delivery to the aged are virtually nonexistent” (Powers, 1999, as cited by Sijuwade, 2002, p. 63). Bulter (2001) suggested the use of already-established communities that have a high proportion of elderly, as living laboratories for interventions and studies. He also suggested the need to keep the elderly working and involved, by matching skills with needs in the community, adapting workplaces and the use of flex time. He also stated a need for health promotion, disease prevention, and urgent care centers in remote areas. He advised the off-hour utilization of public transportation such as school buses and vans to transport the elderly.

Goldsmith’s (President of Health Futures, Inc.) ideal model is a virtually integrated system (Vavala, 1995). It is described as a system where “services are provided to patients through strategic alliances and networks linked together by common
information systems and pooled-risk capitation” (p. 4). Virtually integrated systems have standards for patient care set by agreements and protocols monitored by information systems, and incentives that determine the compensation of physicians and hospitals.

Rosswurm (2001) mentions two other models. The first is the Community Nursing Organization Medicare demonstration project, which had four sites in 1992. The second was the Geriatric Collaborative Care Model, in which physicians, nurses and patients work together as a team.

**Delivery of Health Care Services in General**

To compare the delivery of care to rural areas by MC, one must be familiar with problems in the delivery of care in general. This review examined several articles with this in mind. Four of the components to the delivery of care (practice issues, systems, access and utilization, and policy) will be summarized in this section. To take a principle from market economics, use affects delivery of service and delivery of service affects use.

**Practice Issues**

Not only can practice affect delivery of health care services, but pressures exerted from third-party payers, changes in practice models and availability of providers can have a large impact on the users of health care. The elderly and especially the rural elderly are vulnerable to these effects, even when these practices are not specific to rural areas. Widespread implementation of practice changes in urban areas will filter into rural practices.
The elderly have more chronic illnesses and rural elders appear to have more chronic illnesses than their urban counterparts (AHRQ, 1996). One innovative change in practice that was studied was group visits for the chronically ill (Beck, et al., 1997). They found that group visits for chronically ill patients reduced repeat hospital admissions, emergency care use and cost, delivered certain preventive services more effectively, and increased patient and physician satisfaction, with the unintended benefit of the patient’s perception of improved access to care.

Although Medicare was meant to have no effect on the practice of medicine, efforts to contain costs have radically changed medical practice (Ricketts, 2004). Ricketts believed that Medicare has moved away from being a universal benefit that put the elderly at the center, to being a program that paid providers for what the third-party payers or the government believed should be made available to the beneficiaries. Finally, he thought Medicare’s role had become a mechanism to transfer money for the disbursement of efficient care.

*Managed Care and Its Effect on Practice in General*

Also, MC has contributed to the changes in the practice of health care. These changes have affected provider satisfaction. Many of the changes have been adopted even outside MCOs. Dixon, Kerchner, Edelberg, Ayanian, and Wei (2000) found that the MC policies of checklists, computer-generated reminders, comparisons of resource utilization rates, educational seminars, case management, organized discussions of
specific patients and formal reviews of records, were all felt by physicians to be beneficial to the patient, and physicians were willing to implement these changes. However, the group discovered that physicians felt prior authorizations of tests and consults were burdensome and not beneficial to patients, and many physicians did not want to implement them. Also, Peak and Barush (1999) and Taylor (as cited by Cesta, 2002) concluded that the practice of transferring the risk to the physician is interfering with the physician’s obligation to put the patient first, or the Hippocratic Oath.

However, Tietze (2003) found that the nurse practitioner’s (NP) perception of managed care is more negative in high penetration areas. She found the NP’s perception to be that managed care increases the intensity of illness, decreases length of stay, decreases the available RN staff, and decreases the time they have for direct patient care. Sinha (2003) agrees with Tietze but adds several other perceptions. She concludes that the general perception among NPs was that managed care increases frustration and job dissatisfaction.

Provider-sponsored managed care organizations were found more in the not-for-profit or religious-based hospitals according to Salen, Vaughn, and Rohrer (2002). It appeared to them that the provider-sponsored managed care organizations were able to respond to community health care needs and restore the public trust.

Furthermore, Veal (1995) concluded that African-American providers were excluded from MCOs because of a lack of board certification or eligibility, and African-American
solo practitioners were losing their patients to employer-sponsored MC, which was taking their patients away from culturally sensitive care. Therefore, Veal observed that African-American health care providers are forming their own entities, allowing them to practice as they deem appropriate and allowing the resurgence of the provider as advocate.

A related article presents a different slant to the minority issue. Wallace, Villa, Ennriquez-Hall, and Mendez (2001) report that while on average minority elders have better access to care in general, there are some areas of access that still have large deficiencies. One deficiency that they noted was that there seems to be a large problem with acceptability as most are not receiving culturally sensitive care. Their conclusion was that MMC needs to improve access to minorities before considering mandatory HMO enrollment of Medicare beneficiaries.

_Elderly Long Term Care Practice Model_

Another innovation in practice was studied by Burl, Bonner, Roa, and Khan (1998), who discovered that there was a gain of $72 per resident per month (PRPM) when the geriatric nurse practitioner/physician team (GNP/P) covered long-term care patients, compared with a loss of $197 PRPM for physicians alone. The GNP/P team reduced Emergency Department (ED) and acute care utilization costs as well as overall costs for a cohort of HMO enrollees in long-term care for a net loss of $2 PRPM to the HMO. Fama and Fox (1997) found that the GNP/P teams not only decreased hospitalizations but
increased health status outcomes, but that waivers are needed to use GNP/P teams in rural long-term care facilities.

*Systems Issues*

Health care systems are not only a component of delivery, but can have a direct effect on the elderly. Systems can have effects on access, quality and cost. The following two articles discuss systems in general, but their findings could have an impact on the rural elderly.

Although the chronically ill are the largest consumers of health care, the American health care system is not equipped to meet their needs according to Davis and Magilvy (2000). Berenson and Horvath (2003) found that the traditional Medicare program has had difficulty evolving to support a chronic care model. They believe that although capitation may be the most suitable policy to support provision of care to chronically ill beneficiaries, the current structural restrictions and problems faced in the M+C program limit the use of capitation at this time.

Rueben (1997) found that one of MC’s problems is a rapidly changing environment, which makes program development and clinical trials unrealistic; by the time a program is evaluated, changes have already occurred which make the program obsolete. Instead, MC efforts are set up to provide utilization data for modifying services or continuous quality improvement.
Policy Issues

Governmental policy on Medicare affects all the elderly. Occasionally a policy will have a greater effect on the rural elderly than on their urban counterparts. Below are some policies that affect the elderly in general and some accomplishments by the HHS.

Medicare may rely on federally mandated taxes and legally compelled membership but it is administered largely by private fiscal intermediaries (Stone, 2000). Stone deduced that the trend is distinctly away from any government regulation in determining the delivery of health care. Though payers' control over the content of medical services has risen dramatically, the government has done little to restrain payer control over clinical decisions. She observed that the government seems to be pulling back from the little authority it once exerted over providers to its Medicare and Medicaid beneficiaries. Baucus and Fowler (2002) suggested that efforts should be made to encourage the Center for Medicare/Medicaid Services (CMS) to become a more prudent purchaser of care for beneficiaries, and that Congress must work to rectify vast regional disparities in Medicare spending. In other words, Baucus and Fowler believe that Congress should do what it can do now to make Medicare stronger.

Edelman and Menz (1996) determined policy preferences between rural and urban populations do not vary greatly due to definition of community used by national analysis. They found Medicare beneficiaries comprised 16% of the rural population in comparison to 12% of the urban population in the 1994 HCFA survey.
Ultimately, M+C could not thrive under the conditions of the marketplace and the BBA of 1997 (Gold, 2003). As a result, HHS in 1999 addressed the flawed policy of the BBA and provided excessive payment reductions (HHS, 1999a).

The Balanced Budget Refinement Act of 1999 (BBRA) restored $11 billion over five years, primarily to increase (or enhance) provider payments (Dubow, 2001). Congress adjusted the Medicare+Choice payment methodology (Data Digest #47, Payment to M+C Organizations, April 2000 as cited by Dubow, 2001). Floor payments would pay M+C organizations more than Medicare would have spent on the same beneficiaries in the original Medicare Program by an average of 12% (Medicare Payment Advisory Commission Report to Congress, March 2001, as cited by Dubow, 2001).

In 2000, HHS through policy changes and savings extended the finances of the Medicare trust fund to 2024, meaning that Medicare would remain solvent until 2025 (HHS, 2000). HHS also implemented a new prospective payment system for outpatient hospital services and home health and expanded preventive benefits, nutrition therapy and glaucoma screening (HHS, 2000).

HHS (2001a) in 2001 formed the Rural Task Force and expanded community health centers with $124 million increase in funding to serve up to one million more individuals with 100 new sites, and expanded service at 100 existing sites to bring the total to 1,200 centers. The CHC budget for 2003 was 1.5 billion (HHS, 2002). HHS (2001a) renamed HCFA as the Center for Medicare/Medicaid Services and restructured it into three
operational divisions: the Center for Medicare Management, the Center for Beneficiary Choices, and the Center for Medicaid. It streamlined the enrollment form for providers.

“[This is the] most significant improvement to senior health care in 40 years;” stated Secretary Thompson on the new prescription drug bill (HHS, 2003). “Seniors will now have access to modern medicine delivered in a modern way.” The bill also creates equity in ways rural areas are funded under Medicare and improves access to physicians, hospitals, ambulance companies, labs, hospice and home health agencies. A well-designed Medicare drug benefit would be especially beneficial to the rural elderly because they either lack coverage or have less generous coverage according to Mueller and Schur (2004).

In summary, the main points for the section on the delivery of health care in general are:


2. NPs have negative perceptions of MC that appear to worsen with higher penetration rates (Tietze, 2003; Sinha, 2003).

3. Provider-sponsored organizations, found mostly in not-for-profit and religious facilities, may be able to respond to community needs and re-establish trust of patients (Salen, et al., 2002).

