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Profiles of Aging: Iowa

Aging in Iowa: Past, Present and Future

The population characteristics of Iowa today and the projections for the next two decades suggest that Iowa faces many challenges and many opportunities. The purpose of this paper is to highlight what is known about today's older Iowans, to discuss the probable long-term care needs of Iowa's elders to 2010 and beyond, and to analyze the social and environmental context that may impact long-term care.

In the discussion that follows, the current characteristics of the Iowa population and of elder Iowans, in particular, will be examined. This will serve as a framework for projecting population characteristics into the near and more distant future. The major focus of this report will be on the next five years, but as will be discussed, the next five to ten years may be a time of reprieve from expected increases in demand for long-term care and an opportunity to reflect and prepare for the next three decades.

Current Demographics

Like other midwestern states, Iowa faces an increasingly aged population. The median age in Iowa has increased from 34 years in 1990 to over 37 years today. In 1990, Iowa was the second oldest state in the U.S. Although it had dropped to fifth place by 1998, due to the rapid aging of other state's populations (*Table 1*), Iowa is expected to remain among the top 10 oldest states through 2030. It is projected that the Iowa population 65 years and older will increase from the current 15.1 percent to approximately 22.2 percent by 2025.

Table 1: Ranking of States by 65 + Population: 1990 & 1998

State (1990)	Percent	State (1998)	Percent
1. Florida	18.2	1. Florida	18.3
2. Iowa	15.3	2. Pennsylvania	15.9
3. Pennsylvania	15.3	3. Rhode Island	15.6
4. West Virginia	14.9	4. West Virginia	15.2
5. Rhode Island	14.9	5. Iowa	15.1
6. Arkansas	14.8	6. North Dakota	14.4
7. South Dakota	14.7	7. Connecticut	14.3
8. North Dakota	14.2	8. South Dakota	14.3
9. Nebraska	14.1	9. Arkansas	14.3
10. Missouri	14.0	10. Maine	14.1

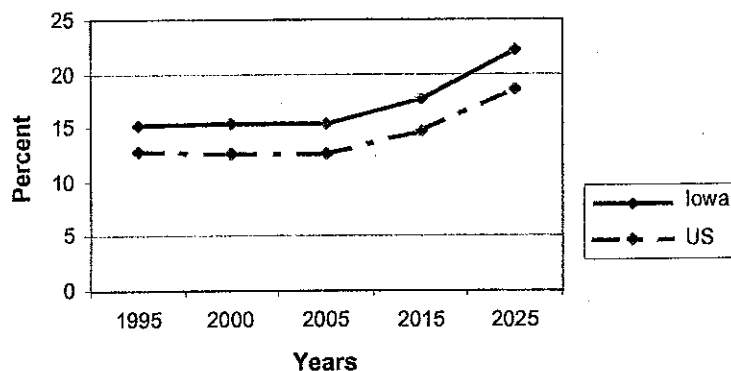
Source: U.S. Bureau of the Census. *State Rankings*.
<http://www.census.gov/statab/ranks/rank01.txt>

Not only does Iowa have a high percentage of persons 65 years and older, it has the highest percent of the oldest-old (those 85 years and older) in the country. Approximately 2.2 percent of the Iowa population is 85 years or older, as compared to 1.6 percent nationally. This is a higher percentage of people 85 years and older than is forecasted for the nation as a whole for several decades and it is this older segment of the population that poses the greatest challenges for our long-term care systems.

Changes in Demographics of Iowa to Year 2010 and Beyond

The percent of persons 65+ and 85+ continues to increase in Iowa, but the actual growth rate of the older population has been below the national average for over a decade. From 1990 to 1999, the growth of the 85-plus population in Iowa was 16.9 percent, as compared with a national average of 36.5 percent (U.S. Bureau of the Census). This slow growth is expected to continue well into the future. Between now and 2005, the number of Iowans 65-plus will increase by only 2.3 percent. By 2015, after the baby boom generation begins entering their senior years, the 65-plus population of Iowa is still projected to increase at a rate below the national average, 25.1 percent compared to 31.9 percent. Although the growth rate will be low, the *percent* of aged in the Iowa population will remain above the national average for the foreseeable future (Figure 1).

Figure 1
Projections of Elderly Population for and the U.S.: 1995-2025



Source: U.S. Bureau of the Census, *Projections of the Population, By Age and Sex, of States: 1995 to 2025 Series A* projections
<http://www.census.gov/population/projections/state/stpjage.txt>

The increasing percentage of elderly in the Iowa population will largely be the result of the slow natural growth occurring in the state and the high out-migration of people in younger age groups. The increase in actual numbers of elders will be far less than many other states, but the growing percent of elders, combined with a decreasing percent of working age adults, may

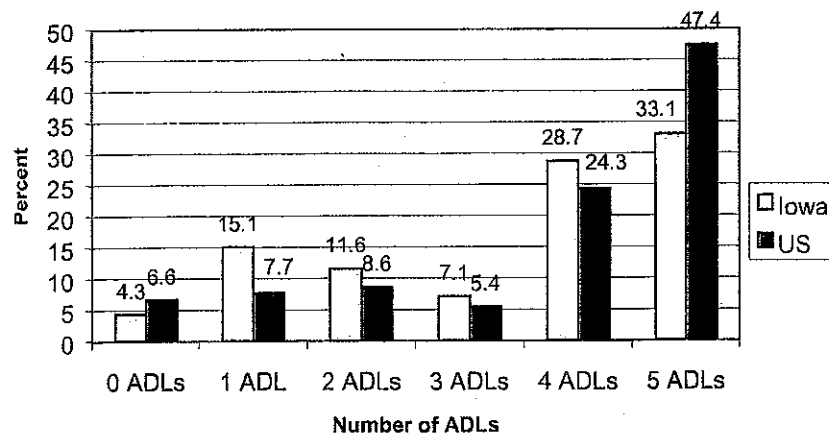
present particularly difficult problems in Iowa. At a time when the need for a service workforce and monetary resources to provide services is great, Iowa may be faced with a workforce shortage and a limited tax base to draw on for service development.

Long-Term Care in Iowa

A major concern for Iowa, and indeed the entire country, is the impact of an increasing elderly population on the long-term care system. Historically, the provision of long-term care in Iowa has been heavily skewed toward the use of nursing facilities. In 1996, Iowa had the fourth highest number of nursing facility beds per population 85+ of any state in the country (AHCA, 1998). Today, Iowa has one of the highest rates of nursing facility utilization in the nation: 6.8 beds per 1000 persons 65+ compared to a national average of 4.5 beds per 1000 persons.

While nursing facilities fill a critical role in caring for persons who require 24-hour supervision, skilled nursing care or intensive therapies, they are not the best nor the most cost-effective option for persons with lower care needs.

Figure 2
Iowa Nursing Facility Resident ADL Dependencies as Compared with U.S. Average



Source: Cowles, C. (2000). Nursing Homes Statistical Yearbook: 1999. Washington, D.C. : AAHSA.

Data suggest that many of Iowa's nursing facility residents do not have these high levels of need and could be served in less costly and less restrictive settings. In 1999, Iowa had the lowest acuity levels for nursing facility residents of any state in the country as measured by the PROPAC, ADLINDEX and ACUINDEX scales (Cowles, 1999). The characteristics of Iowa nursing facility residents on ADL measures, as compared with national averages, are shown in *Figure 2*. Almost a third of Iowa's nursing facility

residents have two or fewer ADL dependencies, indicating they are likely to require relatively light care. Many states have shown that elders with few ADL dependencies can be maintained in the community in a more cost-effective and acceptable manner if an array of in-home and community-based services and residential options with less intensive supportive services are available.

The presence of large numbers of light care residents in Iowa nursing facilities suggests gaps in the continuum of community-based care. It is likely that insufficient availability of community-based, long-term care services and supportive residential alternatives may be forcing some seniors to accept nursing facility care, when other forms of care might be more appropriate and cost-effective. This situation is by no means uncommon. Very similar situations can be found throughout the midwest and in many other states throughout the country.

