



## **Profiling Arizona's Nursing Home Residents 1999-2001**

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The University of Arizona  
College of Nursing  
and  
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## **Profiling Arizona's Nursing Home Residents**

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# Profiling Arizona's Nursing Home Residents

## Executive Summary

Between the years of 1999 and 2001, over 83,000 individuals were admitted to Arizona's nursing homes. On a single day (July 1) of each of these years, approximately 13,000 individuals were living in Arizona's nursing homes. Who are these people? What are their cognitive, physical, social, emotional, and health care needs? The goals of the Profiling Project were to answer these questions and to contribute much-needed information to ongoing policy and quality discussions about long-term care in Arizona.

In this study, Minimum Data Set (MDS) data submitted to the Arizona Department of Health Services Division of Licensing Services for nursing home residents were analyzed for the years 1999, 2000, and 2001. These were the first three years for which complete MDS data were available. MDS data are a comprehensive set of data completed on all nursing home residents in Medicare certified facilities. Arizona MDS data were made available to this project under the terms of a data use agreement with the Centers for Medicare and Medicaid Services.

Data from MDS assessments were used to describe and compare three subgroups of nursing home residents: (1) individuals who were admitted to a nursing home after a hospital stay and remained 90 days or less (*referred to in this report as the post-hospitalization or post-acute group*); (2) individuals who were admitted to a nursing home from settings other than a hospital and remained in the nursing home more than 90 days (*the chronic care group*); and (3) individuals who traversed between hospital and nursing home, i.e., those who were admitted after a hospital stay and remained longer than 90 days or those who were admitted from non-hospital settings and subsequently had a hospital stay (*the transition or chronic/post-acute group*). All residents and residents in each of the three subgroups were examined at admission to the nursing home and on a single day of each year.

The results of the Profiling Report show that resident characteristics are not homogeneous, either at admission or at one snapshot in time. Resident subgroups had distinct profiles that reflected substantive differences in health care needs. Almost three-quarters of the individuals admitted to Arizona's nursing homes came in after a hospital stay and remained 90 days or less. Their profile: these individuals were younger, in more pain, on more medications, and needed more functional assistance than members of the other two groups. In contrast, individuals in the chronic care group were in the majority at one time during the year. Their profile: these residents were older and had more difficulty with memory, wandering behaviors, and incontinence. Individuals in the transition group, moving between hospital and nursing home, more closely resembled the chronic care group, yet, blended characteristics of both the chronic care and post-hospitalization group. Highlights of this report are presented below:

### **Arizona's Nursing Home Residents at Admission 1999-2001**

- ❑ For the years 1999 to 2001, the majority of individuals admitted to Arizona's nursing homes were women, white, English-speaking, and over the age of 75 years.
- ❑ Half of the individuals admitted to nursing homes lived in Maricopa County prior to admission. Pima County was the county of prior residence for 14 percent of admissions and about 22 percent of residents admitted to nursing homes lived in one of the remaining 13 Arizona counties prior to admission.
- ❑ The percent of individuals admitted to nursing homes with a living will decreased from 27 percent in 1999 to 20 percent in 2001.
- ❑ At admission, more than 40 percent of nursing home residents had short-term memory problems; about one-quarter had problems with long-term memory.
- ❑ Almost one-third of residents had one or more indicators of a depressed, sad, or anxious mood at admission; only about 20 percent established their own goals for being in the nursing home. About 5 percent of individuals engaged in wandering behavior or verbally or physically abusive behavior.
- ❑ One-third or less of residents were independent in key areas of physical functioning, including bed mobility, transfers, toilet use, dressing, or bathing at admission. A substantial number required extensive or full assistance in each of these areas.
- ❑ At admission, one-quarter of residents were incontinent of bowel movement all or most of the time; one-fifth were incontinent of urine all or most of the time. One-quarter had an indwelling catheter.
- ❑ Chronic health problems were common in individuals admitted to nursing homes between 1999 and 2001. More than half had a diagnosis of hypertension and almost one quarter had a diagnosis of diabetes. A little over 20 percent of residents had a diagnosis of Alzheimer's Disease or dementia other than Alzheimer's disease at admission.
- ❑ At admission, almost 40 percent of nursing home residents complained or showed evidence of pain daily. Most of these individuals described their pain as moderate in intensity, but 16 percent reported horrible or excruciating pain.
- ❑ Between 1999 and 2001, almost every individual (99 percent) admitted to a nursing home was taking at least one over-the-counter or prescription medication. Two-thirds were taking between 5 and 12 medications and almost one-fifth were taking more than 12 medications.

### **Arizona's Nursing Home Residents on One Day of the Year 1999-2001**

- ❑ For the years 1999 to 2001, on a single day of the year, July 1, a majority of individuals in Arizona's nursing homes were women,, white, and English-speaking. The percent of women was slightly higher than in the admission profile (68 percent compared to 60 percent). More than 40 percent of this population was over the age of 85 compared to 26 percent in the admission profile. While most of the residents on one day of the year were white, there was a slightly higher Hispanic population than in the admission profile (10 percent compared to 8 percent).
- ❑ About 44 percent of individuals in nursing homes on July 1 had lived in Maricopa County prior to admission. Pima County was the county of prior residence for 11 percent of residents and about 18 percent lived in one of the remaining counties of Arizona prior to admission.
- ❑ About 70 percent of residents in nursing homes on July 1 had short-term memory problems; a little more than half had a problem with long-term memory. Less than one-quarter of residents were independent in decision-making regarding tasks of daily life.
- ❑ Approximately 40 percent of residents in nursing homes in July 1 had one or more indicators of a depressed, sad, or anxious mood. About 14 percent engaged in wandering behavior and 10 percent exhibited verbally or physically abusive behavior.
- ❑ On July 1 of each year, about 40 percent of residents were independent in bed mobility and eating; however one-quarter or less were independent in transferring, dressing, toilet use or bathing. Over half required extensive or full assistance in toilet use, dressing, or bathing.
- ❑ About half of residents in nursing homes on July 1 were frequently incontinent of bowel or bladder function all or most of the time. Ten percent had an indwelling catheter.
- ❑ About 20 percent of residents on July 1 complained or showed evidence of pain daily. Most of these individuals described their pain as moderate in intensity, 10 percent reported horrible or excruciating pain.
- ❑ About 20 percent of residents in nursing homes on July 1 had fallen in the past 30 days.
- ❑ Between 1999 and 2001, almost every individual (99 percent) in a nursing home on July 1 was taking at least one over-the-counter or prescription medication. Two-thirds were taking between 5 and 12 medications and 12 percent were taking more than 12 medications.

### **Resident Groups at Admission, 1999-2001**

- ❑ Each of the three resident subgroups was comprised of approximately 15 percent of individuals under the age of 65 years at admission. A greater percent of chronic care residents and residents in the transition groups were 85 years or older than in the post-hospitalization group.
- ❑ Residents in the post-hospitalization group were more likely to be white, more likely to live alone prior to admission, and less likely to have do-not-resuscitate directives than residents in the other two groups.
- ❑ Twice as many chronic care and transitional residents have short-term memory problems compared to post-hospitalization residents. More than twice as many chronic care and transitional residents have long-term memory problems compared to post-hospitalization residents.
- ❑ The percent of chronic care and transitional residents with difficulty understanding others or making themselves understood was more than double that of post-hospitalization residents.
- ❑ Fewer post-hospitalization residents were admitted with one or more indicators of a depressed, sad, or anxious mood than chronic residents or residents in transition.
- ❑ Twenty percent of chronic care residents engaged in wandering behavior at admission compared to 8 percent of residents in transition and 3 percent in post-hospitalization residents. More chronic care residents engaged in verbally or physically abusive behavior than post-hospitalization residents or residents in transition.
- ❑ At admission, post-hospitalization residents were more at ease interacting with others than residents in the other two groups and were twice as likely to establish their own goals at admission.
- ❑ At admission, chronic care residents are more likely to be independent in all activities of daily living, with the exception of bathing, than residents in the other groups. Residents in transition had the highest percentage of residents requiring extensive or total assistance in the majority of activities of daily living.
- ❑ Residents in the chronic care and transition groups had more than twice the rate of bladder and bowel incontinence than residents in the post-hospitalization group. The percent of residents in the transition and post-hospitalization groups with an indwelling catheter was more than three times that of the chronic care group.
- ❑ At admission, the chronic care group had the highest percentage of individuals with dementia other than Alzheimer's disease and Alzheimer's disease.
- ❑ One-third of residents in the chronic care group and transition group had a diagnosis of depression compared to 18 percent in the post-hospitalization group.

- ❑ About 70 percent of post-hospitalization residents complained or showed evidence of pain at admission compared to half of residents in transition and 40 percent of chronic care residents. Post hospitalization residents had a substantially higher rate of daily pain and reported more times with horrible or excruciating pain than the other groups.
- ❑ More post-hospitalization residents were taking 12 or more over-the-counter or prescription medications (20 percent) than residents in the transition (14 percent) or chronic care groups (10 percent).
- ❑ Residents in the post-hospitalization group were substantially more likely to receive skills training for returning to the community than residents in the other two groups. More residents in the post-hospitalization group received physical therapy and occupational therapy at admission.
- ❑ Residents in the post-hospitalization group were substantially more likely to express a preference for return to the community (86 percent), followed by residents in the transition group (38 percent), and then residents in the chronic care group (20 percent).

### **Residents Groups on One Day of the Year, 1999-2001**

- ❑ On July 1 of each year, the post-hospitalization group had the highest percentage of residents under age 65 (almost 20 percent), followed by the transition group (15 percent) and then, the chronic care group (11 percent). The chronic care group had the greatest number of residents 85 years or older.
- ❑ Chronic care and transitional residents were substantially more likely to have short-term and long-term memory problems and severe impairment in cognitive skills for daily decision-making than post-hospitalization residents.
- ❑ Fewer post-hospitalization residents had one or more indicators of a depressed, sad, or anxious mood than chronic residents or residents in transition.
- ❑ On one day of the year, 16 percent of chronic care residents exhibited wandering behavior compared to 10 percent of residents in transition and 4 percent of post-hospitalization residents. More chronic care residents engaged in verbally or physically abusive behavior than residents in the other groups.
- ❑ Of residents in nursing homes on July 1 of each year, chronic care residents were more likely to be independent in activities of daily living, with the exception of dressing and bathing, than the post-hospitalization or transition residents. More chronic care residents and residents in transition, however, required extensive or total assistance in activities of daily living than post-hospitalization residents.
- ❑ Chronic care residents had the highest percent of individuals with bladder and bowel incontinence, followed by transition residents and then post-hospitalization residents. Post-hospitalization residents were most likely to have an indwelling catheter.
- ❑ About 70 percent of post-hospitalization residents complained or showed evidence of pain compared to half of residents in transition and 35 percent of chronic care residents. Post-hospitalization residents had a substantially higher rate of daily pain and reported more times with horrible or excruciating pain than the other groups.
- ❑ The post-hospitalization and transition resident groups had greater percentages of residents with falls in the past 30 days than the chronic care group.
- ❑ The percent of residents in nursing homes on July 1 with at least one Stage 2 skin ulcer was greatest in the post-hospitalization group (14 percent), followed by the transition group (12 percent) and the chronic care group (5 percent). The chronic care group had the lowest percent of residents with at least one ulcer of any stage.
- ❑ More post-hospitalization residents were taking 12 or more medications (20 percent) than residents in transition (13 percent) or residents in the chronic care group (11 percent).