4. African-American providers may be excluded from MC (Veal, 1995).

6. GNP/P teams save money and increase satisfaction and health status in long-term care patients (Burl, et al., 1998; Fama & Fox, 1997).

7. The American health care system is not equipped to handle chronic illness (Davis & Magivly, 2000; Berenson & Horvath, 2003).

8. MC may not be able to develop programs or run clinical trials due to rapid changing environment characteristics (Rueben, 1997).

9. The government trend is away from regulation and enforcement (Stone, 2000; Baucus & Fowler, 2002).

10. Urban and rural policies do not seem to vary much due to government definition of community (Eldeman & Menz, 1996).

**Delivery of Health Care Services in Rural America**

Just as examining delivery of care in general is important, it is also important to examine delivery of care in rural America separately from the elderly and MC.

**Practice Issues**

The National Health Service Corps (NHSC), a division of the HHS, was established in 1977 to expand the ability of people in health professional shortage areas (HPSA) to access primary care services by, offering financial assistance to health care providers. Growth in the NHSC continued until 1986 when legislation eliminated the scholarship
program (Hicks, 1990). NHSC professionals dropped from 3,000 in 1983, the peak (Nampiaparampil & Rising, 2002), to between 200 and 300 in 1992 (Hicks, 1990). In 1999, the NHSC placed 2,526 providers, which by this time included nurse practitioners and dentists (GOA, 2000, as cited by Nampiaparampil & Rising, 2002). In 2002, 60% of the 2,400 clinicians practiced in rural areas (HHS, 2002). President G.W. Bush gave the NHSC $192 million in the budget for 2003. Today, the NHSC uses two ways to recruit providers: loan repayment programs and the re-creation of the scholarship program, which grants about 400 scholarships per year. The loan repayment program has shifted to a two-year contract with the option for renewal. The NHSC represents only 5% of the physician workforce (Mullan, 1997 as cited by Nampiaparampil & Rising, 2002). More than 60% of the providers continue to practice in underserved areas after finishing their contracts, usually in a different locale (Nampiaparampil & Rising, 2002). Bowman and Penrod, 1998 (as cited in Crittenden, 1999), also observed that residents who receive training in rural areas are more likely to settle in rural areas. Finding the best way to solve the access problem may require a mix of providers (Pol, 2003).

Networks exert pressure on providers to meet quantity standards (Pol, Rouse, Zyzanski, Rusmussen, & Crabtree, 2001). This group found that rural physicians who are free from this pressure could spend more time with patients and often treat all the members of a family. Consequently, they inferred that if rural residents could get into a clinic, care was as good if not better than in urban areas. Pol et al. attributed this in part
to the characteristics of rural residents: They expect to wait and to have longer visits, and frequently request vaccinations. Therefore, the group concluded that the more time rural physicians spent with patients, the better the continuity of care, and that rural physicians consistently delivered a higher percentage of preventive health services.

MC and it's policies of efficiency are changing the spirit of rural nursing (Cogdon & Magivly, 2001). These authors discovered that rural nurses had historically combined the principles of traditional and contemporary practices and were deeply committed to patients and a community value of personalized care. Cogdon and Magilvy obtained the knowledge that certain themes lay behind rural nurses leaving the field in exasperation. In short, the increased number of patients, staff shortages, more acutely ill populations, increased reimbursement efforts and paperwork had resulted in decreased patient care and the resulting frustration and disillusionment. This affects access on all levels. Cogdon and Magivly suggested that the rural nurse often provides the stable patient/provider relationship in the system and if the nurse leaves then that relationship is broken and access is affected.

*Systems Issues*

Alexy and Bletcher (1997) deduced that the pressures that are jeopardizing the viability of rural hospitals are: a falling census due to the Prospective Payment System (PPS); limited means of raising capital; and the hospitals serving an economically constrained population, which does not have widespread insurance coverage. Rural
elders’ income is 20% below that of urban elders due to a lower social security income, smaller savings, less income from pensions and few opportunities for part-time work (Alexy & Bletcher, 1997). In fact, Alexy and Bletcher determined that nearly 10% of older persons living in nonmetropolitan areas not adjacent to a metropolitan area are receiving Medicaid or other public assistance. This compares with 5.8% of elders living in metropolitan areas (Coburn & Bolda, 2001).

Similarly, rural hospitals’ economic resources are limited because of low personal income, a fragile tax base, and a lack of corporate or private giving (Bull, Krout, Rathbone-McCuan, & Screffler, 2001). Also, there are few economies of scale, with a single provider often dictating cost and quality. Bull et al. determined there is a lack of a trained labor pool. Therefore, rural hospitals are slow to introduce new technologies. Bull et al. deduced the rural labor market is becoming more service-oriented. Additionally, because members of the baby boom generation have spent most of their working life in two-income families, their expectations of services have increased (Bull, 1998 as cited by Bull, et al., 2001).

At the same time, formal hospitals and community-based services are interdependent (Bull, Krout, Rathbone-McCuan, & Screffler, 2001). It was determined by the group that there is a slow breakdown in the infrastructure of most rural communities. Therefore, they concluded that maintaining or restoring access to certain “security blanket” services may contribute to the sense of community. Unfortunately, most of the rural programs are
urban programs that have been poorly adapted to the rural areas (Rosswurm, 2001). Finally, Ahern and Mcoy (1993) also determined there was some evidence that indicates rural areas have weaker local economies, a disproportionately high number of uninsured patients, and financially troubled hospitals. Rural hospitals often have increased risk of closure due to effects from weak economies, competition from other hospitals, and payment system squeezes since greater proportions of their revenues come from Medicare patients (GOA Report, 1991). The GOA Report concluded that cross-subsidization is no longer effective, due to decreased profit margins.

*Managed Care and Rural Health Care Systems*

Medicare has not been especially kind to rural hospitals and MC structure is based on a payment system that clearly discriminates against rural communities (Ricketts, 1999). Increase of negotiated fees with HMO and PPOs and resulting volume and case-mix intensity, have generally not been favorable to rural hospitals, especially the small hospitals in low-density areas (Moscovice, 1989, as cited by Buczko, 1994; Prospective Payment Assessment Commission (ProPAC), 1992 as cited by Buczko, 1994).

Robinson (1996) feels that MC is shifting the acute care hospital from the center toward the periphery of the health care system. He determined that between 1983 and 1993, the number of community hospitals declined by 9%, beds by 21%, inpatient days by 21%, and inpatient surgical procedures by 33%. The for-profit sector lost 28% of their facilities and 27% of their beds, while the nonprofit sector lost 15% of their facilities and
6% of their beds. Buczko (2001) reported rural hospitals represent one half of all hospitals and one quarter of all hospital beds.

A high proportion of rural hospitals are already involved in MC activity, mainly through contractual relationships (Salen, Vaughn, & Rohrer, 2001). Many rural hospitals joined multi-hospital networks, alliances or systems to increase their viability and to better cope with the growth of MC during the 1990s (Moscovice, et al., 1999 as cited by Buczko, 2001).

*Developing Medicare Managed Care in Rural Areas*

Many challenges are involved in promoting MC readiness through network development in rural areas (Fasciano, Felt-Lisk, Ricketts, & Popkin, 1999). Fasciano et al. determined that stakeholders need to be strongly motivated and the strongest motivator appears to be fear. Mueller, Shay, Fletcher, and McBride (2001) observed several factors encouraged MC development. These factors are: the motivation of providers, compatibility with delivery systems, consistency with other programs, and obtaining business objectives. Networks can support and maintain the infrastructure of rural communities (Ricketts, 1995).

Since patients are scarce, pursuing a MC strategy requires a significant commitment in terms of financial and other resources from hospitals (Salen, Vaughn, & Rohrer, 2001). Salen et al. determined that larger hospitals have the resources to pursue an establishment of MCOs. Also discovered was that high competition in the marketplace increased the
likelihood of rural hospitals pursuing a MC strategy; but the higher the potential demand in an area, the less likely a rural hospital was to pursue MC strategies, because the higher demand usually provided a rural hospital with enough patients, resulting in a decreased pressure to explore other strategies. Salen et al. reported that there was no significant relationship detected between poor performance and pursuing a MC strategy. McBride and Mueller (1999) found that the implications for growth of MC options in rural areas are still unclear.

MC is forcing rural health care providers to re-evaluate the demand for their services and their ability to price those services (Wells, 1996). Wells found that rural health care providers’ leverage was determined by the scarcity of services in the area, but that quality, access, and cost influenced their leverage power. Also, in markets with many providers and a large number of plan members MC had been able to determine price and available services. Wells determined that market ruling factors related to what consumers wanted; or in other words that the rural members were unlikely to choose a plan that excluded local providers. He discovered that one of the most common strategic issues facing rural provider organizations related to alliances and mergers. For example, in urban-adjacent areas it is common for an urban hospitals to offer rural organizations the use of its MC contracting power to ensure inclusion of the rural organizations in the plan. Consequently, he concluded that any MC strategy a hospital develops must be
closely coordinated with its physicians because physician roles and attitudes would dictate the options that were available.

The most successful rural programs are home-grown, and based on local interest and talent (Bull, Krout, Rathbone-McCuan, & Screffler, 2001). Consequently, the group determined that funds need to be administered at the lowest possible level, and programs should be adapted locally. Bull et al. concluded that a reduction of duplicate services would help stabilize the infrastructure and help keep local hospitals open.

Moscovice, Casey, and Krein (1998) found that rural MCOs tended to be some of the largest MC organizations, often with their headquarters in an urban area; and that frequently the MCOs were rural in name only, with very few rural members. The group reported the barriers to rural MC include the adjusted average per capita cost (AAPCC) rates, inadequate physician supply, perceived unprofitability and adverse selection, and the increased cost of marketing and administration.