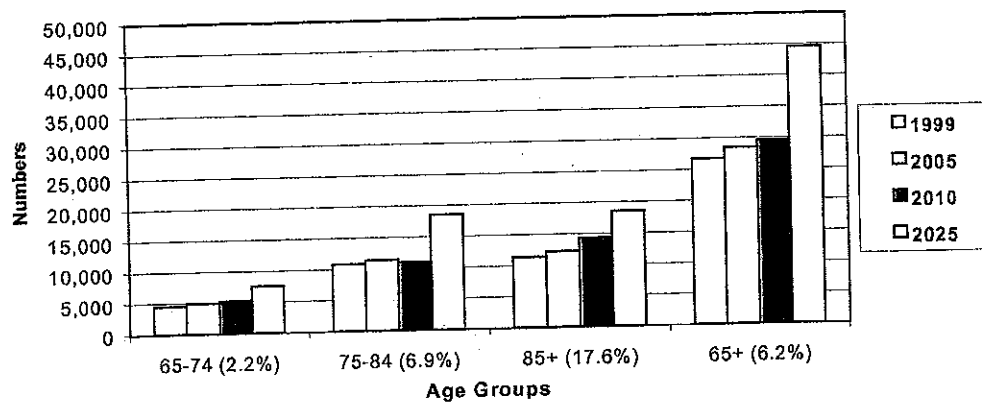
The reasons for the institutional bias in Iowa are beyond the scope of this paper, but they likely include: a rural environment that makes it difficult to realize advantages of economy of scale to develop affordable community-based care; the importance of the nursing facility industry as an employer and political player; and an entrenched long-term care reimbursement system with a pervasive institutional bias. Whatever the historical causes, Iowa's current attempts to control long-term care costs and encourage more appropriate use of nursing facilities is well advised. If current rates and patterns of institutional use continue, the need for nursing facility beds nationally will increase rapidly within the next 25 years. The Census Bureau estimates that by 2020 the number of nursing facility residents in the U.S. will increase from the current 1.7 million to 2.9 million. By 2040, the number will double to 5.7 million.

Like many other states, Iowa is attempting to control institutional growth and long-term care costs through regulatory mechanisms, such as preadmission assessment (in which applicants for nursing facility admission must meet functional care criteria), control of reimbursement rates, and incentive programs for diversifying the role of nursing facilities to provide less costly and more appropriate levels of care. Such efforts are both necessary and timely. By 2025, the number of persons 65+ in Iowa is expected to increase by 59 percent. While this percent is not as daunting as the 80 percent increase in elderly anticipated nationally, Iowa may still face significant challenges resulting from the historical institutional bias in long-term care. If current usage patterns of nursing facilities in Iowa continue, even this more moderate increase will have a significant impact on the long-term care system in the state and will not bode well for the Iowa Medicaid budget. It is also important to note that this impact will not be short-term. The need for long-term care beds and services is projected to spiral beyond 2050.

In contrast to the expected growth of the elderly population in the more distant future, the next ten years is likely to see a lull and possibly a marked drop in the demand for nursing facility care (*Figure 3*). From now through 2010, there is no increase in need projected for nursing facility beds among the age groups 65-74 or 75-84. An increase is projected for the 85+ age group, but this projection does not factor in a recent decrease in need for long-term care among this age group that is being attributed to a decrease in disability (Waidmann, T. & Manton, K., 1998). We do not know how long this trend in lowered or delayed disability will continue, but it is likely to be a factor in long-term care need for at least the next 10 years.

A significant increase in need for nursing facility beds is not projected to occur until 2025, when the first wave of baby boomers reach their eighties (*Figure 3*). The projection shown in *Figure 3* is based on current patterns of population need and institutional use in Iowa, which includes the placement of many low acuity persons in nursing facilities. Given the current efforts in the state, it is unlikely this pattern will continue and, therefore, this projection

Figure 3
Projected Number of Iowans in Nursing Facilities for 1999, 2005, 2010, & 2025 (assuming current rates)



Source: Calculated using Iowa population projections, rate of NF use by various age groups, and current number of Iowa beds in use (average occupancy).

is very high. Actual bed numbers can be anticipated to be lower and acuity levels much higher if affordable alternatives are in place for low acuity care and if sufficient financial incentives are in place for nursing facilities to accept and adequately care for higher acuity residents.

It is important for states such as Iowa to begin now to plan and develop a range of long-term care options that will appropriately and effectively meet the needs of current and future cohorts of elders. This will require that states promote community-based care and other residential care options, while assuring that adequate numbers of nursing facility beds are available for those who need this level of care. As need decreases over the next 10 years, states must be cautious not to reduce nursing facility capacity to a level such that it will be difficult to respond to increased demands for nursing facility

care when the large number of baby boomers become the senior boom. How great the need for long-term care and nursing facility care will be among future cohorts of elders is not certain, but the health problems and health-related behaviors of today's elders and the baby boomers that will follow may give us some clues.

Health Status and Disability in Elderly Iowans

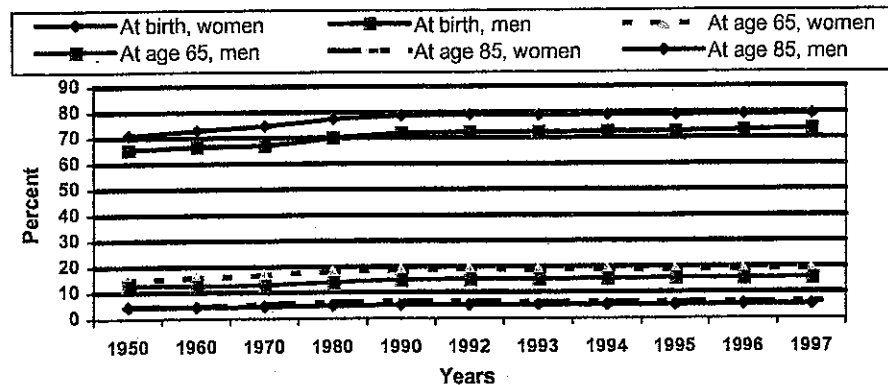
Aging is a predisposing condition for chronic illnesses and injuries that are likely to result in the need for long-term care. The patterns and trends in disease and disability among today's elder Iowans and those who will become 65+ over the next several decades may give some clues to what future long-term care needs might exist.

Measures of Health Status

Life Expectancy

Life expectancy is both a result and a reflection of the health of a population. On a national level, life expectancy has increased at birth, at 65 years of age and slightly for persons at age 85 (Figure 4). Since some other countries have a higher life expectancy than the U.S., it can be assumed we have not yet reached the maximum end of the human life span and that this aging trend will continue for some time. In fact, Iowans have already exceeded the U.S. average life span. From 1989-1991, the average life span in Iowa was 77.3 years, as compared with the national average of 75.4 years (National Center for Health Statistics, 1998). It is likely this trend will continue for some time and there will be increasing numbers of very old individuals in the Iowa population. While this suggests that Iowans are relatively healthy, it also means more people will be living into age ranges where the risks of chronic illness and disability escalate rapidly.

Figure 4
Life expectancy at birth, age 65, and age 85, United States

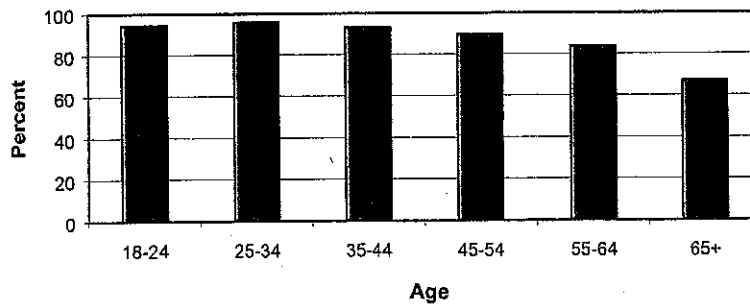


Source: Centers for Disease Control, National Center for Health Statistics, National Vital Statistics System. See Health and Aging Chartbook 1999.