The results of this first profile present a complex and compelling picture of Arizona's nursing home residents, one that suggests striking implications for quality of care and long-term care policy. The results suggest that, rather than serving a single, easily described population, Arizona's nursing homes care for a number of different groups of residents, each with their own distinctive characteristics and health care needs. Individuals newly discharged from hospitals live side-by-side, potentially in the next bed from individuals who will remain in the nursing home for months or years. The challenge for our nursing homes is to provide appropriate care matched to the health care needs of these different groups. The implications of these findings for care delivery models, nursing home staffing, and nursing home reimbursement call for more in-depth study and dialogue.

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## I. Introduction to The Profiling Report

The purpose of this research was to profile the residents of Arizona's Nursing Homes and to provide citizens, providers, insurers, policy-makers, and advocacy groups with a "snap-shot" of the individuals coming into and living in our state's nursing homes in the years 1999 to 2001. With the expected growth in the number of older adults worldwide, there is growing interest in understanding the type and scope of services that will be needed to serve this population. This is of particular interest in Arizona, where the population of older adults continues to grow and is expected to double within a few years. What role will our nursing homes play? How do we prepare our state for designing long-term care systems that will serve the needs of our residents at an affordable cost?

When we began this project, little was known about Arizona's nursing home residents. Available federal and state reports, such as the National Nursing Home Survey or the Arizona Older Ethnic Minorities Report 2000, provided useful demographic and clinical descriptors, typically with the nursing home rather than the resident as the unit of analysis. In contrast, this MDS Profiling Report provides detailed demographic and health information about nursing home residents between 1999 and 2001. By attempting to illuminate the answers to the questions: "Who are the residents of Arizona's nursing homes?" and "what are their major cognitive, social, emotional, and physical needs?" it is our hope that this study will serve as a guide to improve quality of care and stimulate policy dialogue about the needs of nursing home residents in Arizona.

The need to describe current nursing home residents and anticipate future residents is important. Nursing homes play a distinctive role in the continuum of long-term care services, a role that continues to change as we strive to match rehabilitative, restorative, and chronic care needs with optimum environments and resources for funding. In Arizona, our continuum of long-term care system consists of an extensive array of home and community based services, assisted living and adult care homes, and nursing home care. The relative mix and balance among these services have been influenced profoundly by the growth of assisted living and adult care home options in the state and the shift of rehabilitative and restorative care from hospitals into other settings. Individual who once might have been admitted to nursing homes for personal or intermediate levels of care now are able to manage in assisted living and adult care homes. Individuals who once might have received rehabilitation services in hospital transitional care units, now are transferred to free-standing rehabilitation hospitals or nursing homes for this care.

With shifts going on at each intersection of long-term care services,, we are no longer clear on exactly who is in Arizona's nursing homes. While it once may have been true that nursing homes were the "last stop" on the long-term care train, a final home for individuals who could no longer support themselves or be supported in community settings, this may not be the case today. Some of these people may now be in residential facilities in the community, leaving nursing homes to serve a subset that looks different, perhaps higher risk, more vulnerable, less able to remain in the community. Add the infusion of individuals coming into nursing homes from hospitals, and we potentially have a totally new mix. This captures the intent of the Profiling Project: to understand who is in our nursing homes and how their characteristics and needs may be changing in response to these trends and others. We must understand who our nursing home residents are if we are to provide them with quality of care at a price that we can afford.

The Profiling Project offered a unique opportunity to analyze the characteristics of Arizona's nursing home residents. In Arizona, as in all other states in the US, a comprehensive set of data, called the Minimum Data Set (MDS) is collected on all residents of Medicare certified nursing homes at admission, every three months, when there is a significant change in status, and at discharge, if discharge occurs. Arizona's nursing homes transmit their MDS data to the Arizona Department of Health Services Division of Licensing Services, which in turn, submits the data to the Centers for Medicare and Medicaid Services. Selected components of MDS data, including quality indicators, are available on the Medicare website and reports. To date, the detail of resident data provided in the Profiling Report has not been available to guide quality initiatives or policy decisions.

The Profiling Report is the first comprehensive profile of nursing home residents in Arizona. We view it as a first step in creating an ongoing system to describe and track the characteristics and needs of the people admitted to and living in the state's nursing homes. The Profile should serve as an important source of information to current and anticipated nursing home initiatives in the state. As we complete this report, the analysis and comparison of the 2002 Profile of Arizona's Nursing Home Residents is underway.

## **Overview of the Analysis Plan for The Profiling Report**

### *Access to MDS Data*

Prior to initiating data analysis, the Arizona Department of Health Services applied for and received a data use agreement (DUA) from the Centers for Medicare and Medicaid Services to use 1999 through 2002 MDS data. The DUA includes the objectives for the project and specific guidelines for appropriate use and protection of the data. Each of the DUA guidelines was observed throughout the conduct of the Profiling Project.

### *Data Analysis Plan*

Data analysis for the MDS Project was carried out for two timeframes: (1) admission to the nursing home (the admission profile) and (2) on one day of the year (the cross-sectional profile). Following analysis of the total group of residents for each of these two timeframes, descriptive analysis was carried out for three resident subgroups according to the expected intent and duration of their nursing home stay. The subgroup analysis was further broken down by gender, age, ethnic group, and county of prior residence. Consistent with the DUA, only findings for which there were 10 or more subjects were reported.

The descriptive analyses consisted of frequencies and percentages. The MDS data were not risk adjusted for this report. Tests of statistical difference between groups were not conducted. In many cases, large sample size would have inflated the likelihood of finding significant differences between and among groups. Consistent with the goals and scope of the Profiling Project, a five percent difference between and among groups or across years was used as the criterion for noting comparisons in this report. Differences less than 5 percent are not discussed.

### *Analysis Timeframes*

The Profiling Project analyzed Arizona's nursing home residents at two distinct points in time: at admission to the nursing home and on one day of the year. Our intent was to describe and compare any differences between the profiles of individuals entering nursing homes (Admission Profile) and those living in nursing homes at a given time (cross-sectional Profile). An overview of the Admission Profile and Cross-Sectional Profile is provided below.

#### Admission Profile

The Admission Profile describes key demographic, cognitive, psychosocial, physical, and functional indicators from the initial assessment of each resident entering the nursing home during 1999, 2000, and 2001. For nursing home residents with more than one initial assessment during a year, only the initial assessment with the latest MDS completion date was used. A more detailed description of the analysis plan for the admission profile may be found in the Technical Appendix.

#### Cross-sectional Profile

The cross-sectional profile describes the characteristics of individuals residing in the nursing home on July 1 of each year. In comparison to the admission profile, which describes residents upon their entry into the nursing home, the cross sectional profile provides a "snapshot" of all residents in the nursing home at one point in time. The cross-sectional profile was drawn from the MDS assessment that was completed closest to July 1 of each year. The cross-sectional profile describes categories of MDS data common to all MDS assessments. Since the quarterly, change of status, and discharge assessments do not include all of the admission assessment questions, some of the information provided on the admission assessment is not available for the cross-sectional assessment. A more detailed description of the analysis plan for the cross-sectional profile may be found in the Technical Appendix.

#### *Resident Subgroups*

Within the admission and cross sectional profiles, residents were categorized into four groups: (1) Chronic Care Residents; (2) Post-Hospitalization Residents; (3) Residents in Transition; and (4) Undetermined. Results for the first three groups are provided in this report. Detail about the selection criteria for each of these groups may be found in the Technical Appendix.

#### Chronic Care Residents

Chronic care residents were defined as individuals who were admitted to a nursing home from settings other than a hospital and remained in the nursing home more than 90 days.

## Post-Hospitalization Residents

Post-hospitalization residents – also referred to as post-acute residents - were defined as individuals who were admitted to a nursing home after a hospital stay and remained 90 days or less.

## Residents in Transition: Between Chronic Care and the Hospital

Residents in Transition – also referred to as chronic/post-acute residents – were defined as individuals who moved between nursing home and hospital, i.e., those who were admitted after a hospital stay and remained longer than 90 days or those who were admitted from non-hospital settings and subsequently had a hospital stay.

Data for each of the resident subgroups was further broken down by selected demographic characteristics including gender, age, ethnic group, and Arizona county of prior residence. Categories for each of these characteristics were taken from the MDS form. County of prior residence were coded as Maricopa County, Pima County, or 13 Other Counties.



## II. Arizona's Nursing Home Residents: 1999, 2000, 2001

The Profiling Report begins with a description of the total population of nursing home residents at admission to the nursing home followed by a description of the total population of residents on one day, July 1, for each of the three years. The report follows the sequence and categories of major sections of the Minimum Data Set (MDS) Nursing Home Resident Assessment and Care Screening Tool.

Between the years of 1999 and 2001, over 83,000 individuals were admitted to Arizona's nursing homes.

Table 1. Total Number of Nursing Home Admissions: Arizona, 1999-2001

1999	28,330
2000	27,377
2001	27,333

At admission, Arizona's nursing home residents for 1999, 2000, and 2001 were predominantly women, over the age of 75 years, white, English speaking, and a resident of one of the two metropolitan areas in the state. Less than half had advance directives and the number with living wills declined over the three years.

At admission, less than half, but still a substantial number of residents had short-term (40 percent) and long-term memory problems (25 percent). About one-third had one or more indicators of a depressed, sad, or anxious mood. Five percent engaged in wandering or verbally or physically abusive behavior. Physical limitations were common and most residents required substantial assistance in activities of daily living. About one-quarter of residents were incontinent of bowel movement all or most of the time at admission while about 20 percent were incontinent of urine all or most of the time. Chronic health problems were common, particularly hypertension and diabetes. About 40 percent of residents complained or showed evidence of pain daily; 16 percent described their pain as horrible or excruciating. One-third had fallen in the past 30 days. Almost all residents were on one or more over-the-counter or prescription medications at admission; two-thirds were taking 5 to 12 medications and 20 percent were taking more than 12 medications.

On a single day for these years, more than 40,000 individuals were living in Arizona's nursing homes.

Table 2. Total Number of Residents on July 1: Arizona, 1999-2001

1999	13,445
2000	12,984
2001	12,804

On a single day of the year, Arizona's nursing home residents for 1999, 2000, 2001 also were predominantly women with a slightly higher percentage of women than in the admission profile.