In contrast to other studies (AHRQ, 1996; HHS, 2002; Dwyer, Lee & Coward, 1990), Call, Casey, and Radcliff (2000) concluded that common chronic conditions are not more prevalent among the rural elderly, but that it costs more to treat those chronic conditions in a rural area. They also concluded that the BBA of 1997 adjusted the variances of the AAPCC, which they believed would correct the differences in cost between urban and rural areas.
Access and Utilization

If a health care system or program presents an access or utilization problem to an urban population, the same system or program will cause the corresponding rural population even more of a problem. Therefore, one must look at access and utilization in general to determine if there is a system problem or one specific to the rural population.

The Institute of Medicine defines access as “the timely use of personal health services to achieve the best possible health outcomes” (Institute of Medicine, 1993, p. 4 as cited by Comer & Meuller, 1995). The concept of access includes the following elements: availability, or do the appropriate services exist; accessibility, or how easy or difficult is it to use the service; affordability; accommodation, or the relationship between providers and patients; acceptability, or acceptance by patients and providers of each other; a match of expectations and values; and achievement, or what medical care the patient received (Penchansky & Thomas, 1981 as cited by Comer & Meuller, 1995; Wallace, et al., 2001). Lago, Stuart, and Ahern (1993) inferred that differences in availability are more important than demographic or economic characteristics, but then described the aspects of availability as population density and adjacency to a Metropolitan Statistical Area (MSA). A MSA is a place of at least 50,000 population or a Census Bureau defined area with a total urban population of at least 100,000 except in New England where it is 75,000 (Johnson-Webb, Baer, & Gesler, 1997).

While the Critical Access Hospital (CAH) program has the potential for increased
access to care for the elderly, the primary financial analysis has shown negative financial outcomes (Reif & Ricketts, 1999). Reif and Ricketts observed that individual states are concerned about potential gaps in emergency services, and meeting the length-of-stay requirements. They noted the CAH program was a major component of the BBA, 1997's Medicare Rural Hospital Flexibility Program. Moreover, they reported the Rural Hospital Flexibility Program grew out of the Essential Access Community Hospital (EACH)/Rural Primary Care Hospital (RPCH) and the Medical Assistance Facility (MAF) programs. HHS (1999a) improved the CAH programs. In 2000, HHS awarded additional grants under the CAH program, of $125 million to 250 small rural hospitals over five years (HHS, 2000).

Policy Issues

Hermenova, Brown, Goins, and Briggs (2001), reported that any project on rural aging is in fact addressing the concerns of more than 60% of the world’s elderly. However, National data often obscures state-level issues that are important to rural health policy development (Kralewski, Liu, & Shapiro, 1992). For instance, Pol (2003) suggested having the Vital Statistics use outcome measures, aggregated to place by using different surveying methods that would increase comparison and separate access from delivery effects.

hospitals with fewer than 100 beds (HHS, 1991b). The BBRA complemented the special protection for rural hospitals with the outpatient PPS system (HHS, 1999a).

Communities have created fixed infrastructures that depend on medically underserved areas and populations (MUA/P) and health professional shortage area (HPSA) funds and resources (Ricketts, 1999). In 1998, new rules were proposed that would combine the two and change the method of determining underservice. Up to 205 rural communities could lose their designations, federal benefits, and years of investment in the local health care system if the clinic or practice closes. Goldsmith (1999) stated the proposed new rules could result in a county that has no or very few providers, but is not eligible for funding because it does not meet the other criteria.

In summary, the main points for the section on delivery of health care to rural areas are:

1. If funding continues for the NHSC, it will continue to be a good source for rural health care providers. In 2002, out of the 2,400 practitioners in the program, approximately 1,400 will practice in rural areas during their contracts and 864 will continue to practice in rural areas after their contracts are through (Hicks, 1990; Nampiaparmpil & Rising, 2002; GOA, 2000; HHS, 2002; Mullan, 1997; Bowman & Penrod, 1998).

2. Rural solo practitioners seem to provide quality care comparable to urban areas (Pol et al., 2001).
3. Rural nurses, often the ones who provide the stable patient/provider relationship, are leaving nursing due to the changes in practice (Cogdon & Magivly, 2001).

4. Rural hospitals were under economical constraints before the changes to the system. Since the cost measures of Medicare and MC, many are under severe economical constraints (Alex & Bletcher, 1997; Bull, et al., 2001; Ahern & McCoy, 1993; GOA, 1991).

5. The demand for health care services will increase with baby boomers and succeeding generations (Bull, et al., 2001).

6. Rural hospitals and community based services are interdependent (Bull, et al., 2001).

7. Most rural programs are poorly adapted urban programs (Rosswurm, 2001).

8. Medicare and MC discriminate against rural hospitals (ProPAC, 1992; Buczko, 1994).

9. MC seems to be shifting the hospital to the periphery of the health care system (Robinson, 1996).

10. High numbers of rural hospitals are already involved with MC through MC contracts (Fasciano, et al., 1999).

12. Rural providers and organizations are not without leverage (Wells, 1996).

13. MC needs to adapt programs locally and administer funding at a local level (Bull, et al., 2001).

14. Rural MCOs tend to be large, have their headquarters in urban areas and have few rural members (Moscovice, 1998).

15. Call et al. (2000) had different findings than many other studies (AHRQ, 1996; HHS, 2002; Dwyer, Lee, & Coward, 1990) on the prevalence of chronic illness in rural areas.

16. CAH has potential to correct some access problems, and the program is expanding but still needs supplemental funding (HHS, 1999a; Rief & Ricketts, 1999).


18. M+C plans could not thrive under the BBA, and the BBRA of 1999 tried to solve some of the problems caused by the BBA (Gold, 2003; HHS, 1999).

19. The BBRA implemented new payment system for ancillary services (HHS, 2000).

20. Rural communities have fixed infrastructures that are dependant on government designations (Ricketts, 1999).
Delivery of Health Care Services to Rural Elderly

Now that delivery of health care services in general and in rural areas have been examined, it is time to look at the delivery of health care services to the rural elderly. Issues that affect delivery to rural elders may impact MMC.

Practice Issues

Davis and Magilvy (2000) discovered that the lack of a stable relationship with physicians because of high turnover is especially troublesome to rural elders. It is threatening for rural residents to seek health care that requires them to admit a health decline (Goin & Mitchell, 1999). Goin and Mitchell discovered the elderly perceived a decline in health would mean a loss of livelihood and/or independence.

Systems Issues

Kralewski et al. (1992) concluded that rural areas have the highest levels of use of post-acute and skilled nursing facilities (SNF). Conversely, they found rural areas also have the lowest number of hospital beds and five times fewer physicians, but have more SNF beds. The group reported a significant correlation between provider availability and service use, and often across service categories.

Access and Utilization

Regrettably, Rabiner (1995) found non-institutional options are regrettably, not often considered in the U.S.. Nevertheless, he observed older adults living in more remote rural areas are both more likely to want but not use medical care, and less likely to use
some home-based and community-based services. As a result, he concluded that there was some evidence of inequity in the provision of these services to older adults in rural America.

Fitsgerald, Morgan, and Morris (2004) found that 70% of rural residents could be cared for in community-based alternative settings such as the Program for All-Inclusive Care for the Elderly (PACE). They determined that in 2002, almost all of the PACE programs were located in urban settings, though the program became permanent with the BBA. They reported that the National Rural Health Associations and the PACE programs had begun to develop rural models.

Changing family support often leads to nursing home admissions for the rural elderly (Cogdon & Magivly, 2001). Providing long-term care within the confines of the rural system puts a strain on families and communities (Coburn, 2002). Coburn suggested that two key barriers needed to be overcome to improve the availability and accessibility of health and long-term care services to the rural elderly: the current financing of long-term care in general, and the need for better models for delivering services in rural communities (Coburn & Bolda, 2001).

Sterns, Slifken, and Edin (2000) learned low income has a more pervasive and problematic relationship to self-reported access, satisfaction and utilization than does rural residence. Rural respondents do not indicate access problems, according to the Medicare Current Beneficiary Survey of 1993 (as cited by Sterns, et al., 2000). Stern et
al. determined that this finding may stem from differences in rural residents’ expectations regarding access or willingness to accept appropriate substitutions to traditional care. Their belief was that poverty is a significant barrier to care both by beneficiaries not being able to afford care and by communities not being able to recruit health care providers (Silver, Babitz, & Magill, 1997; Dennis, 1998; Cordes, 1989 as cited by Kralewski, et al., 1992).

In 1958, 32% of the elderly population had not seen a physician in the preceding year (Seacomb, 1995). By in 1970, the elderly who had not seen a physician in the preceding year had decreased to 24%.

Franks and Clancy (1997) discovered that male patients were more likely than females to be referred. Furthermore, HMO insurance may reduce this gender disparity and increase the access of patients with Medicaid and Medicare to specialty care.

Rosenblatt and Hart (2000) determined there was a relative shortage of physicians in rural areas, with family practitioners being the largest single group of physicians in rural areas. They believed one way to improve access was to improve the delivery of telemedicine to rural areas by resolution of the professional licensure regulations, and by allowing physicians in metropolitan areas to make their expertise available to remote rural areas, even across state lines.

Davis and Magilvy (2000) discovered that for rural elders the main determinant of feeling healthy was taking care of themselves, by remaining independent and retaining
control over decision making. They found total dependence on medical care was considered not healthy and families routinely used herbs and other alternative practices. A delay in seeking formal medical care or rejection of medical advice was not interpreted by the rural elderly as a lack of “self-care” behaviors but as an indication of personal knowledge of illness and attempts to develop programs reflecting individual life experiences. Goin and Mitchell (1999) perceived that since the rural elderly are used to hardship they are more likely to take poor health in stride. Davis and Magilvy (2000) ascertained that living with chronic illness is a proactive, shared learning process shaped by interrelationships. Rosswurm (2001) stated that traditional cultural values and practices keep rural elders from relying on health care services.

Himes and Rutrough (1994) found that self-reported health is the most consistent predictor of health care. They learned children or spouses act like gatekeepers, providing transportation and urging the seeking of medical attention. Their conclusion was the effect of rural residence appeared to operate largely as a proxy for lack of availability and accessibility of services.

Sijuwade (2002) concluded that the differences between an elder’s expression of need and a provider’s evaluation of need were so great that any direct method of assessment of need would probably not work.