Self-Rated Health

Another measure shown to be highly predictive of health status is how people rate their own health. On the surveys conducted yearly for the Behavioral Risk Factor Surveillance System, Iowans are asked to rate their health. The majority of Iowans of all ages rate their health as good, very good or excellent, although ratings of health as "fair to poor" increase with age (Figure 5).

Figure 5
"Good" to "Excellent" Self-Ratings of Health Status by Age



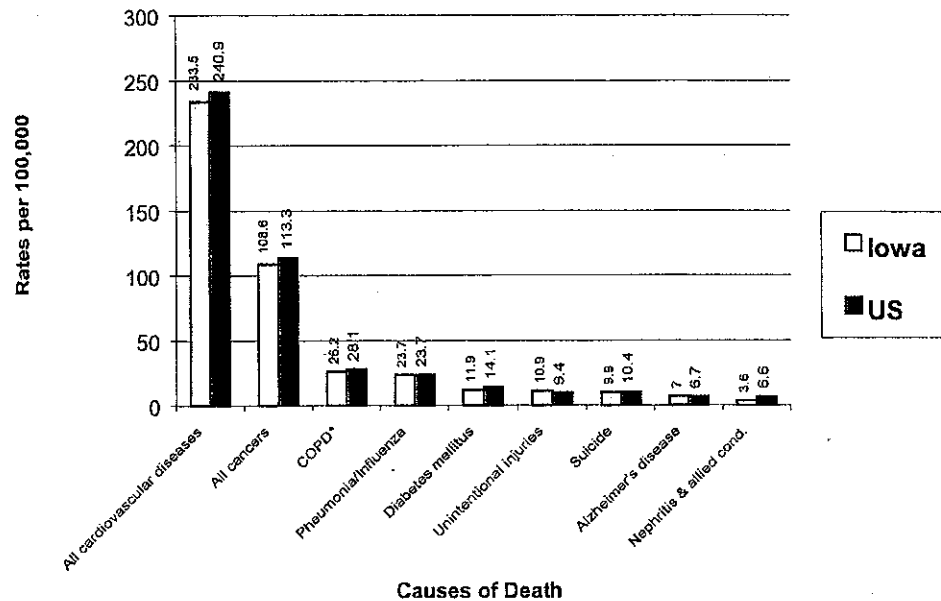
Source: Iowa Department of Public Health. *Health Risk Behaviors 1997-1998, Final Report from the Behavioral Risk Surveillance System.*

Mortality and Causes of Death

Death rates are another indicator of the health and health problems of a population. The age-adjusted death rate for Iowa is 422 per 100,000 compared with 479 for the nation. With the exception of unintentional injuries, death rates among those 65 years and older for the top causes of death are lower in Iowa than the national average (National Center for Health Statistics, 1999).

Causes of death rates provide even better insight into the health issues a population faces. Heart disease, stroke and cancer are responsible for more deaths in the U.S. than the next seven leading causes of death combined. Figure 6 on the following page shows the major causes of death among elderly Iowans. As shown, Iowa has lower rates of death than the U.S. average for all of the major causes of death, with the exception of unintentional injuries, but the ordering of causes of death are identical for Iowa and the nation.

Figure 6
Death Rates for Leading Causes of Death in Persons 65+:
Iowa and U.S., 1997



Source: National Center for Injury Prevention and Control. *10 Leading Causes of Death, Iowa 1998, All Races, Both Sexes.*
<http://webapp.cdc.gov/sasweb/ncipc/leadcaus.html>

In order to predict future needs, it is important to know how current and future cohorts may compare in relation to these major causes of death and disability.

1. Heart Disease

General Information

- Although mortality from heart disease is on the decline, it remains a major cause of disability and results in large healthcare expenditures. The cost of heart disease is estimated to be \$286 billion each year, including health expenditures and lost productivity (NCCDPHP**, 2000). Hospital and nursing home care accounted for over three-fourths of the total personal health care expenditures for heart disease.
- Heart disease affects the daily lives of almost 58 million people. Over half of these people are under age 65, but rates for heart disease are higher among the elderly than any other age group and older persons are more likely to have coronary heart disease, which is among the most disabling form of heart disease.

*Chronic Obstructive Pulmonary Disease

** National Center for Chronic Disease Prevention and Health Promotion

- Although death rates for heart disease have been dropping, this drop can largely be attributed to better diagnosis and treatment of heart disease. There is no evidence that the prevalence of heart disease is waning. From 1979 to 1997, the number of persons in the U.S. discharged from hospitals with a primary diagnosis of heart disease increased by 25 percent.

Iowa Specific Information

- Between 1988 and 1996, death rates from heart disease declined 7.6 percent. This decline was seen across counties of all sizes (Iowa Fact Book, 1999).
- Iowa ranks 29th in death rates from heart disease compared with other states in the U.S., but heart disease remains the leading killer of persons age 65 and older (NCCDPHP, 2000).

2. Cancer

General Information

- Cancer is the second major killer in the U.S. and is particularly prevalent among older persons. It is likely that the incidence and prevalence of cancer will increase with the aging of the population.
- In 2000, an estimated 1.2 million new cancer cases will be diagnosed and an estimated 550,000 Americans will die of cancer (NCCDPHP, 2000).
- Although cancer is not a major cause of need for long-term care, the costs of treatment often drain the savings of older people and make them more financially vulnerable at a point that resources are needed for long-term care.

Iowa Specific Information (Data are from the Iowa Fact Book, 1999)

- Sixty-five percent of all new cancer cases in Iowa are found in the 65 and older population.
- Cancer is the second leading cause of death in Iowa, accounting for one of every four deaths.
- Fifty-eight percent of all new cancers diagnosed in Iowa are found in four primary sites (1) prostate in men, (2) lung & bronchus, (3) female breast, and (4) colorectum.

- Fifty-five percent of all cancer deaths are from cancers in the four sites, with lung and bronchial being the leading cause of death (13 percent of all cancer deaths in Iowa).
- Almost a quarter of baby boomers smoke, placing them at high risk of lung cancer.

3. Stroke

General Information

- When cerebrovascular causes of death (strokes) are considered separate from cardiovascular diseases, stroke ranks third as a cause of death in the U.S. The incidence and prevalence of stroke is about the same in men and women, but women are more likely to die of stroke (AHA*).
- Approximately 29 percent of strokes result in death within a year of the occurrence of the stroke (AHA). This percentage is higher in adults age 65 and older and in African-American men and women.
- Although the stroke death rate fell by about 14 percent between 1987 and 1997, the actual number of strokes rose by 6.6 percent (AHA). The prevalence of stroke increases with age and this increase in the number of strokes is most likely a result of the increasing numbers of older persons in the population.
- Stroke is a leading cause of disability in the U.S. Only about 35 percent of stroke survivors recover completely or have minor impairments. About 40 percent will have moderate to severe impairments that require special care and another 10 percent will require a nursing facility or other form of long-term care (National Stroke Association).

Iowa Specific Information

- In Iowa, stroke is the second leading cause of death among persons 85 years and older.
- Hypertension is associated with increased incidence of stroke and hypertension rates in Iowa are above the national average (NCCDPHP, 1999).
- Rates of stroke have not declined in Iowa, as they have in other parts of the country and this trend is evident across all counties.

* American Heart Association

4. Chronic Obstructive Pulmonary Disease (COPD)

General Information

- COPD is a slow and progressive condition that often results in high levels of disability prior to death.
- Stroke is the third leading cause of death when considered separate from heart disease. If stroke is combined with heart disease, COPD becomes the third leading cause of death in Iowa and the U.S.

Iowa Specific Information

- Rates of COPD have been increasing over time with the larger counties in Iowa having higher mortality (University of Iowa, 1999).