More than 40 percent of this population was over the age of 85 compared to 26 percent of the admission cohort. Most of these residents were white, but there was a slightly higher Hispanic population than in the admission profile (10 percent compared to 8 percent).

On a single day of the year, 70 percent of residents in Arizona's nursing homes had short-term memory problems and about 50 percent had long-term memory problems. Short-term and long-term memory problems were substantially higher in this cohort than in the admission profile. About 40 percent had one or more indicators of a depressed, sad, or anxious mood, again higher than residents at admission. Fourteen percent engaged in wandering behavior, almost three times the frequency of wandering behavior at admission. Ten percent engaged in verbally or physically abusive behavior, twice the rate at admission. Similar to the profile at admission, physical limitations were common and most residents on one day of the year required substantial assistance in activities of daily living. About half of residents were incontinent of bowel and bladder control all or most of the time at admission, both more than double the rate at admission. About 20 percent of residents complained or showed evidence of pain daily; 10 percent described their pain as horrible or excruciating. The frequency and intensity of reported pain was lower on one day of the year than at admission. Twenty percent had fallen in the past 30 days, compared to one-third of residents at admission. Almost all residents were on one or more over-the-counter or prescription medications; two-thirds were taking 5 to 12 medications and 12 percent were taking more than 12 medications.

Overall, individuals at admission had moderate rates of short-term memory loss and indicators of depressed, sad or anxious moods. While limited in physical functioning, a minority were incontinent of bowel or bladder control. A substantial number complained of daily pain. Most were on a significant number of medications. In contrast, on one day of the year, residents had substantially higher rates of short-term and long-term memory loss than the admission cohort. They had higher rates of wandering and verbally and physically abusive behavior and were much more likely to be incontinent of bowel and bladder control than residents at admission. Complaints of pain were less common in residents on July 1 and the percent of individuals complaining of horrible pain was less. While both groups were taking a substantial number of medications, a lower percentage of residents on July 1 were taking 12 or more medications than residents at admission.

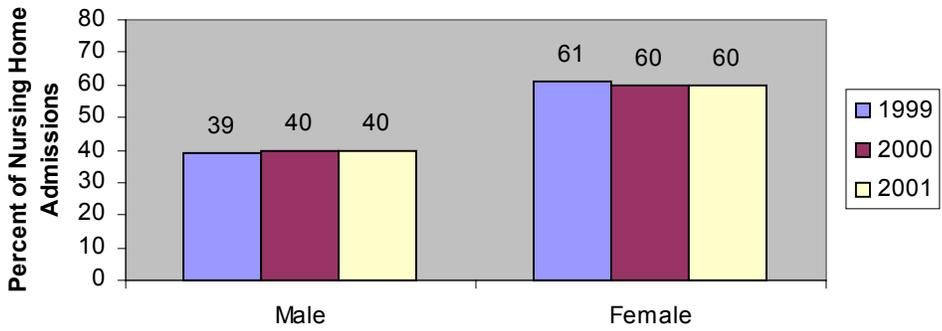


## **II.A. Arizona's Nursing Home Residents At Admission**

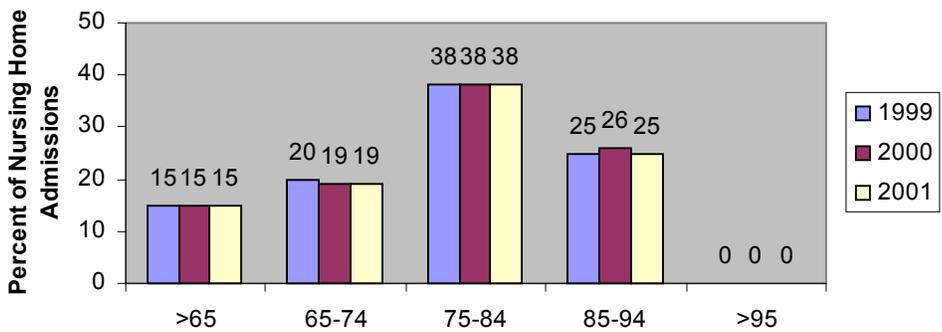
### *Demographic Profile*

- ❑ For each year, 60 percent of the individuals admitted to Arizona's nursing homes were female. (Figure 1)
- ❑ The age distribution for nursing home admissions remained stable from 1999, to 2000, and 2001. Residents under the age of 65 accounted for 15% of the nursing home admissions across the three years. (Figure 2)
- ❑ The largest group of residents admitted to a nursing home in 1999, 2000, and 2001 was between the age of 75 and 84. Approximately 62 percent of residents were 75 years of age or older. (Figure 2)
- ❑ Race distribution rates in residents admitted to nursing homes were stable from 1999, to 2000, and 2001. White residents made up 86 percent of nursing home admissions. Hispanic, American Indian/Alaskan Native, and Black residents comprised 8 percent, 3 percent, and 2 percent on admission, respectively. Fewer than 2 percent of residents admitted to nursing homes were Asian/Pacific Islanders. (Figure 3)
- ❑ About 26 percent of residents admitted to nursing homes lived alone prior to entry. (Figure 4)
- ❑ Approximately half of the residents admitted to nursing homes lived in Maricopa County prior to admission. Pima County was the county of prior residence for 14 percent of nursing home admissions. About 22 percent of residents admitted to nursing homes lived in one of the remaining 13 Arizona counties prior to admission. (Figure 5)
- ❑ A majority of residents admitted to nursing homes were high school graduates (Figure 6)
- ❑ At admission, the primary language of about 84 percent of nursing home residents was English. Spanish was the primary language of 4 percent of residents (Figure 7)
- ❑ About 36 percent of residents admitted to nursing homes were married. A larger group, about 43 percent of admissions, was widowed. (Figure 8)
- ❑ The number of individuals admitted to nursing homes with living wills declined from 27 percent in 1999, to 22 percent in 2000, and 20 percent in 2001. The number of individuals admitted to nursing homes with do not resuscitate (DNR) directives remained stable at 38 percent from 1999, to 2000, and 2001. (Figure 9)

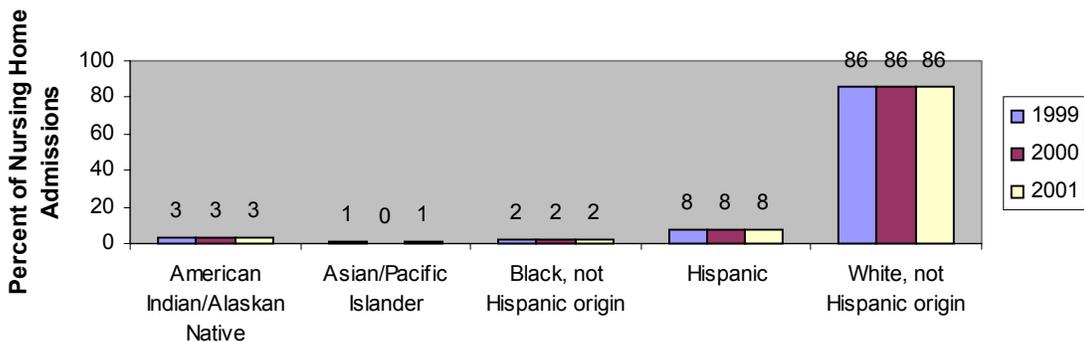
**Figure 1. Nursing Home Admissions by Gender and Year: Arizona, 1999-2001**



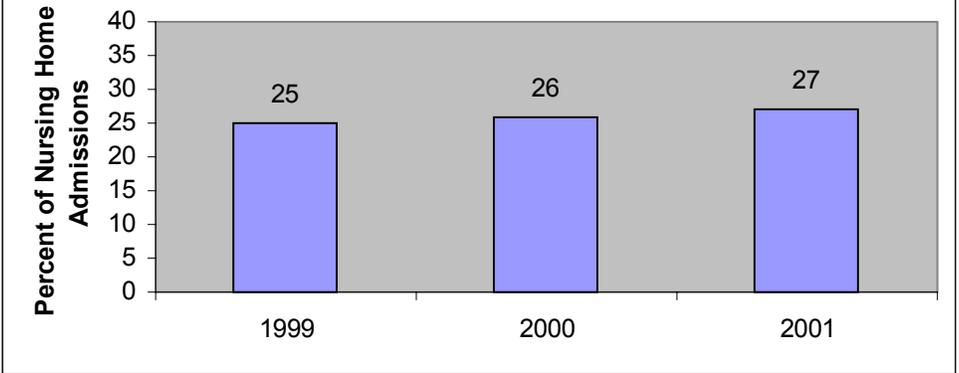
**Figure 2. Nursing Home Admissions by Age and Year: Arizona, 1999-2001**



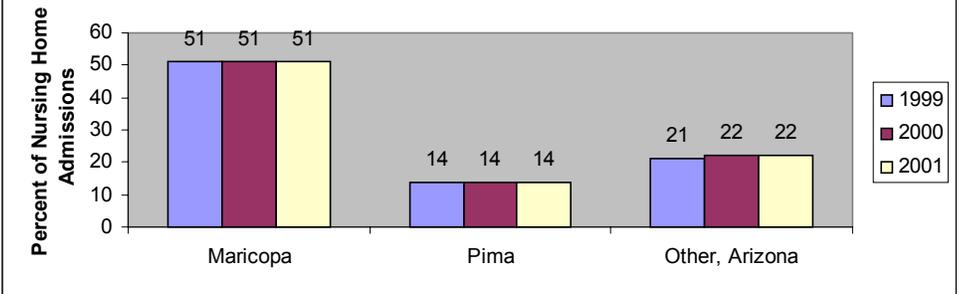
**Figure 3. Nursing Home Admissions by Race and Year: Arizona, 1999-2001**



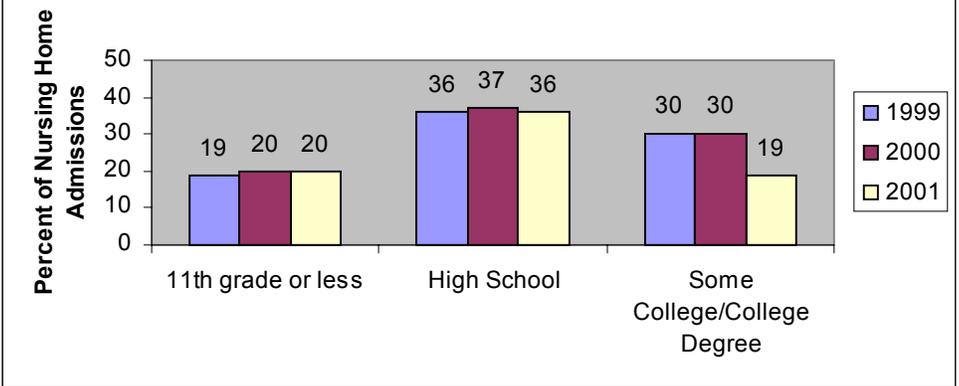
**Figure 4. Nursing Home Admissions Living Alone Prior To Admission by Year: Arizona, 1999-2001**