Hamdy and Forrest (1997) found that elderly people do not use EDs in proportion to the number of elderly in the community (15.2% versus 19.3%). They
discovered a higher percentage of the elderly require hospitalization and arrive with urgent conditions. Bushy (1990 as cited by Giltinan & Murry, 1992) believed generally, rural elderly will not seek health care until a problem interferes with their ability to work or function. Furthermore, the elderly delay seeking care for new illness and the under-utilization of preventative or primary health care can lead to avoidable disease progression and secondary complications, which in turn lead to hospitalizations (Kralewski, et al., 1992).

Kassab, Luloff, Kelsey, and Smith (1996) deduced that differences exist among the rural elderly in terms of access to and utilization of healthcare services, especially outside the hospital. Major barriers to service are: isolation with respect to distance; hostile terrain; and, with automobiles as the only choice of transportation, a lack of good roads (Bull, et al., 2001; Schoenberg & Coward, 1998). Also, perceived rigid program eligibility standards, confusion about how to access services, a lack of knowledge and limited access (in that too few programs exist) are also seen as barriers to access among the rural elderly, concluded Schoenberg and Coward (1998). They found the smaller the community is, the greater the percentage of the population is 65 or older. In addition it was determined that in many states one half or more of the older population are rural. Foley and Gibson (2000) learned beneficiaries encountered barriers to health care due to caregiving responsibilities, living arrangements, and provider attitudes.
Buczko (2001) concluded that rural Medicare beneficiaries’ inpatient hospital utilization was basically stable between 1990 and 1998. He found that while the percentage of rural beneficiaries being treated in urban hospitals increased slightly, it was not a large scale movement, but the result of beneficiaries seeking specialized high technological care that only large urban hospitals could provide. According to Buczko, during the 1990s more than 60% of beneficiaries in rural areas used the nearest hospital. This study confirmed his earlier study (Buczko, 1994) and Adams and Wright (1991) study which found this to be true also. Buczko (2001) suggested that rural Medicare beneficiaries in most regions were not having an access problem with inpatient care, but the higher utilization rates could reflect ambulatory-care access problems or the need for primary care. Patients covered by either commercial or MC insurance has the highest hospital bypass rates (Radcliff, Brasure, Moscovice, & Stensland, 2003). The rate of hospital bypass is lowest in the Medicare group and bypass is affected by type of admission, with cardiac being the highest diagnosis for hospital bypass. Only 10% of rural hospitals performed heart catheterization and only 4% performed angioplasties in 1996 (Moscovice, et al., 1999 as cited by Buczko, 2001). In contrast Borders, Rohrer, Hilsenrath, and Ward (2000) found the perception by the elderly of the quality of their local delivery system had a strong impact on whether they bypass local providers, whereas according to Basu and Cooper (2000), illness severity and local shortages of inpatient care were two major factors driving admissions from rural areas.
Most rural hospitals are small facilities with less than 100 beds and two or fewer full-time physicians (Moscovice, et al., 1999 as cited by Buczko, 2001). Moscovice believed rural patients were more likely to be transferred from their resident county (a sign of severity). An explanation might be that those far from services might self-medicate more often and wait longer to seek medical care according to Pierce et al. (1998 as cited by Basu & Cooper, 2000). Rosenblatt and Moscovice (1982 as cited by Borders, et al., 2000) reported people often feel a greater sense of security when medical care is locally available. Cheh and Phillips (1993) deduced that when rural beneficiaries are treated outside their local area there is an increased likelihood of the discharge planner at the hospital not knowing about the type of services available in a beneficiary’s local area. Consequently they think this may result in a disruption in the continuity of care and poor outcomes.

The nursing-home-to-hospital transfer problems may be symptomatic of fragmented or misaligned incentives in state nursing home and federal hospital reimbursement policies (Frieman & Murtaugh, 1995; Ouslander, Weinberg, & Phillips, 2000; Sterns, et al., 1996 as cited by Coburn, et al., 2002). The Medicare PPS system was designed to contain spiraling cost by creating incentives for hospitals (Bray, Carter, Dobsen, Watt, & Shortell, 1994). Disproportionate share hospital (DSH) payments, or PPS-Medicare Part A payments were designed to compensate hospitals that treated a greater proportion of
low-income persons (Caplan, 1998). The system was changed in 1998 because it was paying large urban hospitals who did not treat a high number of Medicare patients.

The rural system makes health care transitions a time of crisis for the elderly and their families (Cogdon & Magivly, 2001). They found decisions are often made in times of fear, and made hastily because the illness was not anticipated or the individual had not planned for long-term care. Furthermore, a lack of collaborative decision-making, especially for long-term care, resulted in poor planning and discontent among the elderly. Cogdon and Magivly determined that limited knowledge of local resources by health care providers, patients, and family had exacerbated this crisis. They discovered that Home Care Nurses are the most knowledgeable about long-term care options. They suggested the elderly delayed entry into health care due to dread of dealing with the system and remained at home until a crisis point was reached. Inconsistencies in the distribution of health care services, hospital closings, home care agencies opening and closing, few alternative living facilities (assisted living or board and care homes), inconsistent discharge planning (thoroughness and nature of outcomes vary across communities and health care settings), all make nursing homes not the first choice but often the only choice these elderly have, concluded Cogdon and Magivly as well as McConnel and Zetzman (2003). Also, both sets of authors believe the problem is compounded by limited bed availability in the desired nursing home and the distances one had to travel to the next available nursing home.
*Policy Issues*

Cheh and Phillips (1993) found that rural beneficiaries received fewer home care visits than the practice guidelines stipulate. Their impression was that since travel costs are higher for rural agencies, the agencies limit their service areas so that they can meet MC cost limits. Rural beneficiaries have fewer total home visits, decreased resource consumption and increased aide utilization, but also have decreased physical therapy and occupational therapy (Schlenker, Powell, & Goodrich, 2002). Schlenker et al. concluded that rural elderly patients received fewer home visits and did not meet discharge outcomes. According to Cheh and Phillips (1993), rural home care agencies appear to be substituting skilled nurses for physical therapists.

According to Dansky, Branon, Shea, Vasey, and Dirani (1998), the number of home health visits was 3.5% higher in remote rural areas than in urban-adjacent rural areas. This may indicate substitution of home visits for community services in those areas, thus providing a safety net. Urban-adjacent areas had the least number of visits of all.

Ricketts and Heaphy (2000) discovered rural hospitals have survived in the present system partly because Medicare payment policies that were discriminatory to rural hospitals have been altered by legislation, and partly because there is a justification for the location and mission of hospitals in rural places. They report that in early 1998 the 2,182 non-federal, acute-care rural general hospitals made up 45% of the total hospitals. Ricketts and Heaphy discovered the majority of rural hospitals are government-owned or
fall under some other nonprofit classification. Additionally, a larger proportion of rural hospitals (23%) are contract-managed, compared with only 7% in urban areas.

Many authors had comments or suggestions for reform of the Medicare system. Langmore (2001) felt that perspective is needed to insure that older people in rural areas receive a more equitable share of available resources. Wallace and Hirst (1996) showed that one of the purposes of the Older Americans Act, that of providing services for socially isolated rural elders, is not being met. Wennberg, Fisher, and Skinner (2002) proposed that Medicare eliminate under-provision of effective care; establish patient safety; support outcomes research; establish shared decision making for preference-based treatments, chronic disease management and end-of-life care; establish accountability; and promote conservative practice.

Ricketts (2000) concluded that only a comprehensive policy, one that links health care resource distribution with underlying economic forces and overall economic planning, can deflect or reverse the factors that cause the imbalance. Yet the United States has no such policy, a fact that individual states are learning as they attempt to bring the rural regions into the twenty-first century. Ricketts (2004) reported that policy makers often feel it is easier to try an equalized resource distribution (in this case, setting equal rules for provider conduct) than to seek equal outcomes or opportunity for equal outcomes, accepting that there are reasonable differences in the caregiving structure that must be accommodated or adjusted for in rural areas. Rural populations are often
overlooked and have little if any organized political advocacy (Bull, et al., 1991 as cited by Bull, et al., 2001).

The summary, of the main points of the section on delivery of health care services to the rural elderly are:

1. High turnover in health-care providers is troublesome for elders (Davis and Magivly, 2000).

2. Rural areas have more SNF beds but fewer hospital beds and physicians than urban areas (Kralewski, et al, 1992)

3. Often a SNF is the only choice the elderly have in rural areas and this places a strain on the system, families, and patients; but the PACE program may offer relief (Rabiner, 1995; Fitsgerald, et al, 2004; Cogdon & Magivly, 2001; Coburn, 2002; Coburn & Bolda, 2001; McConnel & Zetzman, 2003).

4. Poverty may be more of a barrier to access than place of residence (Sterns, et al., 2000; Krawewski, et al., 1992).

5. The elderly are visiting physicians more (Seacomb, 1995).

6. HMOs may reduce gender discrimination in specialty referrals (Franks & Clancy, 1997)

7. Rural areas still have a shortage of physicians (Rosenblatt & Hart, 2000).
8. Rural elderly may have different personality characteristics that may be affecting access (Davis & Magivly, 2000; Goin & Mitchell, 1999; Rosswurm, 2001; Sijwade, 2002).

9. Rural residence may be serving as proxy for availability and access (Himes & Rutrouogh, 1994).

10. Rural elders use the emergency department less but are more gravely ill when they come in (Hamdy & Forrest, 1997; Giltman & Murry, 1992; Kralewski, et al., 1992).

11. There still are differences in access and utilization between rural and urban elderly (Kassab, et al., 1996; Bull, et al., 2001; Schoenberg & Coward, 1998; Foley & Gibson, 2000).

12. Rural elderly usually bypass local providers only when there is a need specialized care, or their condition or insurance demands it (Buczko, 2001; Buczko, 1994; Adams & Wright, 1991; Radcliff, et al., 2003; Basu & Cooper, 2000), but Boders et al. (2000) found severity of illness and local shortages to be factors in bypass. Cheh and Phillips (1993) identified problems with discharge planning when local providers are bypassed.