5. Unintentional Injuries

General Information

- Nationally, unintentional injuries are the seventh leading cause of death among persons 65 to 84 years of age and the eighth leading cause among those 85+ (National Center for Injury Prevention and Control [NCIPC], 1998).
- Falls are one of the major causes of death from unintentional injury among older persons.
- Of those older persons who fall, between 20 to 30 percent suffer moderate to severe injuries that reduce mobility and independence.
- Older adults are hospitalized for fall-related injuries five times more often than they are for injuries from other causes (Alexander et. al., 1992)

Iowa Specific Information

- Among persons 65-74 years of age, injuries are the sixth leading cause of death in Iowa, with motor vehicle accidents being the major cause of deadly injury (36.9%) (NCIPC, 1998).
- Among persons 75-84 years and 85+, injuries are the seventh leading cause of death, with falls being the major cause at ages 75-84 (33.9%) and at 85+ (58.4%) (NCIPC, 1998).
- Falls have been increasing as a cause of death among the 85+ in all but the metro counties of Iowa (University of Iowa, 1999).

6. Diabetes

General Information

- About 16 million Americans have diabetes and about one-third of them are unaware of it (Centers for Disease Control [CDC]).
- Increases in the incidence of diabetes are particularly concerning, since diabetes predisposes individuals to a host of other deadly and/or disabling conditions, such as heart disease, kidney disease, blindness, and amputations.

Iowa Specific Information

- Deaths from diabetes are on the increase, particularly in the rural counties of Iowa (University of Iowa, 1999)

7. Alzheimer's Disease and Other Dementias

General Information

- Alzheimer's disease and other dementias affect 4 million Americans and are the leading cause of long-term care need (NCCDPHP, 2000).
- Dementia is a leading cause of disability among older persons, with Alzheimer's Disease being a leading cause of dementia.
- At least 50% of persons over 85 years of age have some memory problems associated with Alzheimer's or other dementias.

Iowa Specific Information

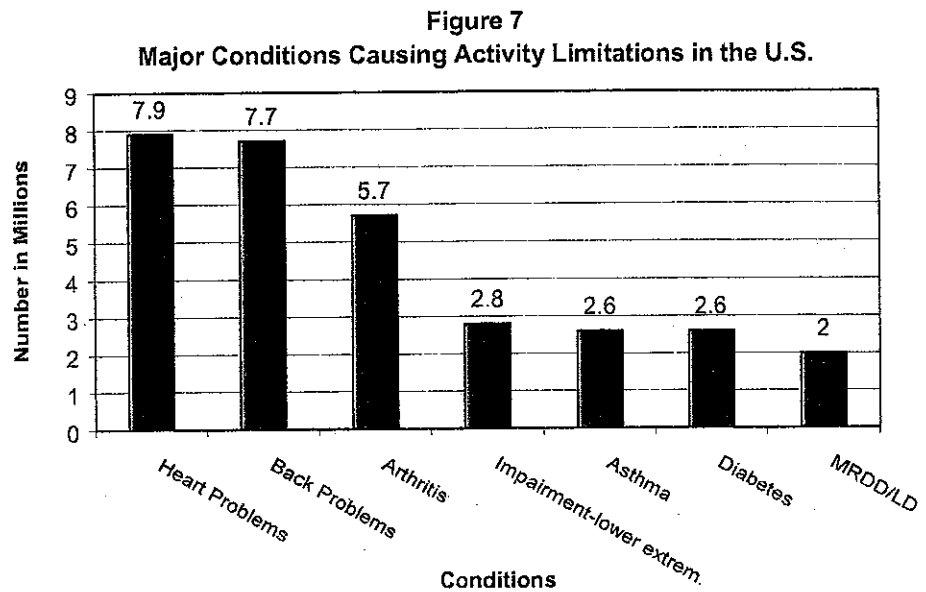
- Estimates regarding the prevalence of Alzheimer's disease and other dementias in Iowa vary considerably depending on the source. It is generally accepted that about 10 percent of the population 65 and older have some form of dementing illness. Using the 10 percent figure, approximately 43,000 elder Iowans would be projected to have dementia. Considering that the rate of dementia among those 85+ years is closer to 50 percent and Iowa has a larger percentage of persons 85+ than other states, the numbers of elders with dementia could be as high as 60,000. Whatever the current number, it is expected to double by 2040.

Disability Today and Tomorrow

The relationship between causes of death and the need for long-term care are very intertwined. Almost every condition discussed above is likely to result in prolonged periods of disability prior to death. Many of these conditions are among the major causes of disability in this country. Increasingly, people are living with conditions that would have resulted in death only a few short years

ago. Current treatment methods are allowing people to live with serious chronic conditions, sometimes with a minimum of disability and other times with severe levels of disability.

There are a number of other conditions that, while not posing a serious threat to life, result in chronic disabilities that adversely affect quality of life, increase risk of need for long-term care, and result in considerable cost to the individual and society. *Figure 7* shows the major causes of activity limitation in this country today. Most of these conditions can occur at any age, but are most common in the elderly.



Source: LaPlante, M & Carlson, D. (1996). *Disability in the United States: Prevalence and Causes, 1992*. San Francisco, CA: Disability Statistics Center. <http://dsc.ucsf.edu/UCSF/pub.taf>

Can We Anticipate Change in Disease and Disability Patterns in Future Cohorts?

There are indications that chronic conditions may be changing in the U.S. population. *Table 2* on the following page illustrates the most common chronic conditions by age and gender. In part, these differences result from age-associated conditions, but there is some indication that the prevalence and types of chronic conditions may be changing in younger cohorts. Significant increases are occurring in environmentally associated conditions such as sinusitis and asthma. Likewise, back pain, carpal tunnel syndrome and other orthopedic impairments are becoming prevalent conditions that can result in inability to conduct daily activities. Even if these conditions do not result in the need for nursing facility or other forms of long-term care, they are likely to compete for monetary and service resources that might otherwise be allocated to long-term care.

**TABLE 2: MOST COMMON CHRONIC CONDITIONS
BY AGE AND GENDER**

AGES	MALE	FEMALE
ALL AGES	<ul style="list-style-type: none"> • Orthopedic impairments • Sinusitis • Hearing impairments • Hypertension • Hay Fever 	<ul style="list-style-type: none"> • Sinusitis • Arthritis • Orthopedic impairments • Hypertension • Hay Fever
18-44	<ul style="list-style-type: none"> • Orthopedic Impairments • Sinusitis • Hay Fever • Hearing impairments • Hypertension 	<ul style="list-style-type: none"> • Sinusitis • Orthopedic impairments • Hay Fever • Migraine • Asthma
45-74	<ul style="list-style-type: none"> • Hypertension • Arthritis • Hearing impairments • Orthopedic impairments • Heart Disease 	<ul style="list-style-type: none"> • Arthritis • Hypertension • Sinusitis • Orthopedic impairments • Hay Fever
75+	<ul style="list-style-type: none"> • Hearing impairments • Arthritis • Heart Disease • Hypertension • Cataracts 	<ul style="list-style-type: none"> • Arthritis • Hypertension • Hearing impairments • Heart Disease • Cataracts

Adapted from National Academy on an Aging Society analysis of 1994 National Health Interview Survey data. In from National Academy on an Aging Society, *Chronic Conditions: A challenge for the 21st Century*, Number 1, November 1999.

The reasons for changes in disability patterns may be multifaceted. Age is a major influence in the likelihood of development of certain disabilities, but conditions such as sinusitis and asthma are increasing in young cohorts. Air pollution and environmental contaminants may be the cause of some of this increase and may have implications across other areas of health.

Orthopedic impairments are increasing in younger cohorts. The reasons for these increases may be work-related or the result of other lifestyle differences. Regardless of the causes, these impairments have serious implications for future functional abilities of persons as they age.

Lifestyle differences, differentials in exposure to environmental contaminants or workplace hazards, differentials in access to effective treatment or knowledge about prevention and/or differences in choices about what risks to take will influence the health and well-being of future cohorts of elders. Iowans in the age ranges 35 to 65 currently manifest behaviors and characteristics that may increase their susceptibility to heart disease, cancer, stroke, back problems and a host of other chronic illnesses (CDC, 1999).