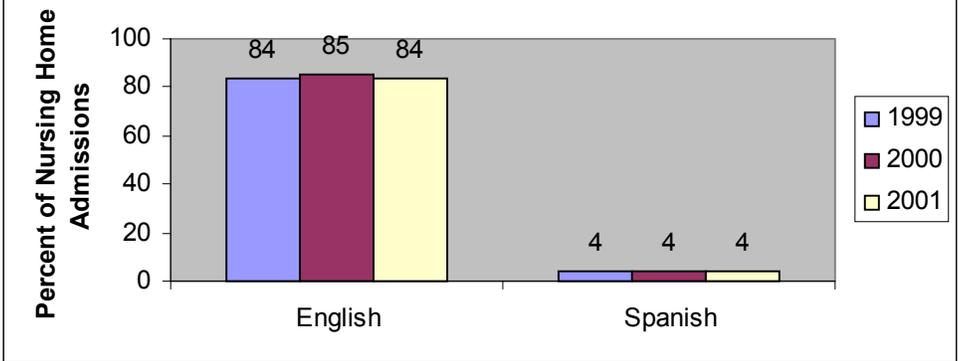
**Figure 5. Nursing Home Admissions by County of Prior Residence and Year: Arizona, 1999-2001**



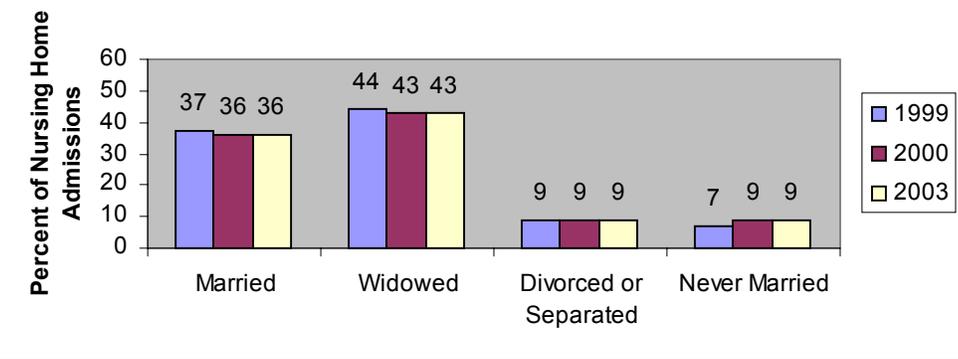
**Figure 6. Nursing Home Admissions by Education and Year: Arizona, 1999-2001**



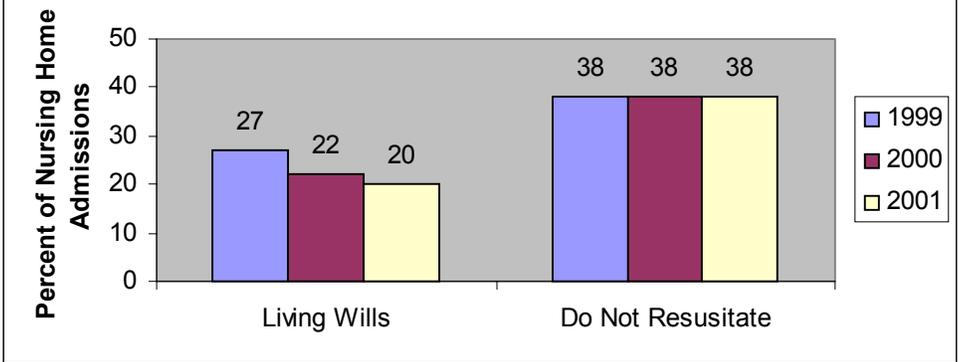
**Figure 7. Nursing Home Admissions by Primary Language and Year: Arizona, 1999-2001**



**Figure 8. Nursing Home Admissions by Marital Status and Year: Arizona, 1999-2001**



**Figure 9. Advanced Directives Among Nursing Home Admissions by Year: Arizona, 1999-2001**

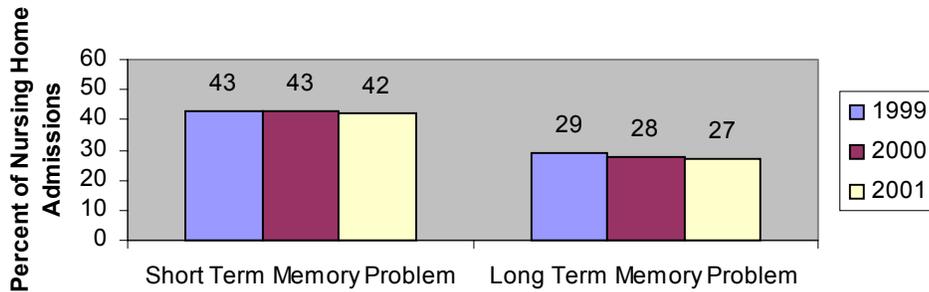


### *Cognitive Patterns*

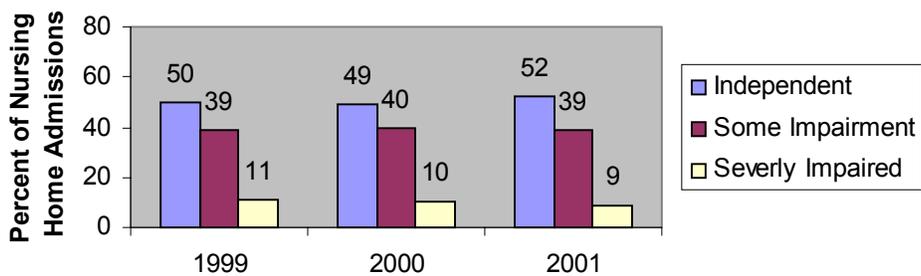
- ❑ At admission, approximately 43 percent of nursing home residents had a short-term memory problem; 28 percent had a problem with long-term memory. (Figure 10)
- ❑ Approximately half of all residents came into the nursing homes independent in decision-making (Figure 11)
- ❑ The majority of residents did not had a change in their cognitive status, skills, or abilities in the past 90 days; however about 13% have experienced a deterioration in the 90 days prior to admission. (Figure 12)



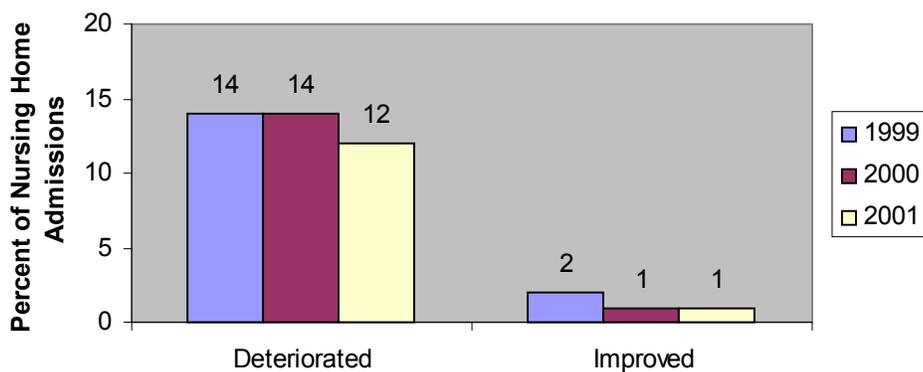
**Figure 10. Short and Long Term Memory Loss in Nursing Home Admissions by Year: Arizona, 1999-2001**



**Figure 11. Cognitive Skills for Daily Decision Making in Nursing Home Admissions by Year: Arizona, 1999-2001**



**Figure 12. Cognitive Status Change in Past 90 Days in Nursing Home Admissions by Year: Arizona, 1999-2001**

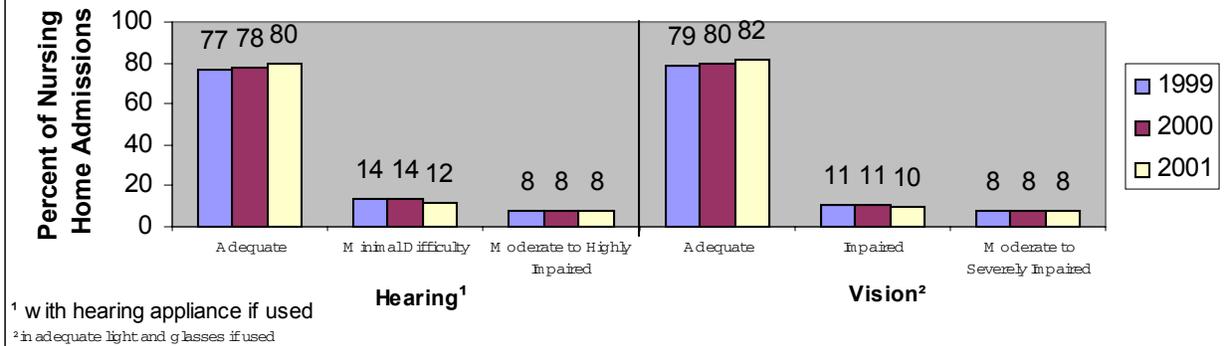


### *Communication and Hearing Patterns*

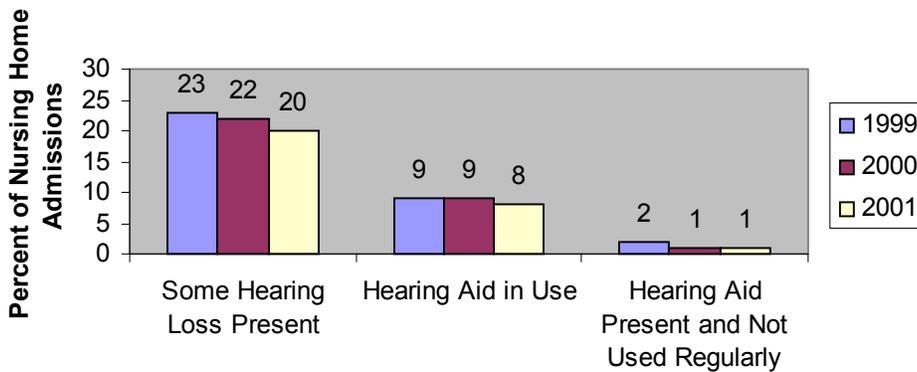
- ❑ More than three-quarters of nursing home residents were able to hear adequately, with hearing appliances, if used. (Figure 13)
- ❑ Less than 10 percent of residents had a hearing aid and used it. (Figure 14)
- ❑ At admission, about one-quarter of residents had difficulty understanding others or making