14. Transitions are a time of crisis for the rural elderly due to lack of knowledge by patient, families, and providers (Cogdon & Magivly, 2001).

15. Rural elderly receive fewer home visits and do not meet discharge outcomes, and agencies seem to be substituting skilled nurses for physical therapists (Cheh & Phillips, 1993; Schlenker, et al., 2002). Nevertheless, Dansky et al. (1998) found the number of visits to be greater in remote areas than in urban-adjacent areas.

16. Rural hospitals have only survived due to legislation adjustments and financial assistance (Ricketts & Heaphy, 2000; HHS, 1999a; HHS, 2000; HHS, 2001).


Research Question #1: The Delivery of Health Care Services by Managed Medicare to the Rural Elderly

Rueben (1997) found several problems with MCOs. He determined that MMC organizations shift the burden of caring for the frail to FFS. In addition he concluded that access to needed care is often confusing and complicated, and the quality of the care is uncertain.
There was a strong incentive for MMC to avoid beneficiary hospitalizations as the HMO is responsible for all Medicare expenses (Fama & Fox, 1997). Fama and Fox determined that nursing custodial care was not a covered benefit of Medicare, therefore it depletes the system.

Only 15% of beneficiaries in rural areas had access to M+C plans, 33% of beneficiaries had access before the BBA and only 3% of rural beneficiaries were enrolled in 2001 (Unpublished HCFA Analysis, April 2001 as cited by Dubow, 2001). In July 2000, only 22,012 beneficiaries were enrolled in MMC plans in rural counties (Mueller, Shay, Fletcher, & McBride, 2001). Only 46 plans were participating in the Medicare+Choice program in 2001, down from 244 in 1996 (Dubow, 2001).

Grimaldi (1999) reported Medicare made several changes to enhance delivery in rural areas. The changes included provider-sponsored organizations (PSOs), allowed rural MMC organizations to meet decreased enrollment levels and solvency standards, increased monthly capitation rates, and authorized direct payment and increased reimbursement to nurse practitioners, clinical nurse specialists, and physician assistants.

The Medicare Payment Advisory Commission (MedPAC) in their March 2000 report to Congress (as cited by Dubow, 2001) noted that “rural areas remain unlikely to attract HMOs even if the payments in those areas rise above FFS cost” (p. 122) and advised Congress that Medicare payments “should be neutral with respect to coverage options and policies should not steer beneficiaries toward any particular coverage option.” McBride,
Penrod, and Mueller (1997) found the fluctuations in the Medicare MC Payment rates to be especially dramatic in rural areas, which may partially explain why MC plans were reluctant to enter rural markets.

In summary, the main points of the Research Question #1: The Delivery of Health Care Services by Managed Medicare to the Rural Elderly, are:

1. MC shifts the burden of carrying for the frail to FFS and access is often confusing and complicated (Ruben, 1997).

2. There is a strong incentive for MMC to avoid beneficiary hospitalizations and custodial long-term care (Fama & Fox, 1997)

3. Only 3% of rural elderly were enrolled in MMC plans in 2001, and only 15% had access to a M+C plan after the BBA, compared with 33% before the BBA (Dubow, 2001; Mueller, et al., 2001). Only 46 plans out of 244 plans were left in rural areas in 2001 (Dubow, 2001).

4. Rural areas remain unlikely to attract HMOs and Medicare should not steer beneficiaries toward any particular option.

**Cost of Health Care Services to the Rural Elderly**

In 1965, the federal government guaranteed that older persons would have access to mainstream medicine (Reuben, 1997). Reuban reported that in 1982, a fixed capitation fee based on local FFS adjusted average per capita cost (AAPCC), was legislated. The AAPCC was reimbursed by government at 95%, which was generous enough to allow for
“expanded” benefits.

Schlenker, Powell, and Goodrich (2002) observed that between 1978 and 1995 Medicare expenditures increased tenfold to over $17 billion. Frankford (1993) concluded that the lower cost for rural health systems was due to decreased demand and use, rather than to a decrease in provider fees.

Rep. Roscoe Barlett (R) of Maryland (2004) stated that the government owes social security $1.4 trillion and that the interest alone in 2004 will be $496 billion. Medicare will need 12.2 trillion in 2004. He went on to explain that the national debt is made up of two parts: public debt and trust funds. Additionally, any surpluses in the trust funds are used by law to pay down the public debt—this does not decrease the national debt, but adds to it, because the money is owed back to the trust funds and the government needs to pay interest on the loans until they are paid back in full. He concluded that this policy has slowly and continually increased the national debit.

Michigan’s Rep. Nick Smith (R) (2004) stated the government needs to raise taxes by 50% and cut Medicare benefits by one third, and that he would like to abolish age and survivor benefits altogether.

Kassab et al. (1996) observed that in 1987, 73% of the elderly had a private supplemental insurance plan, although this figure had dropped to 60% by 1991. However, more than 85% of the elderly had supplemental insurance of some kind in 1991 (GOA, 1994a as cited by Kassab, et al., 1996).
Seacomb (1995) discovered that with the rising cost of deductibles, co-payments, and services not covered, Medicare covers only 45% of health charges. Additionally, out-of-pocket expenditures on average account for 15% of the income of the elderly, and low-income elders spend even a larger portion. She concludes insurance coverage determines the use of health care services, which in turn determines health itself. According to Trude and Colby (1997), social class health disparity is greater now than in 1960.

Four authors reported on hospital closures. Between 1981 and 1989, 190 rural hospitals closed (Seacomb, 1995). Next, Cheh and Phillips (1993) determined that since 1965, 446 rural hospitals left the Medicare program, mainly due to closure. Similarly, between 1980 and 1998, there was a 11.8% decrease in the total number of community general hospitals due to closings, mergers, and conversions (Ricketts & Heaphy, 2000). In addition, by the mid 1990s, 10% of rural hospitals had closed (Reif, DesHarnais, & Bernard, 1999). Finally, the number of closings dropped dramatically during the 1994-1997 period, an average of seven per year (Ricketts & Heaphy, 2000).

Negative economic effects on the community were perceived to result from a hospital closure (Probst, Samuels, Hussey, Berry, & Ricketts, 1999). These authors determined that the loss in jobs and incomes came to about $3.5 million compared with a savings of $110,000 from reduced subsidies. The group also deduced that most communities experienced a decreased population growth, decreased income growth, and a decreased economic growth after the local hospital closed. Furthermore, the situation
was worse when there was no conversion of the hospital property. Cordes et al. (1994 as cited by Borders et al., 2000) concluded the presence of local medical care providers has been linked to the attraction of new business and investments that, in turn, help sustain the viability of rural America. The non-profit health care services, traditional providers for the poor and underserved, are suffering a diminishing role due to the expanding for-profit entities (Probst, Samuels, Hussey, Berry, & Ricketts, 1999).

Kralewski et al. (1992) observed that farm families, unless they have off-farm employment, pay the full cost of insurance premiums and bear the full burden of health care cost increases. They discovered farm families’ health care spending accounts for 20% to 24% of their income. However, only 1% used a HMO plan. Many of the rural elderly come from a farming background.

The MRHFP (Medicare Rural Hospital Flexibility Program) provides opportunity for low-volume, financially troubled rural hospitals to increase revenue though cost-based inpatient and outpatient reimbursement, and it provides incentives to reduce acute care services, which could lower overall cost structure, perhaps making it possible for the hospital to survive observed Blanchfield, Franco, and Mohr (2000).

Wittenburg, Stapleton, and Scriver (2000) deduced that the proposal to raise the Medicare eligibility age (MEA) to 67 or raising the normal age of retirement (NAR) and the MEA to 70 would cause six out of seven 65- to 69-year-olds not to receive benefits and the savings would not be as great as would those from a reform that would affect
everyone. They determined that the potential savings would be $12.1 billion if the
NAR/MEA was raised to 67 in 2022 or $36.8 billion in 2040 when the NAR/MEA would
be raised to 70. Unfortunately, rural policy appears to be developed in a reactive manner,
suggested Frankford (1993).

In summary, the main points of the section on MMC and the Cost of Health Care
Services to the Rural Elderly are:

1. Medicare expenditures increased tenfold between 1978 and 1995
   (Schlenker, et al., 2002).
2. Medicare covers only 45% of health care expenditures. Therefore, many
   elderly have supplement insurance (Seacombe, 1995; Kassab, et al., 1996).
   However, the actual numbers appear confusing.
3. The health status difference between social classes may be worsening (Trude & Colby, 1997).
4. Several programs and policies have been suggested to further control costs

**Research Question #2: MMC and the Cost of Health Care Services to the
Rural Elderly**

Gold (2003) concluded that the cost-savings potential of MC is limited, not so
much by MC’s technology or competence of the industry (although shortcomings exist)
as by our societal expectations and a range of stakeholder interests that lessen support for
the changes needed to hold down costs. The results of Penrod, McBride, and Meuller (2001) suggest that payment changes enacted as part of the Balanced Budget Act will have a limited effect on MMC enrollment, especially in rural areas.

With hospital closures, Reif, DesHarnais, and Bernard (1999) concluded that the general population suffered short-term negative effects, and the vulnerable populations suffered long-term negative effects from the loss of local physicians and emergency departments and the greater distances they had to travel to access these services. As five out six hospitals in the study converted to another type of medical facility, the group believed some of the negative repercussions of the hospital closures may have been buffered by retention of medical services through conversion.