- Over a quarter of persons 35 to 64 years-of-age smoke cigarettes, as compared to 8 percent of those 65+. The percentage of people smoking has essentially remained unchanged over the last decade.
- The percentages of people who are overweight increase with every decade of life until age 65, when the percent decreases slightly.
- The percentage of Iowans who have been told they have high blood cholesterol increases with every decade of life and reaches over 45 percent by ages 65+.
- A quarter of Iowans have been told they have high blood pressure and the prevalence increases with every decade of life. By ages 65+, almost half of Iowans have hypertension. There has been a slight increase in the prevalence of hypertension in Iowa over the last five years.

Major changes, either in the incidence or prevalence of any of the major causes of mortality or disability, can have profound implications for the long-term care system. The above data suggest that we may see increases, or at least little change, in many of the more common chronic conditions and causes of disability today. Other factors may, however, play a role in changing future needs for long-term care.

Breakthroughs in the treatment of Alzheimer's disease that reduce, delay or prevent the disabling effects would greatly reduce need for long-term care or prolong the need for care until later in life. Treatments that further decrease rates of death from heart disease may also improve quality of life and ability to function. If future treatments merely prolong life, but do not significantly increase the quality of life, the result will be more people living with both heart disease and disability. It is possible these people will require long-term care in greater numbers and for longer periods than in the past.

Falls rank as a more prevalent cause of death among the elderly in Iowa than among elders in other states. It can be assumed that falls are also more prevalent among elder Iowans and a major cause of disability. An aggressive falls prevention program might reduce both deaths and disability from falls, thereby reducing need for long-term care among a significant sector of the population.

Advances in medical treatment have been a major reason for the dramatic decreases in death rates from heart disease over the last two decades. Discoveries in human genetics and new approaches to the treatment of cancers, neurological diseases, heart disease, and numerous other disabling conditions may reduce the need for long-term care in coming decades, or may result in long-term care being required for a totally different set of problems.

Other Factors Influencing Health and Disability in Iowa

Ethnic Minority Status

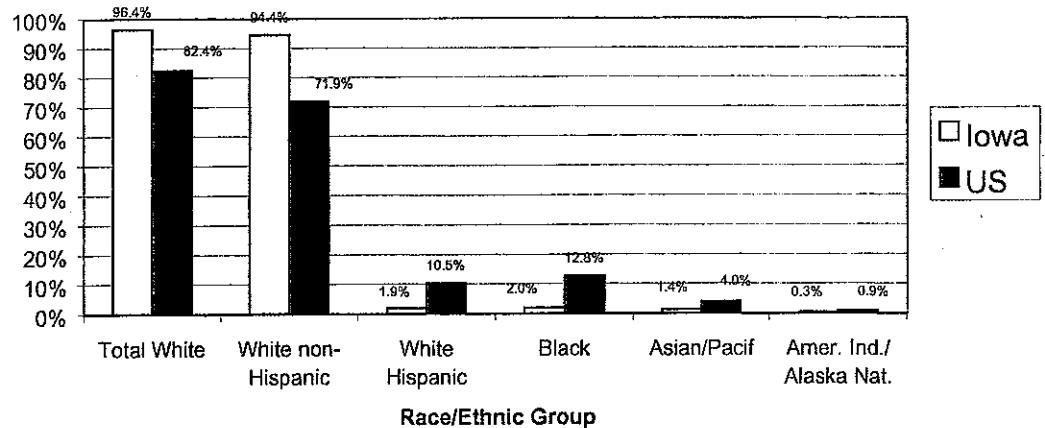
Ethnic and racial heritage play a significant role in the prevalence and course of many health conditions. Heart disease, stroke, diabetes and many other conditions are more common among certain

ethnic minority groups and result in higher death rates.

Iowa has one of the smallest ethnic minority populations in the nation (Figure 8). Over 94 percent of the Iowa population are non-Hispanic white. In 1990, blacks constituted 12.8 percent of the U.S. population, but only 2 percent of Iowa's residents. Iowans of Hispanic origin comprised 1.9 percent of the state's population. Approximately 1.4 percent of the population was Asian or Pacific Islander and the remainder was American Indian, Eskimo, or Aleut.

In some counties of Iowa, the lack of ethnic diversity is very marked. In 1990, whites constituted 99 percent or more of the population in 64 Iowa counties and the white population of the state as a whole tended to be considerably older. In fact, the percentage of whites 65 years and older was more than twice that of any minority group.

Figure 8
Population Estimates for Race and Hispanic Origin U.S. & Iowa 1999



Source: U.S. Census Bureau, *Population Estimates for States by Race and Hispanic Origin: July, 1999*
<http://www.census.gov/population/estimates/state/srh/srh99.txt>

Ethnic background may be a factor in some health conditions due to inheritance of predisposing genetic patterns or to learned behaviors that adversely influence health status. It is often difficult, however, to separate the effects of ethnic background, as it relates to health status, from factors such as income and education. Ethnic minority status has been shown to correlate with lower educational levels and lower income status. Both low income and low

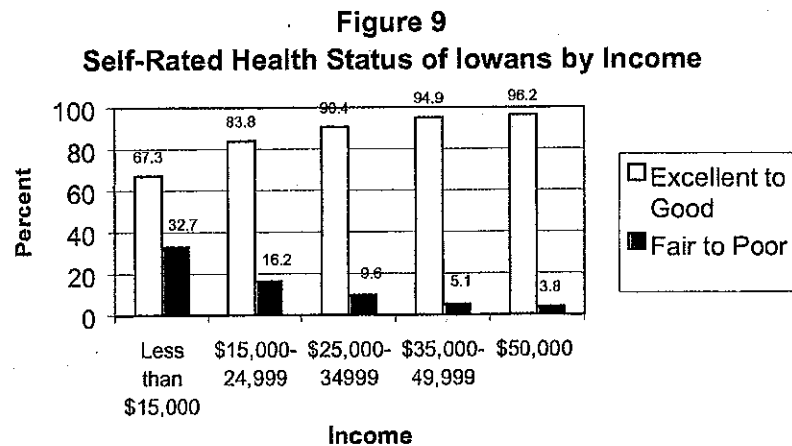
educational attainment have been shown to correlate with poorer health status. The reasons for these correlations are complex, but the most likely explanations relate to differentials in access and knowledge. Persons with lower incomes and education often have less access to health care, cannot afford timely or adequate treatment for health problems, and have less knowledge about appropriate ways to prevent disease and promote good health.

The low prevalence of ethnically diverse groups in Iowa is certain to contribute to the lower prevalence of many chronic conditions and lower death rates from these conditions. The effects of income and education among the population in general may also account for some differences.

Income

Although Iowa is not considered a wealthy state, Iowans are financially better off than people in many other states are. *Figure 9* shows the relationship between income and self-rated health status in Iowa.

Clearly, level of income has a direct positive relationship to perceived health status.



Source: NCCDPH (1998), Behavioral Risk Factor Surveillance System, Iowa- 1997
<http://www2.cdc.gov/nccdphp/brfss>

From 1987 to 1997, the per capita personal income in Iowa increased from \$14,511 to \$23,120. This placed Iowans at 91% of the national average of \$25,288 and at a rank of 32nd in relation to other states (Iowa State University, 1999).

Although Iowans have a per capita income below the national average, other economic indicators suggest that Iowans are relatively economically secure. The poverty rate is quite low (9.8 percent), placing Iowa among the top ten states with lowest poverty rates in the country (Kueter, 1999). Even among the oldest and frailest, economic status appears to be above average. The percentage of nursing facility residents on Medicaid is the lowest in the

country. Only 45.7 percent of Iowa nursing facility residents are on Medicaid, as compared with 67.6 percent nationally (Iowa Department of Human Services, July 2000).

Another indicator of economic well being is home ownership. In 1998, 72.1 percent of Iowans owned their own homes, placing Iowa 13th in the country for home ownership rates (U.S. Bureau of the Census, 1999). Home ownership is particularly prevalent among older Americans who purchased homes after World War II and these are our current aged cohorts. Although over 70 percent of homes in Iowa are valued at less than \$100,000, they remain a source of equity to meet future long-term care needs (Information Pathways, Inc., 2000).

Not only does economic status play a positive role in the health status of Iowans, it also has a protective role in assuring that needs will be met. The ability of people to use income and home equity to meet health and long-term care needs can allow more flexibility for states in designing and encouraging long-term care options.