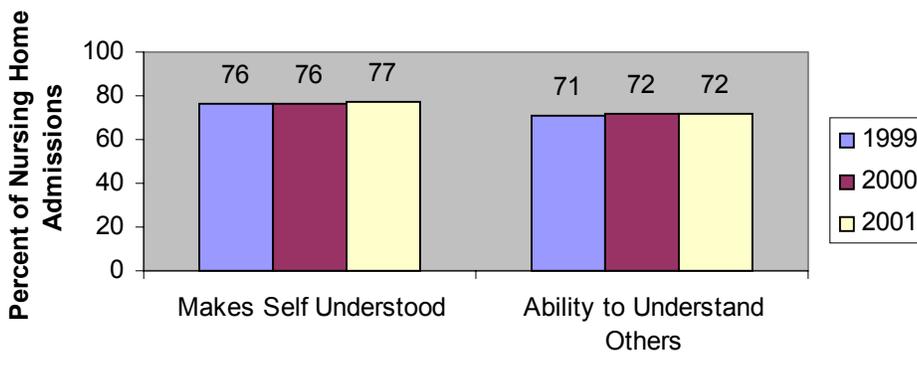
**Figure 13. Sensory and Communication Problems in Nursing Home Admissions by Year: Arizona, 1999-2001**



**Figure 14. Communication Devices and Hearing in Nursing Home Admissions by Year: Arizona, 1999-2001**



**Figure 15. Making Self Understood and Ability to Understand Others in Nursing Home Admissions by Year: Arizona, 1999-2000**

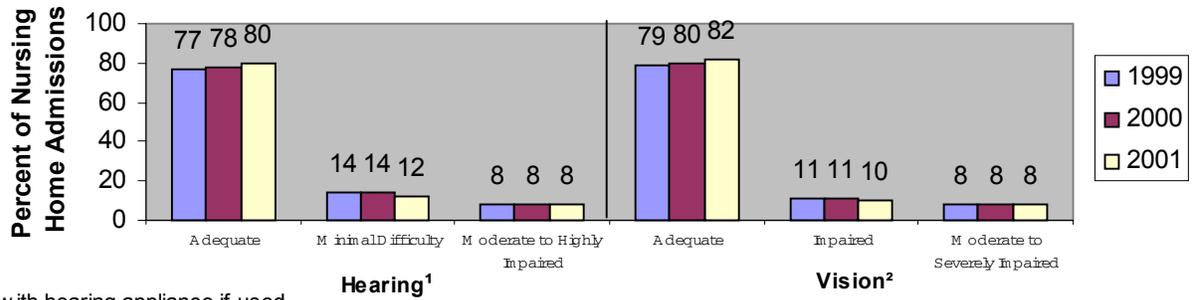


### *Vision Patterns*

- ❑ At admission, the majority of nursing home residents were able to see adequately, with glasses, if used. (Figure 13)
- ❑ Less than 10 percent of individuals admitted to nursing homes had moderate to severe vision impairment.



**Figure 13. Sensory and Communication Problems in Nursing Home Admissions by Year: Arizona, 1999-2001**

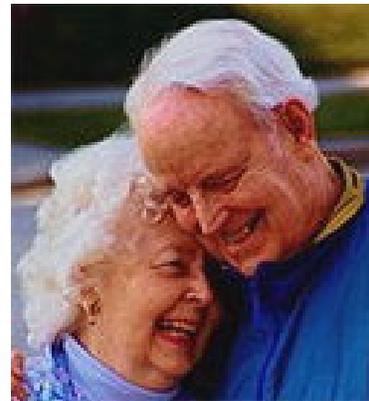


<sup>1</sup> with hearing appliance if used

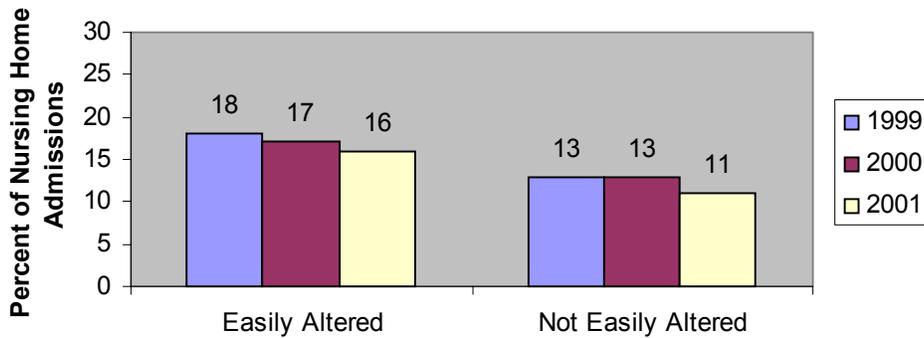
<sup>2</sup> in adequate light and glasses if used

### *Mood and Behavior Patterns*

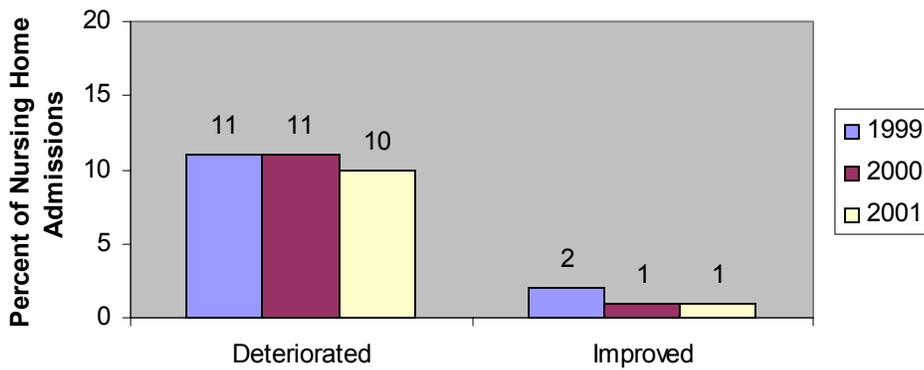
- ❑ At admission, about 30 percent of residents had one or more indicators of a depressed, sad or anxious mood; for about half of these individuals the mood was easily altered by attempts to cheer up, console, or reassure the resident over the last 7 days. (Figure 16)
- ❑ At admission, the majority of residents had no change in their mood compared to the last assessment; however about 10 percent of residents had a deterioration in their mood status. (Figure 17)
- ❑ About 5 percent of individuals admitted to nursing homes exhibited behavioral symptoms, including wandering, verbally or physically abusive behavior, or socially inappropriate or disruptive behavior, in the last 7 days. (Figures 18, 19, 20)
- ❑ More residents resisted care, including resisting taking medications/injections, ADL assistance, or eating, than those that exhibited other types of behavioral symptoms. (Figure 18)



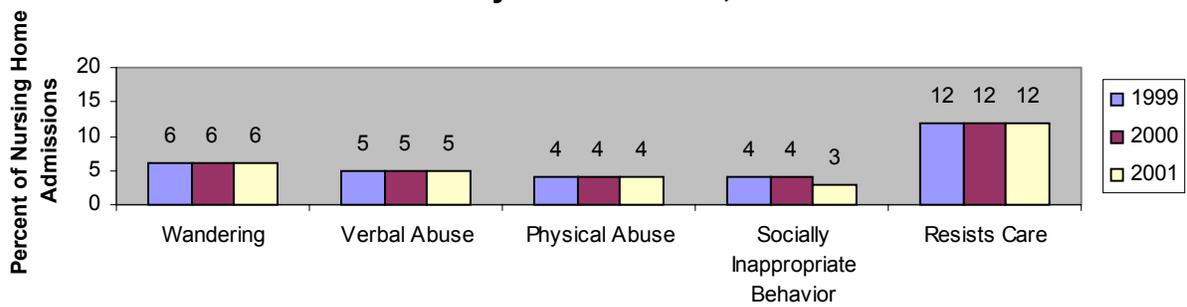
**Figure 16. Depressed, Sad, or Anxious Mood Present in Last 7 Days in Nursing Home Admissions by Year: Arizona, 1999-2001**



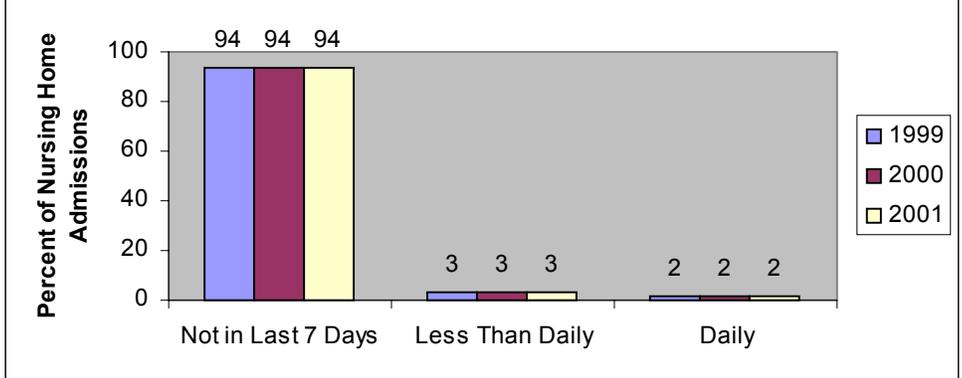
**Figure . Mood Change in Past 90 Days in Nursing Home Admissions by Year: Arizona, 1999-2000**



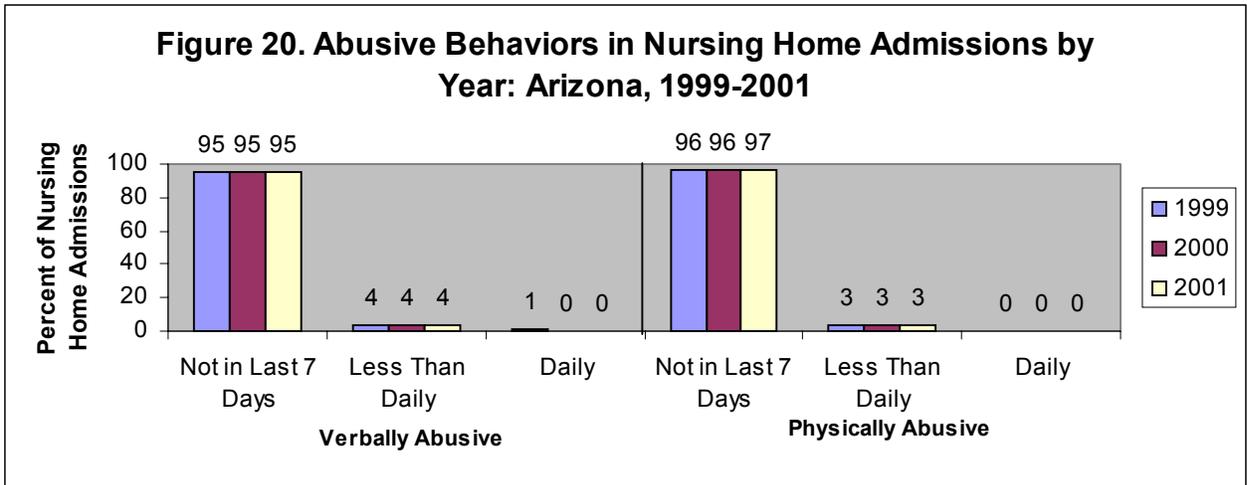
**Figure 18. Behavioral Symptoms Present in Nursing Home Admissions by Year: Arizona, 1999-2000**