In summary, the main points of the section Research Question #2: MMC and the Cost of Health Care Services to the Rural Elderly are:

1. Cost saving potential of MC is limited (Gold, 2003).

2. Payment changes will have limited effect on MMC in rural areas (Penrod, et al.; 2001).

3. Many rural hospitals have closed, over 11.8% (Seacomb, 1995; Cheh & Phillips, 1993; Ricketts & Heaphy, 2000; Rief, et al., 1999); the vulnerable populations have seen long-term negative effects from hospital closures (Reif, et al., 1999) and many communities have had economic downturns (Probst, et al., 1999; Borders, et al., 2000).
Quality of Care and the Rural Elderly

HHS in 1990 stated that their goal is to enhance quality of life for older adults (Bureau of Census, 1991, as cited by Goins & Mitchell, 1999). Reed and Hepburn (1999) suggested a major goal of MC was to improve the value of care for members. They defined value as the quality of care provided divided by the cost of care. Reed and Hepburn determined that quality was measured in three domains: quality and effectiveness of clinical care, functional status, and satisfaction. Cost may be calculated as cost of health care provider + hospital + subacute care + laboratory + radiology + durable medical equipment + pharmacy + administration.

Sterns, Slifkin, and Edin, 2000, also found preventive vaccinations in rural areas are on par with or better than in urban areas. Moreover, community health centers are as effective as hospitals in screening but less effective in promotion services (Lave, Ives, Traven, & Kueller, 1995). The group inferred one reason may be that patients are more likely to follow their own physician’s orders than those of any other provider. They also observed that rural primary care and family practice physicians are less willing to provide prevention services but are willing to recommend them.

The Barnet Group, Westat, & the Kaiser Family Foundation (1999) determined that the majority of the elderly who are involuntarily disenrolled and returned to traditional Medicare without supplemental insurance are poor, near poor, or have poor health status.
Morgenstern, Gonzales, and Anderson (2000) found that only 11% have significant knowledge to make an informed decision about M+C options. Border and Garfinkel (2001) also determined that beneficiaries did not have enough information to make an informed decision. Hibbard and Jewett (1998) discovered that 30% of all respondents knew nothing of HMOs and that 15% were already enrolled in an HMO plan. They reported that the three sources of knowledge were (a) HMO advertising, (b) newspaper and magazine articles, and (c) friends and family. Barents Group et al. (1999) suggested that when beneficiaries enroll in a MMC plan, it is important for them to understand the requirements and restrictions associated with the plan coverage. Furthermore, they recommended beneficiaries should be fully informed about potential risks and responsibilities if their plan chooses to exit the market, including the need to arrange for alternative coverage.

Boult, Boult, and Pacala (1998) found that most of the elderly do not change health care plans often. The group observed that changing physicians is a significant problem but is not sufficient to preclude patients from leaving a MMC plan. They found that cost was a determining factor in decisions about M+C options. Boult, Boult, and Pacala went on to discuss some possible future innovations in health care.

Davis and Magivly (2000) cited several studies (Addleman, 1995; Beckham, 1997; Lamm, 1994; Porter-O’Grady & Wilson, 1995) that concluded that despite health care reform and MC systems, health care continues to be dominated by disproportionate
emphasis on acute intervention, lack of attention to disease prevention and health 
promotion, fragmentation of care, high costs, problems of access, a growing population of 
uninsured and under-insured, and lack of accountability for health outcomes continue to 
dominate health care. Compared with urban areas, rural health care is characterized by 
fewer health resources and health professionals, more costly health services, and more 
problems of access, according to Coward, McLaughlin, Duncan, and Bull (1994 as cited 
that large metropolitan areas have higher levels of use of inpatient days and physicians. 
Kralewski et al. (1992) observed that the average length of stay is uniformly lower for 
non-urban areas.

In summary, the main points of the section on rural elderly and quality of care are:

1. Rural health clinics and providers provide quality care (Sterns, et al., 2000; 
Lave, et al., 1995)

2. Rural areas have lower lengths of stays (Kralewski, et al., 1992).

3. The most vulnerable, the poor, near poor, or those with poor health status, are 
returned to FFS without supplement insurance after involuntary disenrollment 
from a M+C plan (Barnet Group, et al., 1999).

4. Only 11% of the elderly have the knowledge to make an informed decision 
about MMC (Morganstern, et al., 2000; Border & Garfinkel; 2001; Hibbard & 
5. Most elderly do not change plans often (Boult, et al., 1998).

**Research Question #3: Impact of MMC on the Quality of Care**

Brasure, Stensland, and Wellever (2000) discovered that if MC is in a rural area, there is a positive effect on accreditation. Casey (2001) suggested state accreditation requirements may promote expansion of large nationally affiliated and urban-based HMO into rural areas. She reported further that while neither Medicaid nor Medicare HMOs have to be accredited, Medicare HMOs must file a HEDIS report as do many Medicaid HMOS.

In summary, of the main points for the Research Question #3: Impact of MMC on the Quality of Care are:

1. MC has a positive effect on accreditation in rural areas (Brasure, et al., 2000).

**Research Question #4: The Use of Health Status and Outcomes**

During the period covered by this review it became common, and regulation, to use outcomes to measure quality and performance. This review attempted to discover whether the literature reflects this trend.

(Ware, Bayliss, Rogers, Kosinski, & Tarlov, 1996) which observed that the health status of elderly persons and those most physically limited had declined more with MMC than the health status of the fee-for-service patients. Himes and Rutrough (1994) discovered that health status was not responsible for decreased rural physician visits.

The major gap in the literature of this review is that very few documents mention outcomes, let alone use them for analysis. Regan, Schempf, Yoon, and Politzer (2003) found that community health centers employ a model of community-based primary care services that promote access to care and have positive health outcomes for rural residents and other vulnerable groups. Cheh and Phillips (1993) cited Phillips, 1990, who concluded rural patients were not receiving guideline home care and inferred that inadequate care would lead to poorer outcomes. Four studies (Comer & Mueller, 1995; Davis & Magilvy, 2000; Franks & Clancy, 1997; and Winneberg, et al., 2002) cited outcomes from other sources. Three (Casey, Wellever, & Moscovice, 1997; Moscovice & Rosenblatt, 2000; and Ricketts & Heaply, 2000) listed outcome measures in policy deficiencies.

The Medicare Managed Care-Consumer Assessment of Health Plans Study (MMC-CAHPS) project has major implications for health care policy (Smith, Gerteis, Downey, Lewy, & Edgman-Levitan, 2001). Health plans are interested in how they are performing in comparison and some are taking steps to improve their scores. However, it is not yet
clear exactly how they will use this information and if it actually will lead to significant improvements as perceived by Medicare beneficiaries.

In summary of the Research Question #4: The Use of Health Status and Outcomes, 11 documents mentioned health status and 10 mentioned outcomes.


CONCLUSIONS

While there is much literature on delivery and its components of practice, systems, access and utilization, and policy even for the rural areas, there is not much on the impact of MMC on delivery of health care services to the rural elderly. Whether the impact has been positive or negative is undeterminable at this point, because there is not enough data to make such a determination. MC has affected practice. Some of the changes have been positive, such as the organization and reviews. Unfortunately, many providers’ perceptions are negative. There has been a strong economic impact with hospital closures and providers leaving the field of health care. The reports of possible discriminatory practices against minorities, and the apparent worsening health status of rural elders, are both very worrisome. While access may or may not have improved in the last 15 years, it has not been because of MMC. There is no disputing the fact that there are very few rural beneficiaries who are covered by MMC (3%). It is also not clear whether, even if MMC
were able get a strong foothold in the rural areas; it would be able to assist the financially challenged rural health-care systems. What is clear is that the rural health-care system is still, and will be for some time, dependent on government regulation adjustments and financial assistance. Many of the changes that were aimed at fixing the problem have failed, occasionally worsening the situation. MMC may never penetrate all the rural markets, therefore any policy that guides beneficiaries or rewards them for one choice or another is not only unfair and discriminatory. The legislature is trying to find solutions. Unfortunately, they are focusing mostly on cost control. Some of the legislators think the whole system should be abandoned. There still remain questions on quality. It is apparent the beneficiaries do not have the knowledge base to make an informed decision on MMC. MMC has improved accreditation rates in the rural areas. At this point the impact appears to be more negative than positive.

**DISCUSSION**

There are several limitations to this review. Though some studies were probably missed, the scope of the review is broad enough that the robustness should cover any missed studies. Another factor is the percentage of documents from *The Journal of Rural Health*. Considering that this is the journal for the Rural Health Association, and the major vehicle for publication of rural-related studies, this is not unreasonable. The number of studies reviewed was cumbersome for one reviewer and it is hoped that no significant findings were overlooked. The essence and main points relevant to this
review were obtained. For future reviews the narrowing of the field even more is strongly recommended even if this means just a couple of articles are obtained. The piecemeal picture of MMC in rural America that this review gives is an informative overview, but it leaves room for more focused studies. The main problem is there is very little research on the impact of MMC on the rural elderly that can be obtained by regular search methods. The need for disbursement of information on MMC is great especially for MMC in rural areas. Also, to properly conduct a review like this, the reviewer should have plenty of time and financial resources. Brown (2004) reinforces this by pointing out that

The current pricing (at least in the US) constrains the ability of some scientists, clinicians, and potential authors to access important scientific sources... When the cost of obtaining scientific reports is so high, some people will not be able to afford to purchase before...conducting a systemic review of science (p. 290).

Cost may have played more significant role in the results of this review than previously believed.

The main dilemma with any rural study concerns the definition of the term rural. The U.S. is so geographically varied that what defines the concept of rural in the Northeast is vastly different from a definition relevant to the Southwest. Coastal regions also differ greatly from interior regions. This review included a college town of 10,000,
metro-adjacent areas with cities up to 25,000, and frontier areas. All these were classified as rural. Some rural hospitals had another hospital within 30 miles. In other areas, residents had to travel more than 100 miles to obtain care. So, the question is raised whether one is comparing apples and oranges.

Most of the authors agree that the very elderly, the very poor, and the minorities are still having problems. The rural areas are still experiencing a decrease in hospitals, a decrease in providers, a decrease in beds, a decrease in M+C plans, and a shortage of community-based services, and the patients are more ill when they seek or obtain care. Therefore, rural areas are still underserved. I was unable to find any longitudinal cross organization studies such as Christianson and Grogan recommended in 1990. With the current Equal Employment Opportunity Commission ruling and rhetoric over the budget, it does not appear that the health-care outlook for the elderly will improve any time soon.