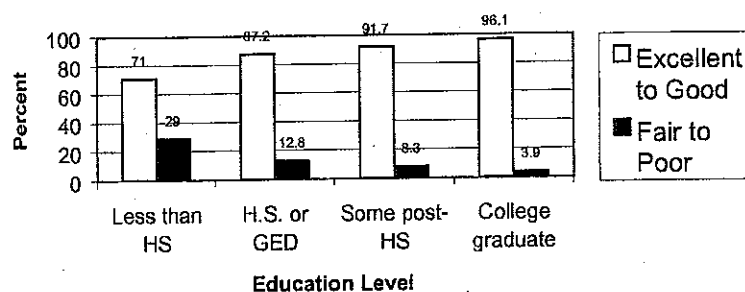
Education

Education also has a close association with health status (Figure 10). An estimated 87.7 percent of Iowans have completed high school, placing Iowa above the national average of 82.8 percent (U.S.

Bureau of the Census, *Statistical Abstract of the U.S.*). One in five Iowans has completed college. These data are impressive given the high percentages of Iowans who are elderly and would have had less access to a college education.

Over the last two decades, educational levels have risen considerably among young individuals. It can be anticipated that improvements in educational levels of future cohorts will be reflected in an improved health status.

Figure 10
Self-Rated Health Status of Iowans by Education



Source: NCCDPH (1998), Behavioral Risk Factor Surveillance System, Iowa- 1997
<http://www2.cdc.gov/nccdphp/brfss>

Changes in the Need for Long-Term Care Over the Next Decade

Population Changes

As discussed previously, the rates of growth of the older population in Iowa will be very slow over the next ten years. This leveling in the growth of the elderly population gives Iowa a short reprieve and a window of opportunity to plan and position their long-term care system, including nursing facilities, for the decades ahead.

Changes in Nursing Facility Use 2000 to 2010

Despite increasing numbers of elders at risk of needing long-term care and reductions in the numbers of nursing facility beds in Iowa, occupancy rates remain relatively low. Today, Iowa has approximately 35,100 nursing facility beds with an average occupancy rate of approximately 86 percent. This phenomenon is being seen across the country. The number of people aged 65 and older who stayed overnight in nursing homes fell by more than eight percent from 1985 to 1995 (Bishop, C.E., 1999).

A study by Waidmann and Manton may shed some light on this phenomenon. In a study of national surveys conducted from the early 1980's into the mid-1990's, they found a leveling and, in many cases, a dramatic decline in disability rates. Findings from the 1982-1994 National Long-Term Care Survey showed dramatic declines (by as much as 15%) in the age-adjusted disability and institutionalization rates for the U.S. population 65+. These declines were particularly dramatic among those 80 years-of-age and older.

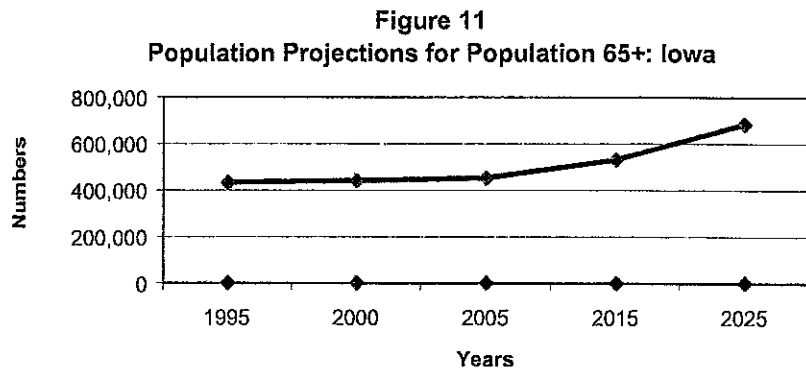
Other factors may also account for some of the decline in nursing facility use. Medicare home health use increased from 5 to 9 percent over the same time period and was likely a substitute for nursing home care. The increase in availability of assisted living has also provided an alternative to nursing facility use for those who are less impaired. All of these factors may continue to erode the use of nursing facilities for the short term.

Changes in the Need for Long-Term Care Beyond 2010

About 2010, the baby boomers will begin to enter their senior years. This will result in dramatic increases in the numbers and percentages of elderly. Significant increases in the numbers of elders will also occur in Iowa. However, the increases in percentages of elderly are likely to be more dramatic than the increases in numbers of elderly. The increases in numbers

are likely to be the result of the aging of current Iowa residents, while the increases in percentages will also reflect the aging of residents and the migration of the young out of the state.

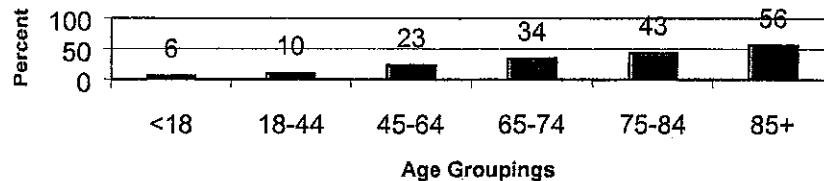
The increase in the elderly population, resulting from the baby boomers entering the senior boom, will undoubtedly have a significant impact on long-term care systems, though the magnitude of this impact may vary from state to state. The Figure below (*Figure 11*) shows the projected growth in the number of elderly in Iowa from 2000 to 2025.



Source: U.S. Census Bureau. *Projections of the Population by Age and Sex, of States: 1995-2025*.
<http://www.census.gov/population/projections/state/stpjae.txt>

While most people age 65 and older do not require long-term care, the likelihood of needing long-term care increases significantly with age (*Figure 12*). Given this age gradient in the need for long-term care, increasing pressure on the long-term care system in Iowa may not be significant for many years. Long-term care need does not escalate significantly until people reach their late seventies to mid-eighties, therefore, it may be 2025 or beyond before the baby boomers will place significant demand on the state's long-term care system.

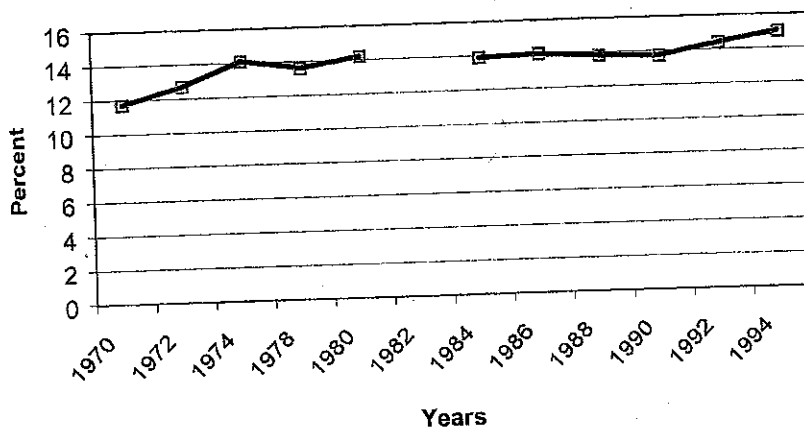
Figure 12
Percent of Individuals Limited in Activities Because of Chronic Conditions, by Age



Source: U.S. Census Bureau, *Projections of the Population by Age and Sex, of States: 1995-2025*.
<http://www.census.gov/population/projections/state/stpjae.txt>

Another factor that must be considered in planning for future long-term care demand is the population younger than age 65 who are disabled. The elderly are only one piece, though a large one, of the long-term care puzzle. In 1995, there were a reported 12.8 million Americans needing long-term care and 57 percent of these people were over age 65. As disability rates appear to be decreasing among those in their eighties, there is evidence of increasing disability in younger cohorts. Disability rates in the U.S. from 1970 to 1994 are shown in *Figure 13*.

Figure 13 Disability Rates in the U.S.



Source: National Health Interview Survey. Note: The break in the graph line between 1980 and 1982 is the result of data not being available for 1982.