**Figure 19. Wandering in Nursing Home Admissions by Year: Arizona, 1999-2001**



**Figure 20. Abusive Behaviors in Nursing Home Admissions by Year: Arizona, 1999-2001**

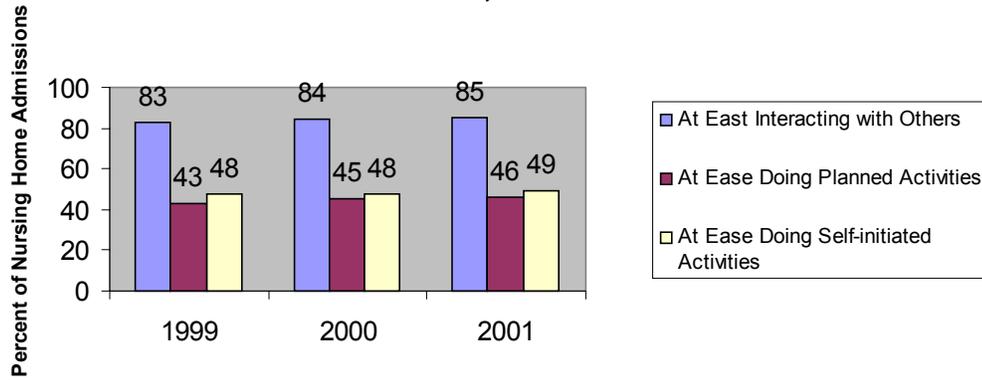


### *Psychosocial Well-Being*

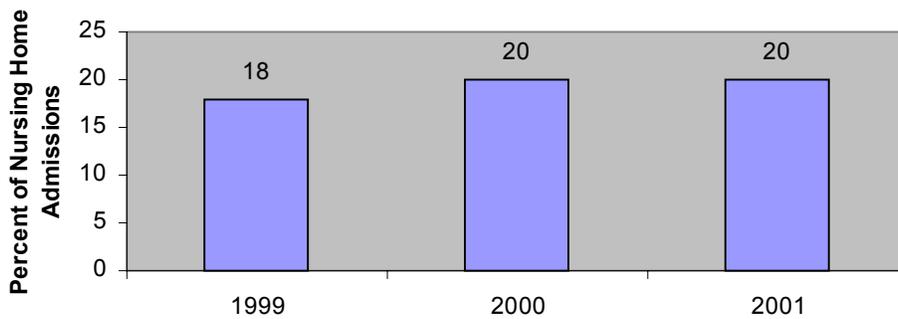
- ❑ The majority of residents admitted to nursing homes were at ease interacting with others (84 percent); fewer were at ease doing planned (43 percent) or self-initiated activities (48 percent). (Figure 21)
- ❑ At admission, only about 20 percent of residents established their own goals. (Figure 22)
- ❑ Fewer than 10 percent of residents pursued involvement in facility activities. (Figure 23)
- ❑ Most residents admitted to nursing home had contact with their family or friends. (Figure 24)



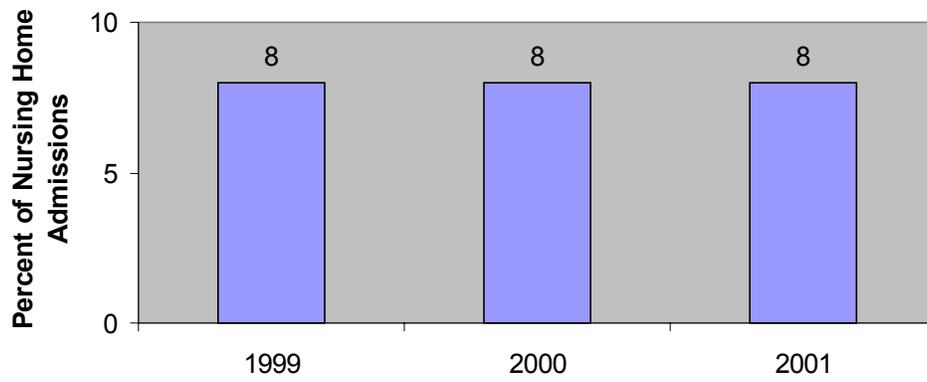
**Figure 21. Psychological Well Being at Admission by Year: Arizona, 1999-2001**



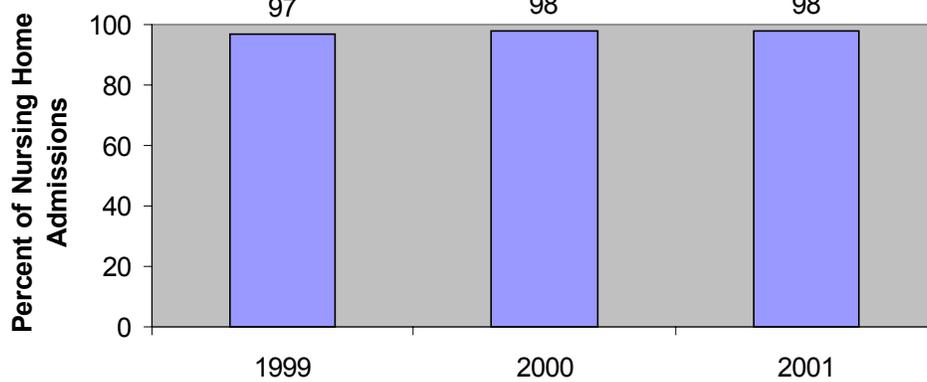
**Figure 22. Establishes Own Goals at Admission by Year: Arizona, 1999-2001**



**Figure 23. Pursues Involvement in Facility at Admission by Year: Arizona, 1999-2001**



**Figure 24. Contact with Family and Friends at Admission by Year: Arizona, 1999-2001**

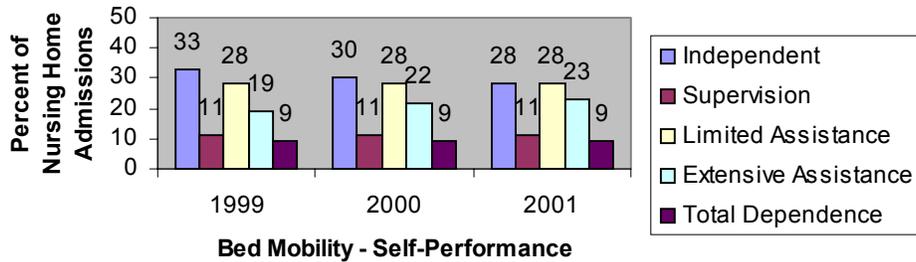


### *Physical Functioning*

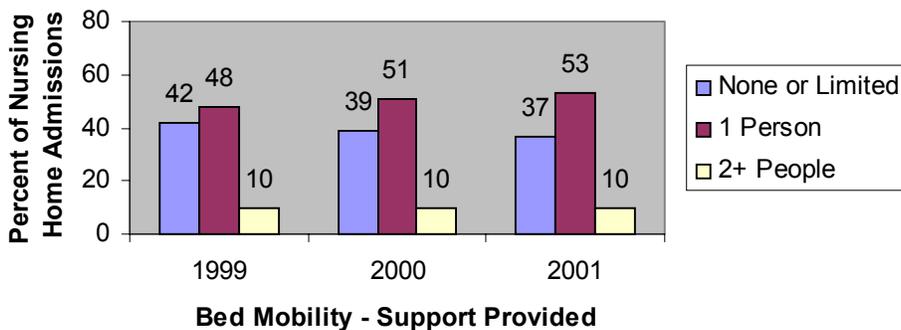
- ❑ About one-third of nursing home residents were independent in bed mobility (i.e., moves, turns, positions self without help or oversight); about one-third required extensive or full assistance. (Figures 25, 26)
- ❑ About 15 percent of nursing home residents were independent in transfers and toilet use; almost 40 percent required extensive or full assistance in transfers and almost half required extensive or full assistance in toilet use. (Figures 27-30)
- ❑ Relatively few nursing home residents were independent in dressing or bathing at admission; over 40 percent required extensive or full assistance in dressing and 70 percent required extensive or full assistance in bathing. (Figures 31-34)
- ❑ More than half of nursing home residents were independent in eating at admission; about 15 percent required extensive or full assistance. (Figures 35, 36)
- ❑ At admission, about half of nursing home residents believed they were capable of increased independence in at least some activities of daily living; staff believed that two-thirds of residents were capable of increased independence in at least some activities of daily living. (Figure 37)



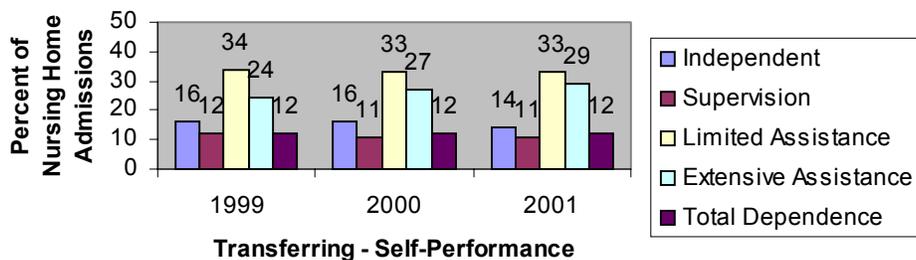
**Figure 25. Independence in Bed Mobility in Nursing Home Admissions by Year: Arizona, 1999-2001**



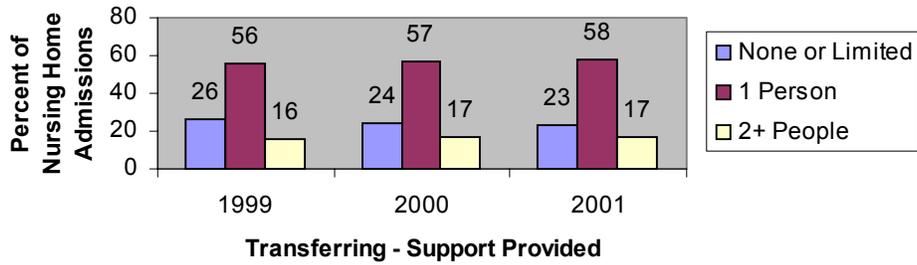
**Figure 26. Independence in Bed Mobility in Nursing Home Admissions by Year: Arizona, 1999-2001**