**SIGNIFICANCE AND IMPLICATIONS**

I must agree with Fasciano et al. (1999) that the full impact is still unknown. However, the impact of certain aspects of MMC and the rural elderly is now known. The impact appears to be mixed or at best status quo. However, there is a tendency more toward the negative. This is seen in the numerous hospital closures, the MMC withdrawal, the questions about quality and the ever-expanding cost of health care. These factors have a negative and definite impact on the rural elderly. Yet the news is not all bad.
Rural communities resist MMC, but if a MMC organization is able to get the community involved in the development of the organization and adapt it to that community’s needs, it will be more likely to succeed. More comprehensive data at the county and state levels would improve program and plan development.

Rural MMC needs to reduce physician turnover to improve access and continuity of care. One possible way to minimize turnover is to for the system managers and MMC to advocate for the NHSC and hire from their ranks. This might establish trust and make the elderly more willing to seek timely care. Minority providers need to be recruited. Studies exploring whether MMC is providing culturally sensitive care are essential. If one minority is being locked out, the question is raised whether other minorities are having the same experience.

Also, MMC must ensure that the elderly are being educated about, and have a good understanding of, the requirements, restrictions, risks, and responsibilities associated with MMC plans. This may have to become a standardized outcome that MMC must document as a form of informed consent before enrollment into a MMC. The MMC and the government may share costs by developing an education program that uses various media to educate the public on the commonly shared points, something similar to the tobacco education campaign. Information that alters perception of programs, and of the necessity for routine health care, may affect rural access. If the access points into the system are simplified and made more personal, there will be a decrease in confusion and
frustration. MMC plans could review with patients common barriers to access and exhibit a willingness to work at solutions.

Information on available alternatives needs to be widely circulated. Discharge planners need a reliable resource to access for their bypass patients. Perhaps a government-sponsored Internet site that is continually updated is the answer. Providers, patients, and family could access the site for help in times of transition and for planning. This would require research and someone with good systems knowledge to determine if it is even feasible.

There is a need for strategies to develop workable programs in a timely manner for MMC or to develop some way to slow the rapidly changing environment. There is a need for more research on making CAHs more viable and to address the concerns over potential gaps in care with this program.

MMC organizations must recognize and adapt to the fact that the rural hospital is often central to the community. Continued legislated financial and regulation relief is needed to keep many rural hospitals operating. Local, viable alternatives to long-term care need to be developed. Recruiting allied health personnel to the community and keeping the nurse practicing is imperative. There is a need for the development of systems and programs that decrease paperwork and other duties that take time away from patient care.

The rural elderly, or any elder, should not be penalized because they do not select
one M+C option over another. A comprehensive policy and reform addressing equality, might serve to ensure this. However, impact studies should be performed on any reform before it is implemented to decrease unintentional negative impacts.

The argument for more or less government regulation is too involved for discussion in this paper. Notwithstanding, until there is evidence that the health-care system and all its components can regulate themselves, the government should enforce the regulations it has in place.

Finally, since outcomes are becoming universal, it is hoped that more health care studies on impact, cost, quality, health status, and performance will start using them. One can hope that by 2006, when the new prescription benefits come into play, researchers will be more interested in outcome studies than they have been in the past, so the system, providers and policy makers can truly evaluate the program. Until we start to incorporate outcomes, or evaluations that have common definitions, we cannot adequately evaluate the impact of health care policies, innovations, programs, systems, effect on the populations, and the delivery of services.
Appendix A

Definitions and word roots (Morris, 1976)

Impact. The effort of one thing upon another. From the Latin root *impatus*, past participle of *impingere*, to dash or strike against.

Delivery. 1). Act of delivery or conveying 2). The act of transferring to another. From the Latin, *dēlīberāre*; *dē* - completely, *līberāre* - to set free; *līber* - free

Health. 1). Optimal functioning with freedom from disease and abnormality. 2). Broadly- any state of optimal functioning, well being, or progress. From the Old English, *haēlth*, related Old English *Kailo-* whole, uninjured, of good omen; *hāelan*, to heal; *hāl*, hale, whole

Care. 1). An object or source of worry, attention, or solicitude. 2). Caution, heedfulness. 3). Protection, supervision, charge. 4). Attentiveness to detail, painstaking application, conscientiousness. From the Old English, *caru, cearu*; the express root - *gar*, to call, cry

Service. 1). Work done for others as an occupation or business. 2). Installation, maintenance, or repair provided or guaranteed by a dealer or manufacturer. 3). A facility providing the public with the use of something, such as water or transportation. 4). An act of assistance or benefit to another or others, favor.

Services. 1). To provide services to, as a commodity used by the public. From the Latin *servitium*, servitude, slavery from *servus*, slave
Rural. 1). Of or pertaining to the country as opposed to the city; rustic. 2). Of or pertaining people who live in the country. From the Latin, rūrālis, from rūs (stem rūr), country

Elders. Alternate comparative of old From Old English, ieldra, eldra

Old. 1). Having lived or existed for a relatively long time; far advanced in years or life, either actually or relatively. 2). Of or pertaining to a long life or to persons who had a long life. 3). Having or exhibiting the physical characteristics of advanced life or an aged person. n. 4). An individual of a specified age. From Old English, eald, ald from al, to grow, nourish

Therefore, if one was to take the root definitions the purpose of this paper would be to strike against for the act of completely setting free to the state of optimal function, well being, or progress by calling a slave to nourish country dwellers. The author prefers to use a modern definition: The effect of transferring the state of optimal functioning by the protection, supervision, and maintenance of medical facilities or providers to the over 64 year of age population of country dwellers.
Appendix B-1

DATA-COLLECTION TOOL

Studies

1. Researcher(s) ________________________________________________

2. Title of study ________________________________________________

3. Year of Study Published _______________________________________

4. Journal ______________________________________________________

5. Accession number _____________________________________________

6. Rural Focus __________________________________________________

7. Definition of Rural ___________________________________________

8. Elderly Focus ________________________________________________
9. Managed Care Focus

10. Delivery of Health Care Services

11. Impact

12. Purpose of the Study/paper

13. Conceptual Model  Yes  No

Type

14. Theory based  Yes  No

What theory

15. Research question/hypothesis
16. Lit review done Yes No

17. Any mention of previous reviews Yes No
   List of previous reviews Yes No

18. Type of research design

19. Inclusion Criteria listed Yes No
   What are they

20. Exclusion criteria listed Yes No
   What are they

21. Type of Sample
22. Number of subjects in study

23. Instruments/tools used

24. Validity (addressed)  Yes  No

25. Reliability (addressed)  Yes  No

26. Method of analyzing data

27. Methodological limitations

28. Factors identified as impacting Delivery of Health Care Services

29. Was impact measured  Yes  No

   How

30. Factors identified as affecting rural elders
<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured in any way</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31. Rules of inference (rational for methods used to analyze) listed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What are they</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32. Rules on inference (validity - process and rational) Listed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What are they</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33. Study conclusions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34. Rules of inference (appropriate, followed carefully and led logically to implications)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35. Research recommendations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Policy

Practice

Relation to theory

Conditions that impact policy/practice

Implications for theory development

Suggestions for future study
36. References Listed  Yes  No

37. Tables used  Yes  No

38. Impact on use

39. Impact on cost

40. Impact on quality

41. Outcomes or health status used?  Yes  No

What were they and what did they measure? ________________________________
Appendix B-2

DATA COLLECTION TOOL

Papers

Author

_________________________________________________________

_________________________________________________________

_________________________________________________________

_____________________

Title

_________________________________________________________

_________________________________________________________

_________________________________________________________

_____________________

Year Published

_________________________________________________________

_________________________________________________________

_________________________________________________________

_____________________

Journal/source

_________________________________________________________

_________________________________________________________

_________________________________________________________

_____________________

Accession Number
Focus

1. Rural Focus?  Yes  No

Definition of Rural


2. Elderly Focus?  Yes  No

3. Managed Care Focus?  Yes  No

4. Delivery of Care Focus?  Yes  No

5. Purpose of paper

HOW CLEAR IS THIS PAPER?

6. Are major concepts/purpose defined?  Yes  No

What are the Concepts/purpose?
Are the definitions clear?  Yes  No
Are the definitions congruous?  Yes  No
Are the definitions Consistent?  Yes  No
What are the definitions?

7. Are concepts used in a manner consistent with their definition?  Yes  No

8. Are significant concepts not defined?  Yes  No

What are they?

9. Are Words Coined?  Yes  No
Are the Coined words Defined?  Yes  No
What are they and their Definitions?

10. Are words borrowed from other disciplines and used differently in this context?
    Yes  No

11. Is the amount of explanation appropriate?  Yes  No
    If not why? (Too much, not enough) ____________________________________________

12. Are examples or diagrams given?  Yes  No
    Are they Helpful?  Yes  No
    Are they meaningful?  Yes  No
    Are they needed?  Yes  No
    consistent with the text?  Yes  No
13. Are there any tables?  
Yes  No  
Are they clear?  
Yes  No  
explained/referenced in text  
Yes  No  

14. Are the assumptions made by the author(s) clear?  
Yes  No  

15. Are the basic assumptions consistent with one another?  
Yes  No  
with purpose?  
Yes  No  
What are these assumptions?  
__________________________________________________________  
__________________________________________________________  
__________________________________________________________  

16. Are there any biases stated?  
Yes  No  
apparent?  
Yes  No  
What are the biases?  
__________________________________________________________  
__________________________________________________________  
__________________________________________________________  

17. Are the same terms defined differently?  
Yes  No  

18. Are different terms defined similarly?  
Yes  No
19. Can the concept be followed? Yes No

20. Are they any gaps in the flow? Yes No

21. Are they any ambiguities as a result of sequence of presentation?
   Yes No
   What are they? __________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

22. Does the author accomplish what she/he set out to do? Yes No

   **HOW SIMPLE IS THIS PAPER?**

23. Is the paper organized Yes No

24. What format is used ________________________________

25. Does the paper tend to describe? Yes No
   Explain? Yes No
   Predict? Yes No
   impart understanding? Yes No
   create meaning? Yes No

26. Is it written in easy to understand language? Yes No

   **HOW GENERAL IS THIS PAPER?**
27. How specific/broad is this paper ________________________________

_________________________________________________________________

________

_________________________________________________________________

________

_________________________________________________________________

________

28. Is this paper culturally relevant? Yes No

To which cultures? ________________________________________________

_________________________________________________________________

________

_________________________________________________________________

________

29. Is this paper valid for a different population then that addressed?

Yes No

Which Populations? ________________________________________________

_________________________________________________________________

________

_________________________________________________________________

________

30. Is the paper specific to nursing? Yes No

if not, Who else could use it? _______________________________________

_________________________________________________________________

________

_________________________________________________________________
31. Is the purpose justifiably a nursing purpose? Yes No

**General**

32. References Yes No

How many

**Impact**

What impact does this have on the elderly?