Rates of disabilities within the general population remained relatively stable during the 1980's, but began a marked increase in 1990. This increase cannot be solely attributable to the aging of the population. In fact, increases in disability rates among younger cohorts appear to account for much of this growth. In part, the increase may be the result of earlier identification and treatment of disabilities, but there are also more people being born with disabilities or experiencing permanent disabilities from disease or injuries who are now kept alive. Many of these people can expect to survive into their 60's and beyond, a phenomenon that would have been unlikely even a decade ago. Although increasing rates of disability do not automatically assume an increased need for long-term care, it can be assumed that a number of these people will require resources for rehabilitation, habilitation, special education or other special services that will compete for long-term care dollars.

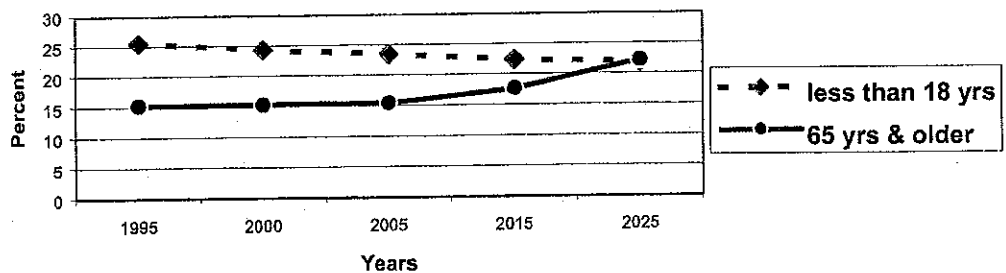
Challenges Iowa Faces in Providing Long-Term Care Services

Increasing Dependency Ratios

Iowa may be hampered in its ability to meet long-term care needs due to a number of factors. Over the next three decades, Iowa will experience a slight decline in percentages of young and a marked increase in the percentages of elderly in the population (Figure 14). With the increase in older persons, a significant increase in the dependency ratio in the state is anticipated. It is projected that by 2025, for every 100 people of working age (ages 20 to 64 years) there will be 88.8 dependent persons (under age 20 or over age 65) (U.S. Bureau of the Census, Population Division). This compares to a dependency ratio of 77.2 in 1995. The implication of this trend is significant and is already reflected in some rural counties.

Rural counties are already experiencing the impacts of increased dependency ratios. The trend for a number of years has been for the young to migrate out of rural counties, leaving the older segment of the population. In many cases, the older people left behind are poorer, more disabled and have fewer options for assistance available to them than elders in more urban areas. The high dependency ratios translate into fewer workers to meet the staffing demands of the long-term care system. Not only are there fewer workers, but as the percentages of older retired adults increases, the tax base of the county or state tends to decrease, meaning less revenue to develop and pay for services.

Figure 14
Age Projections for Young (<18) and Old (65+) in Iowa: 1995-2025



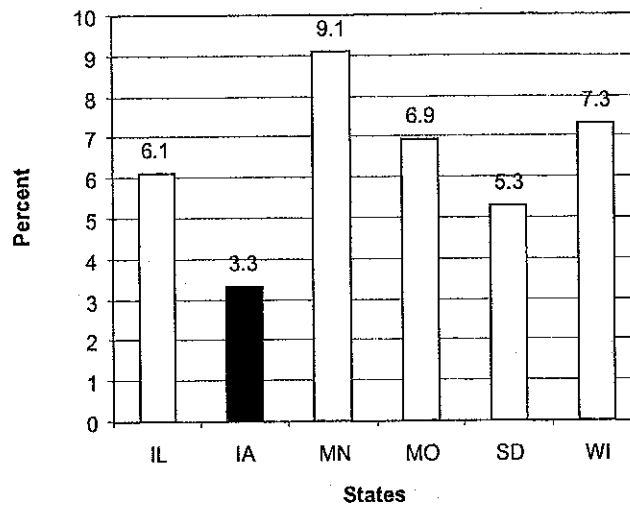
Source: U.S. Census Bureau.
<http://www.census.gov/population/www/projections/popproj.html>

Slow Growth Rate of the State Population

The increase in dependency ratios in Iowa is primarily due to out-migration of younger residents, slow natural growth, and low rates of immigration into the state. With a growth rate of 3.3 percent over the last decade, Iowa has shown the slowest growth of any of

the surrounding states (Figure 15).

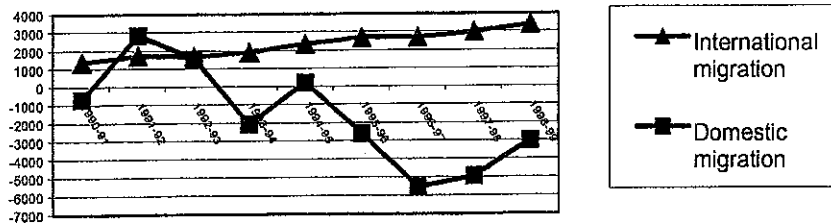
Figure 15
Percent Change in Population by State: 1990-1999



Source: U.S. Census Bureau. State Population Estimates and Demographic Components of Change 1990-1999.

Migration out of Iowa between 1990 and 1999 exceeded by about 3000 persons the numbers coming into Iowa from other locations in the United States. Natural growth (greater birth rate than death rate) and international migration have been the primary sources of population growth since 1990 (Figure 16).

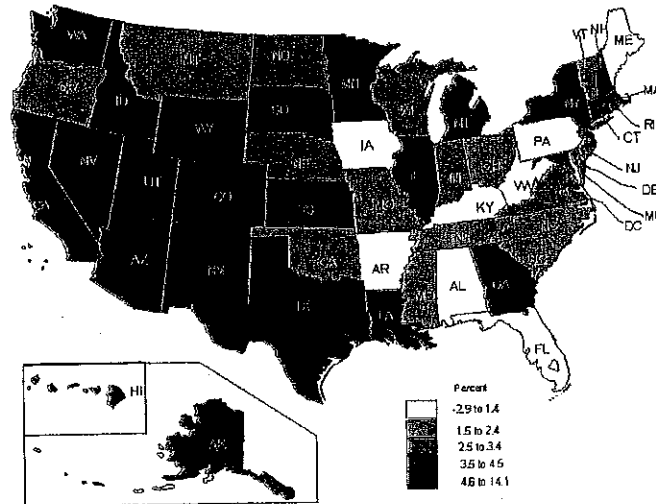
Figure 16
Net International and Domestic Migration:
Iowa 1990-1999



Source: U.S. Census Bureau. State Population Estimates and Demographic Components of Population Change: 1990-1999. <http://www.census.gov/population/estimates/statest-99-2.txt>

As shown in Map 1, it is anticipated that the natural growth rate of Iowa will not increase, but rather decline, over the next two decades. (Source for Map: U.S. Bureau of the Census, Population Division, PPL-47.)

Projected Average Annual Rate of Natural Increase Per 1,000 Population: 1995 to 2025



The minimal population growth of the state, combined with a decrease in the percentage of young and an increasing number of aged people who are likely to need personal care services poses some interesting dilemmas for the state.

Currently, international immigration is the major factor in population growth in Iowa. Recent suggestions that international immigration be further encouraged may be one answer to increasing the workforce numbers in Iowa, but one that must be carefully planned.

Marketing Iowa to only the well-educated and English-speaking immigrant will not address the future long-term care workforce needs and may produce competition for jobs that would keep existing residents in the state. Encouraging immigration of non-English speaking immigrants from backgrounds quite different from native Iowans is also fraught with pitfalls.

To make such an endeavor successful and acceptable to all concerned, the state would need to direct resources to provide for the housing, health and educational needs of the immigrant population, as well as education and training of the resident population to accept, understand and embrace growing diversity of the population. The latter would be no small feat, but one that might be very worthwhile to undertake.

Loss of Informal Support System

Family and friends are a major source of long-term care. The majority of noninstitutionalized elderly with disabilities – about 95 percent – receive some assistance from relatives, friends and neighbors.