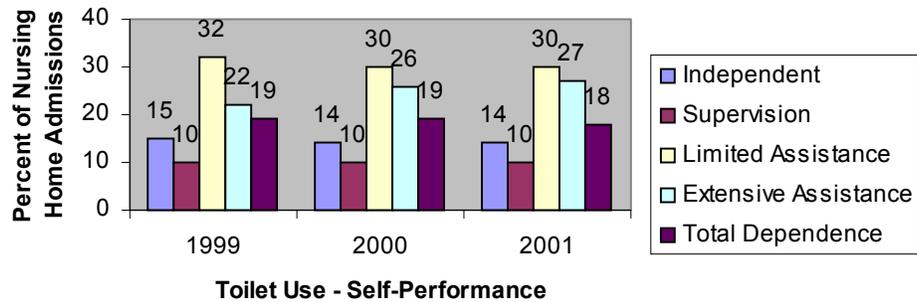
**Figure 27. Independence in Transferring in Nursing Home Admissions by Year: Arizona, 1999-2001**



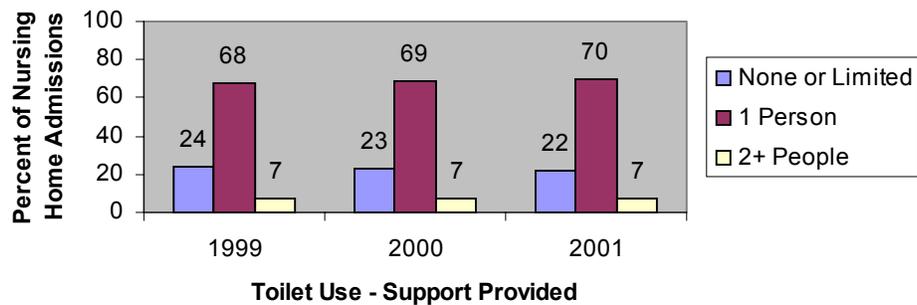
**Figure 28. Independence in Transferring in Nursing Home Admissions by Year: Arizona, 1999-2001**



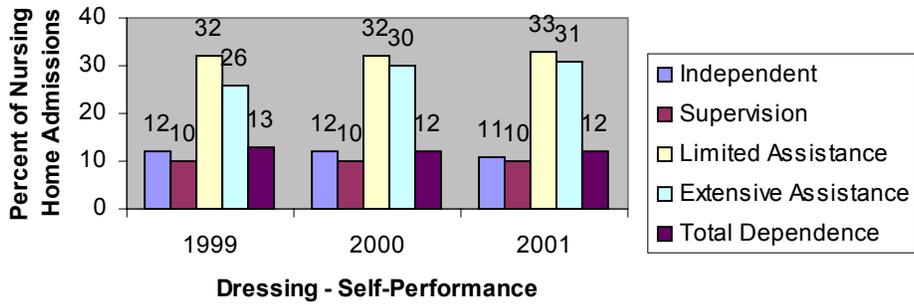
**Figure 29. Independence in Toilet Use in Nursing Home Admissions by Year: Arizona, 1999-2001**



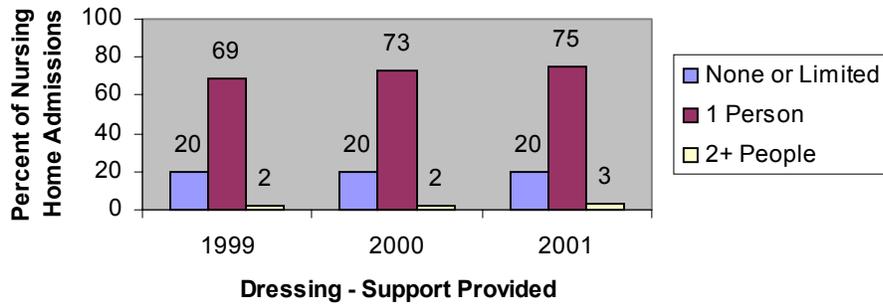
**Figure 30. Independence in Toilet Use in Nursing Home Admissions by Year: Arizona, 1999-2001**



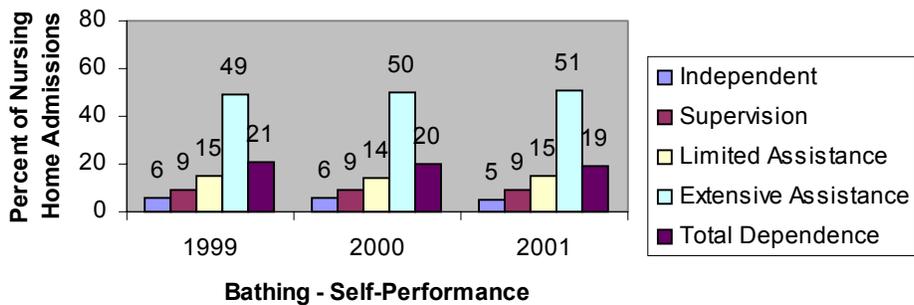
**Figure 31. Independence in Dressing in Nursing Home Admissions by Year: Arizona, 1999-2001**



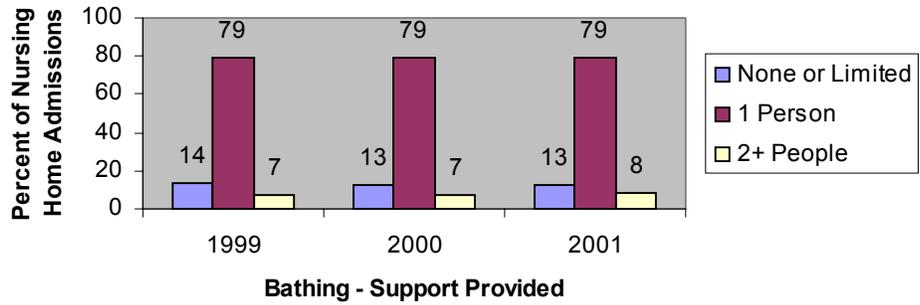
**Figure 32. Independence in Dressing in Nursing Home Admissions by Year: Arizona, 1999-2001**



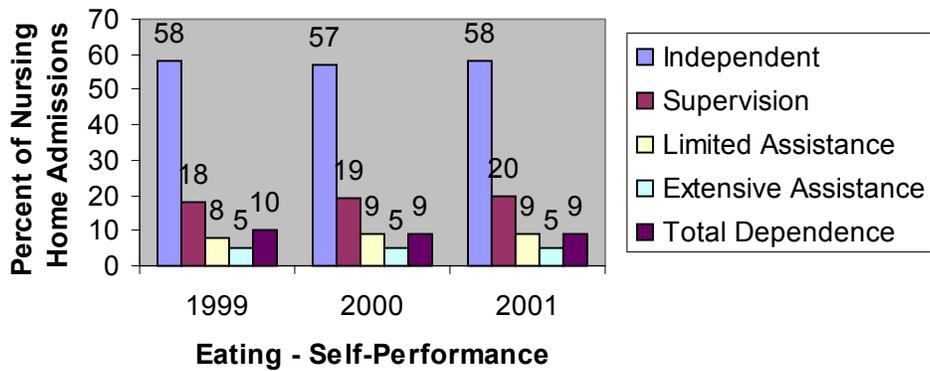
**Figure 33. Independence in Bathing in Nursing Home Admissions by Year: Arizona, 1999-2001**



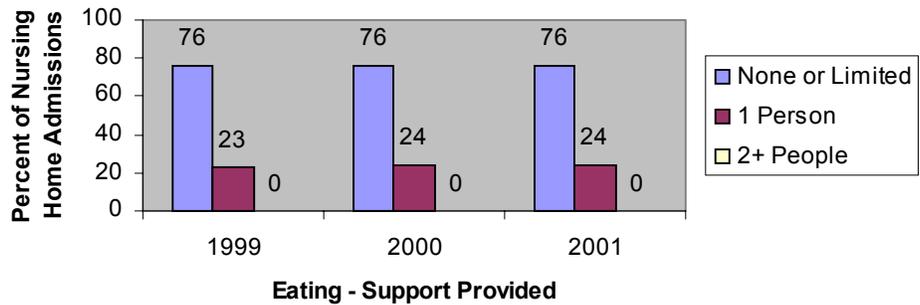
**Figure 34. Independence in Bathing in Nursing Home Admissions by Year: Arizona, 1999-2001**



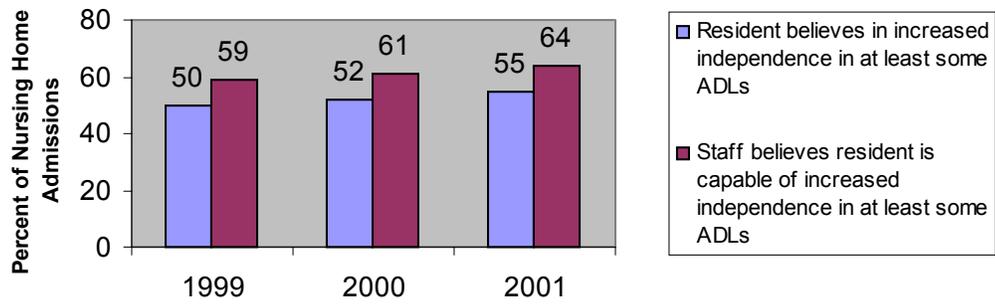
**Figure 35. Independence in Eating in Nursing Home Admissions by Year: Arizona, 1999-2001**



**Figure 36. Independence in Eating in Nursing Home Admissions by Year: Arizona, 1999-2001**



**Figure 37. Rehabilitation Potential at Admission by  
Year: Arizona, 1999-2001**

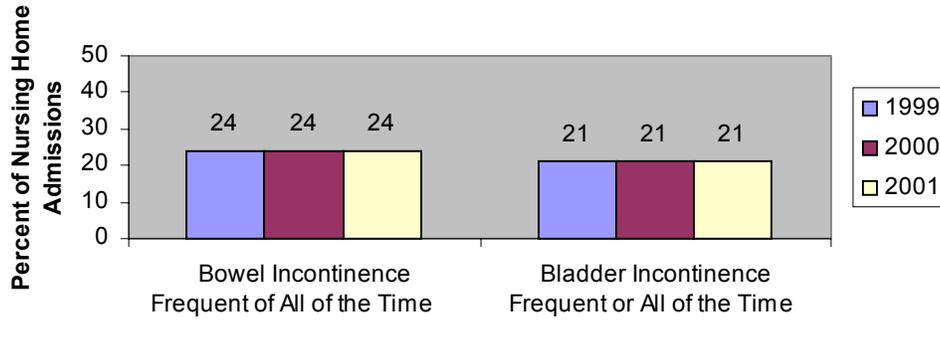


### *Continence*

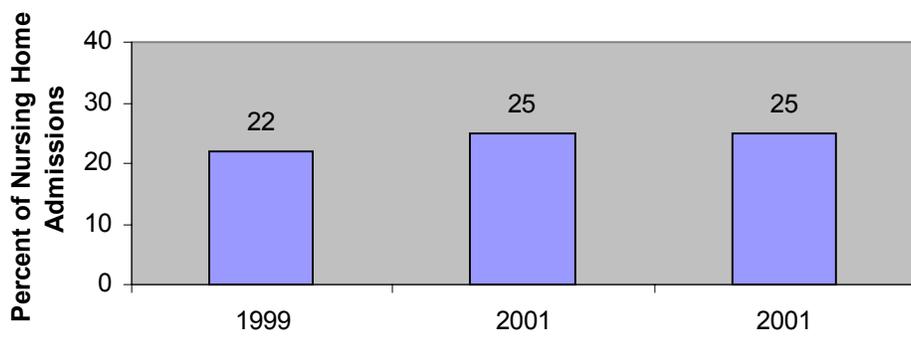
- ❑ At admission, about two-thirds of nursing home resident had control of bowel movement and urinary bladder function, with appliance or continence program if employed.
- ❑ One-quarter of residents were frequently incontinent of bowel movement or incontinent all or almost all of the time. (Figure 38)
- ❑ Approximately one-fifth of residents were incontinent of urine daily or multiple times daily. (Figure 38)
- ❑ The percent of residents on any scheduled toileting plan increased from 13 percent in 1999 to 18 percent in 2001.
- ❑ About one-quarter of residents had an indwelling catheter at admission. (Figure 39)