What impact does this have on the rural population?

What impact does this have on the use of health services?

What impact does it have on managed care?

What is the impact on cost?

What is the impact on quality of care?
Was outcomes or health status used to measure any impacts?

Conclusions (summary)

Appendix B-3

DATA COLLECTION TOOL

POLICY

Author/organization


Title


Year Published


Journal/source


Accession Number

---

Focus

1. Rural Focus?  Yes  No

Definition of Rural

---

---

2. Elderly Focus?  Yes  No

3. Managed Care Focus?  Yes  No

4. Delivery of Care Focus?  Yes  No

5 Purpose of policy

---

---

HOW CLEAR IS THIS POLICY?

6. Are major concepts of the policy defined?  Yes  No

What are the Concepts/purpose? ____________________________
Are the definitions clear?  Yes  No
Are the definitions congruous?  Yes  No
Are the definitions Consistent?  Yes  No
What are the definitions?

7. Are concepts used in a manner consistent with their definition?  
   Yes  No

8. Are Significant concepts not defined?  Yes  No
   What are they?
9. Are Words Coined? Yes No
   Are the Coined words Defined? Yes No
   What are they and their Definitions?

10. Are words borrowed from other disciplines and used differently in this context? Yes No

11. Is the amount of explanation appropriate? Yes No
    If not why? (Too much, not enough) ________________________________

12. Are examples or diagrams given? Yes No
13. Are there any tables?
   Are they clear?
      explained/referenced in text

14. Are the assumptions clear?
    Are the basic assumptions consistent with one another?
       with purpose?

15. Are there any biases stated?
    apparent?

What are these assumptions? ________________________________

What are the biases? ________________________________
16. Are the same terms defined differently?  Yes  No

17. Are different terms defined similarly?  Yes  No

18. Can the concept be followed?  Yes  No

19. Are they any gaps in the flow?  Yes  No

20. Are they any ambiguities as a result of sequence of presentation?

   Yes  No

   What are they? ____________________________________________________________

HOW SIMPLE IS THIS PAPER?

21. Is the policy statement clear and easy to understand  Yes  No

22. Is it written in easy to understand language?  Yes  No

HOW GENERAL IS THIS PAPER?

23. How specific/broad is this policy?
24. Is this policy culturally relevant?  
   Yes  No  
   To which cultures? ________________________________

25. Is this policy valid for a different population then that addressed?  
   Yes  No  
   Which Populations? ________________________________

26. How consistent is the policy statement? ________________________________

   ________________________________

   ________________________________

   ________________________________

General

27. References  
   Yes  No  
   How many ____________________

Impact

What impact does this have on the elderly?
What impact does this have on the rural population?

What impact does this have on the delivery of health care services?

What impact does it have on managed care?

What impact on cost?

What impact on quality?

Was outcomes or health status used to measure any impacts?

Conclusions (summary)

Appendix B-4

DATA COLLECTION TOOL

THEORY/CONCEPT PAPERS

Author/Theorist(s)


Title


Year Published


Journal/source


HOW CLEAR IS THIS THEORY/CONCEPT?

1. Are major concepts defined? Yes No

   What are the Concepts? ____________________________________________

2. Are the definitions clear? Yes No

3. Are the definitions congruous? Yes No

4. Are the definitions Consistent? Yes No

   What are the definitions?

5. Are concepts used in a manner consistent with their definition? Yes No

6. Are Significant concepts not defined? Yes No

   What are they?
4. Are Words Coined? Yes No
   Are the Coined words Defined? Yes No
   What are they and their Definitions?

5. Are words borrowed from other disciplines and used differently in this context? Yes No

6. Is the amount of explanation appropriate? Yes No
   If not why? (Too much, not enough) ________________________________
7. Are examples or diagrams given?  
   Are they Helpful?  
   Are they meaningful?  
   Are they needed?  
   consistent with the text?  
   Yes  No
8. Are the basic assumptions consistent with one another?  
   with purpose?  
   Yes  No
9. Is the view of person and environment compatible?  
   Yes  No
10. Are the same terms defined differently?  
    Yes  No
11. Are different terms defined similarly?  
    Yes  No
12. Can the Theory/concept be followed?  
    Yes  No
13. Can the overall structure be diagramed?  
    Yes  No
14. Are they any gaps in the flow?  
    Yes  No
15. Do all the concepts fit within the theory?  
    Yes  No
16. Are they any ambiguities as a result of sequence of presentation?  
    Yes  No
    What are they?  

What are they?
17. Does the Theorist/author accomplish what she/he set out to do?
   
   Yes    No

How Simple is this Theory?

18. How many relationships are contained within the theory? ________________

19. How are the relationships organized? _________________________________

20. How many concepts are contained in the theory? ________________

21. Are some concepts differentiated into subconcepts and others not?
   
   Yes    No

Which ones? ________________________________

______________________________

______________________________
22. Can concepts be combined without losing theoretic meaning?  
   Yes  No  

23. Is the theory complex in some areas, not in others?  Yes  No  

24. Does the theory tend to describe?  Yes  No  
   Explain?  Yes  No  
   Predict?  Yes  No  
   impart understanding?  Yes  No  
   create meaning?  Yes  No  

How general is this theory?  

25. How specific are the purposes of this theory?  

_________________________________________________________________  
_________________________________________________________________  
_________________________________________________________________  

Do they apply to all practice areas?  Yes  No  
When?  
_________________________________________________________________
26. Is the theory specific to nursing? Yes No
   if not, Who else could use it? ________________________________

27. Is the purpose justifiably a nursing purpose? Yes No

28. If a subpurposes exists, do they reflect nursing actions? Yes No

29. How broad is the concepts within the theory?
30. References

How many

Impact

What impact does this have on the elderly?

What impact does this have on the rural population?

What impact does this have on the delivery of health care services?

What impact does it have on managed care?

What impact on cost?

What impact on quality?
Was outcomes or health status used to measure any impacts?

Summary

Appendix B

List of Organizations

American Medical Association
American Nurse Association
Association of Primary Health Care Physicians
Blue Cross/Blue Shield (insurance)
Center for Health Care System Change
Center for Medicare and Medicaid Services (formally HCFA)
Commonwealth (Insurance)
Health and Human Services
HRSA - Health Resources and Services Administration including their database
Rural Health - web site for the Rural Program of All Inclusive care for the Elderly
[PACE]
BHPR - Bureau of Health Professions
JCAHO (Joint Committee of Accreditation of Healthcare Organization)
Journal of Rural Health
Kaiser Permentee (insurance)
MAMSI (Mid-Atlantic Medical Services, Inc. - insurance subsidiary of United Health)
Medical Care and Health Services Research (Health service Journal)
National Institute of Health
Health Affairs - Journal
School of Public Health - Minnesota
The Henry J. Kaiser Family Foundation
The Virginia Henderson International Nursing Library
Appendix D-1

Key to Tables

Abbreviations:

Anal meth. = method of analysis

Meth lim/prob = Methodological limitations and problems discussed, apparent

DEL HCS = Delivery of Health Care Services focus

V/R = validity and reliability

Hypot. = Hypothesis stated

MC = Managed care Sample meth. = sampling

I/E Crit. = Inclusion and Exclusion criteria stated Tables = used, easy to understand,

impac. = impact to rural elder population, Delivery of Health care services explained or referenced in text

Inter. of results = interpretation of results,

recommendations, rational for data interpretation

Codes

a = Suggests further research e = Theory k = Key informants
b = Recommendations given for policy or practice f = All of the above A-E l = Listing

g = Categorization scheme & meta-analysis

c = Suggestions for future reviews and or studies coding n = focus groups

h = Themes o = ethnographic

d = Conditions that impact policy or practice given i = interviews p = Purposeful sample

j = clusters q = Standard direct method
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<th>Symbol</th>
<th>Term</th>
<th>Abbreviation</th>
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<tr>
<td>r</td>
<td>Random</td>
<td>All = All fields Med</td>
</tr>
<tr>
<td>s</td>
<td>Least Squared Regression</td>
<td>AOV = Analysis of Variance</td>
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<tr>
<td>t</td>
<td>Factor analysis</td>
<td>AOV2 = 2 tailed AOV</td>
</tr>
<tr>
<td>u</td>
<td>Frequency</td>
<td>Avg = Averages</td>
</tr>
<tr>
<td>v</td>
<td>Comparative Analysis</td>
<td>B = Both Rural &amp; Urban BC =</td>
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<tr>
<td>w</td>
<td>Weighted sample - averaging</td>
<td>Bonferoni correction</td>
</tr>
<tr>
<td></td>
<td>and %</td>
<td>BVLR = Bivariate logistic regressions</td>
</tr>
<tr>
<td>x</td>
<td>Turkey HSy = Tobit regression</td>
<td>CM = create meaning</td>
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<tr>
<td>z</td>
<td>Log ration multi collinear</td>
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<td></td>
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<td>!</td>
<td>significant hypothesis direction</td>
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<tr>
<td>@</td>
<td>zero</td>
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<tr>
<td>#</td>
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<td>I = rules of inference noted</td>
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<td>touched upon or think so/maybe</td>
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### Qualitative Studies  Appendix D-3a

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