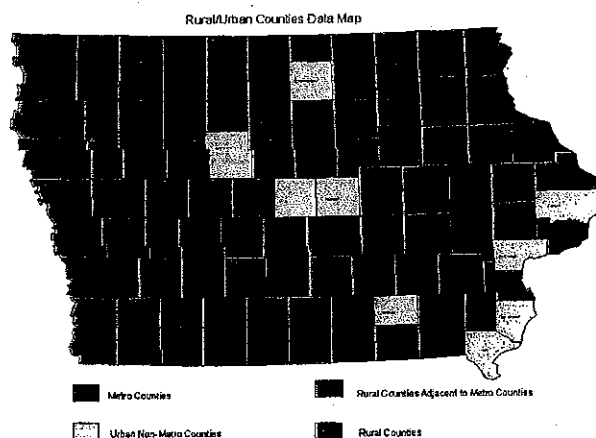
Almost 67 percent of disabled elders rely solely on help from family members, primarily spouses and daughters (Stone, 2000). With the young leaving Iowa, this source of unpaid long-term care is eroded, leaving elders more vulnerable to need formal care.

This situation is further complicated by other factors. Elders in the current cohort 85+ are less likely than the elderly in the past or future to have had children. Women whose reproductive years fell during the depression era had very low fertility rates. Those women are now in their mid- to late-eighties, at considerable risk of needing long-term care, and often have no one to provide their care. They are much more likely to require assistance from paid sources.

Another factor that will continue to complicate the provision of long-term care is the entry of more and more women into the workforce. Women have long been the stalwarts of long-term care in this country. With high percentages of women in the workforce, they are often less able to fully meet the long-term care demands of elder relatives. In Iowa, the percentage of women in the workforce is above the national average. Approximately 65 percent of Iowa women are in the workforce (Iowa Workforce Development, 1999), as compared with 60 percent nationally. This trend is likely to continue as Iowa's workforce needs escalate and the numbers of potential workers declines. Additionally, women have been the backbone of the formal long-term care system. With increasing job options available, they are less likely to enter the long-term care job market where wages tend to be low and working conditions less desirable.

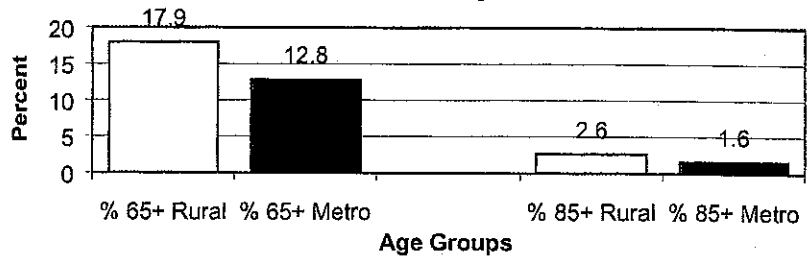
The Challenges of a Rural Environment

Like much of the Midwest, Iowa is a very rural state (Map 2). This creates special problems and challenges for the delivery of long-term care. Delivery of services of all types in rural areas are made more difficult by a less dense population, inability to benefit from an economy of scale to reduce costs, higher poverty levels, an older and more disabled population, and an often inadequate number of persons in the workforce.



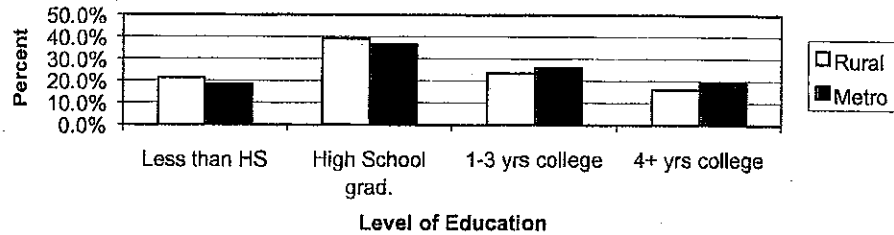
Figures 17-19 highlight some of the differences between populations in rural (non-adjacent) and metro counties in Iowa.

Figure 17
Comparison of Rural & Metro Counties by Aged Population Percentages



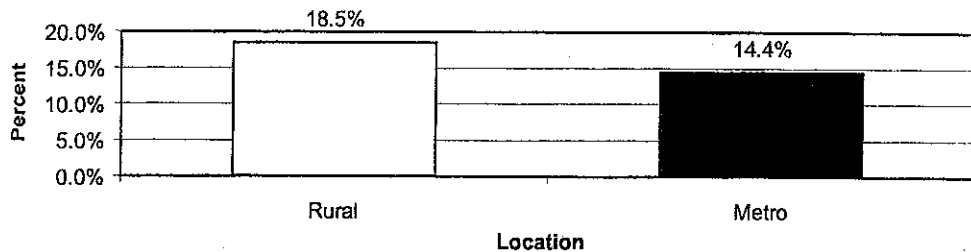
Source; Iowa State University. Iowa PROfiles
<http://ia.profiles.iastate.edu/data/census/regional>

Figure 18
Rural and Metro County Differences in Education of Population, 1990



Source; Iowa State University. Iowa PROfiles
<http://ia.profiles.iastate.edu/data/census/regional>

Figure 19
Rural and Metro County Differences in Percent of Households Below \$10,000 Per Year Income



Source; Iowa State University. Iowa PROfiles
<http://ia.profiles.iastate.edu/data/census/regional>

Economic indicators provide a positive note regarding the future of aging in Iowa. Current data suggest that Iowans are likely to remain above the national average in relation to economic status for the near term (Iowa Department of Economic Development, 2000).

For the last six years, Iowa has been on a wave of prosperity. Total employment climbed to a peak of over 1.5 million in 1999 and nonfarm employment was at an all-time high. In 1999, the unemployment rate in Iowa was 2.5 percent as compared with the national rate of 4.2 percent.

A number of factors can drastically alter this picture, but these factors are more likely to be an issue for the baby boom cohort than for those who will be at high risk for long-term care over the next decade. There has been a trend toward early retirement in Iowa, as in the rest of the country, and baby boomers in large numbers indicate the desire to retire early. The good retirement packages and pensions, as well as good economic conditions in the country, has made it possible for people in their fifties and early sixties to retire and maintain an acceptable standard of living. But as longevity increases, these individuals may have to stretch retirement resources over far more years than anticipated. A decline in productivity in this country and a stagnant economy can easily jeopardize the resources they have accrued. This could result in greater reliance on public programs in the future.

Another impact of early retirement is the stress this places on an already overstretched labor market. With fewer workers available as the population ages, finding workers is likely to be increasingly difficult. The effects of labor shortages have already been manifest in Iowa with employers now targeting previously underutilized sources of labor, such as the disabled, early retirees, immigrants, minorities and welfare recipients (University of Iowa, 2000).

Conclusion

Long-term care will be one of the most difficult challenges of this century. Iowa already has a very aged population and faces the added difficulty of many of these elderly residing in rural and remote areas where access to services is limited and the workforce to provide services is dwindling. Iowa also faces the challenge of transforming its institutional focus of care to one that will more economically and acceptably meet the needs of current and future cohorts of aged individuals.

The next ten years may give Iowa a window of opportunity to plan and position nursing facilities for the future and experiment with different forms of residential and community long-term care programs. Between now and 2010, Iowa will see a very slow, and possibly a negative, growth in the need for nursing facility beds. The stability in growth of the elderly population, combined with the trend of decreasing rates of disability among persons in

their eighties, should reduce the need for nursing facility level care over the short term. Since Iowa has a particularly high percentage of low care residents, there is considerable opportunity to study this population and consider alternatives that offer lower and less costly levels of care. As other elders require long term care services, the availability of a broader continuum of care alternatives should reduce the need for nursing facility beds.

The availability of alternative care options will result in higher acuity levels among nursing facility residents. It is likely the role of the nursing facility in the future will be to serve those with cognitive impairments so severe they will require the structure and skill levels provided in a nursing facility setting, the severely functionally disabled that cannot manage their own care, and those with more acute illnesses or functional impairments that require short-term recuperation and rehabilitation to return to the community. By adding reimbursement incentives for facilities to offer higher and more complex levels of care, this trend will be further cemented in place.

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