**Figure 38. Incontinence in Nursing Home Admissions by Year: Arizona, 1999-2001**



**Figure 39. Indwelling Catheter in Nursing Home Admissions by Year: Arizona, 1999-2001**

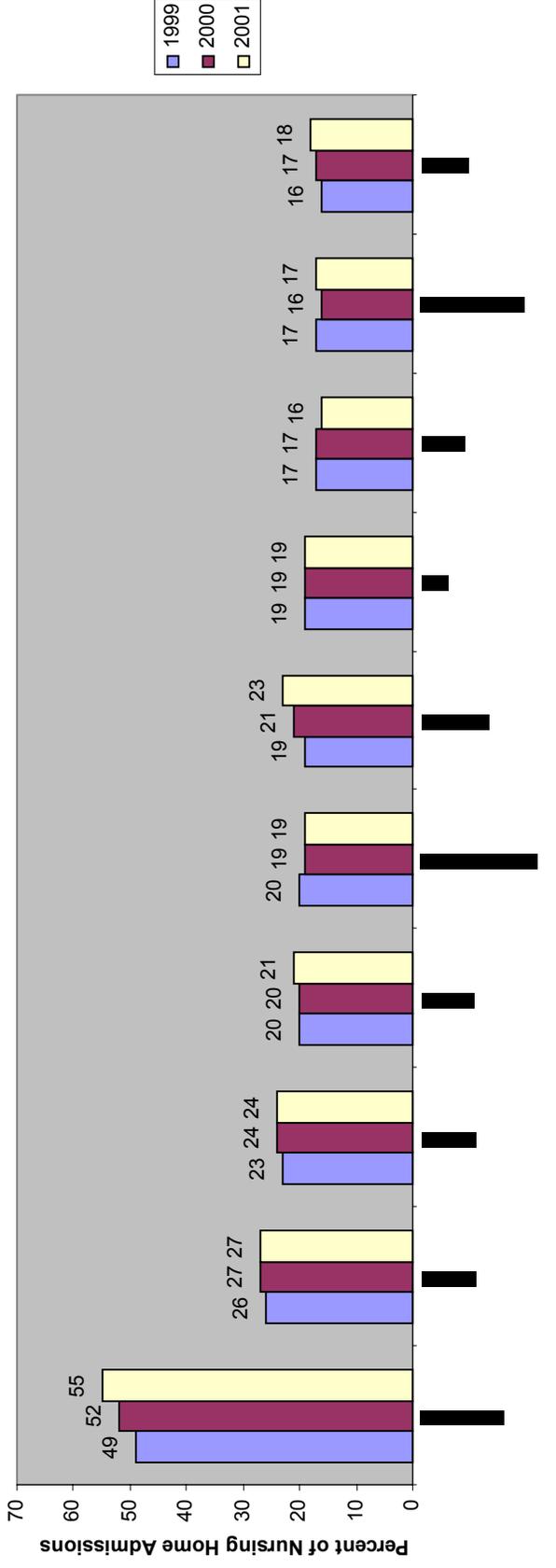


### *Disease Diagnoses*

- ❑ At admission, more than half of nursing home residents had a diagnosis of hypertension; almost one quarter had a diagnosis of diabetes. (Figure 40)
- ❑ One-fifth of nursing home residents had diagnoses of other common chronic illnesses, including arthritis, emphysema/COPD, depression, and congestive heart failure. (Figure 40)
- ❑ About 16 percent of nursing home residents had a diagnosis of dementia other than Alzheimer's disease; 6 percent had a diagnosis of Alzheimer's disease.



**Figure 40. Ten Most Frequently Occurring Health Conditions in Nursing Home Admissions  
by Year: Arizona, 1999-2001**

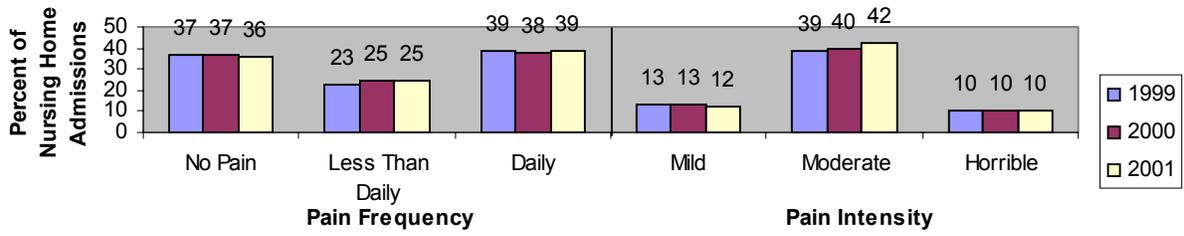


*Health Conditions: Pain Symptoms and Falls*

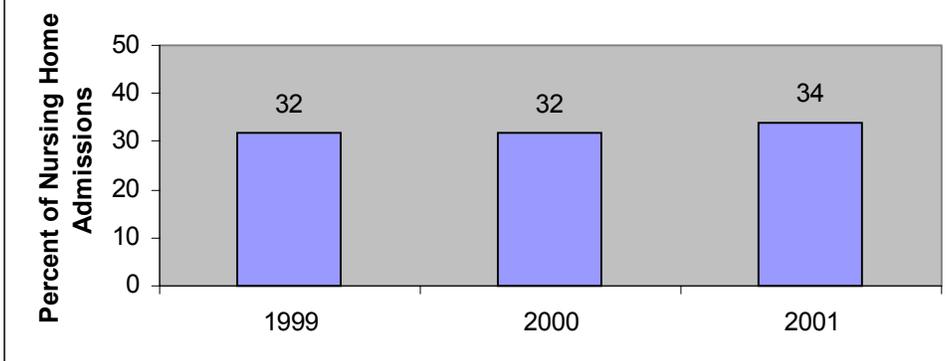
- ❑ At admission, almost 40 percent of nursing home residents complained or showed evidence of pain daily. (Figure 41)
- ❑ Of residents who complained or showed evidence of pain at admission, most reported moderate pain (65 percent), 20 percent reported mild pain and 16 percent reported horrible or excruciating pain.
- ❑ Approximately one-third of residents fell in the last 30 days. (Figure 42)



**Figure 41. Pain Symptoms in Nursing Home Admissions by Year: Arizona, 1999-2001**



**Figure 42. Falls in Past 30 Days in Nursing Home Admissions by Year: Arizona, 1999-2001**

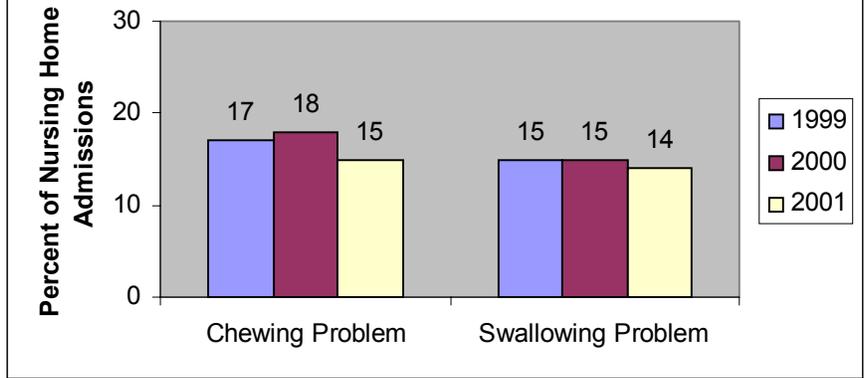


### *Oral and Nutritional Status*

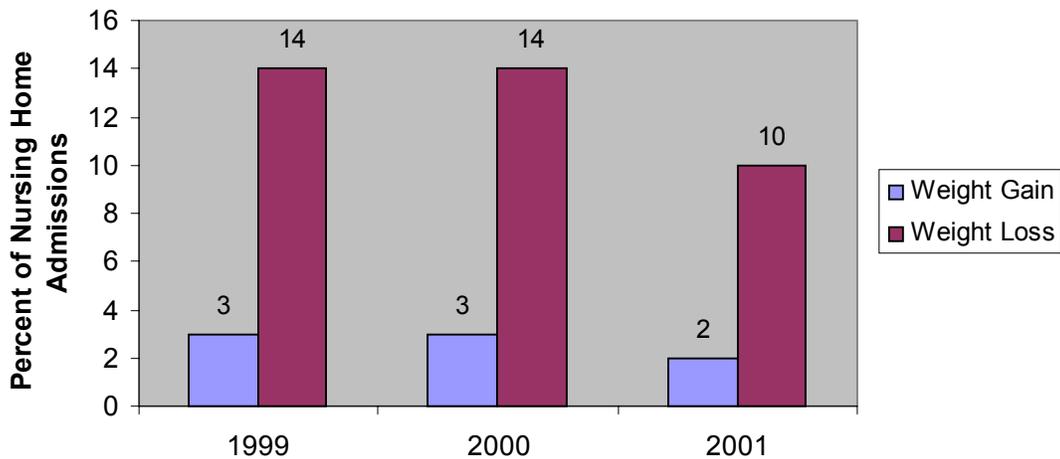
- ❑ About one of six nursing home residents had chewing or swallowing problems at admission. (Figure 43)
- ❑ About 12 percent of residents had either 5 percent or more weight loss in the last 30 days or 10 percent or more weight low in the last 180 days. Few residents had a weight gain over the same period. (Figure 44)
- ❑ At admission, almost 40 percent of residents left 25 percent or more of their food uneaten at most meals.
- ❑ Approximately 5 percent of residents received parenteral or intravenous nutrition or had a feeding tube at admission. (Figure 45)



**Figure 43. Chewing and Swallowing Problems in Nursing Home Admissions by Year: Arizona, 1999-2001**

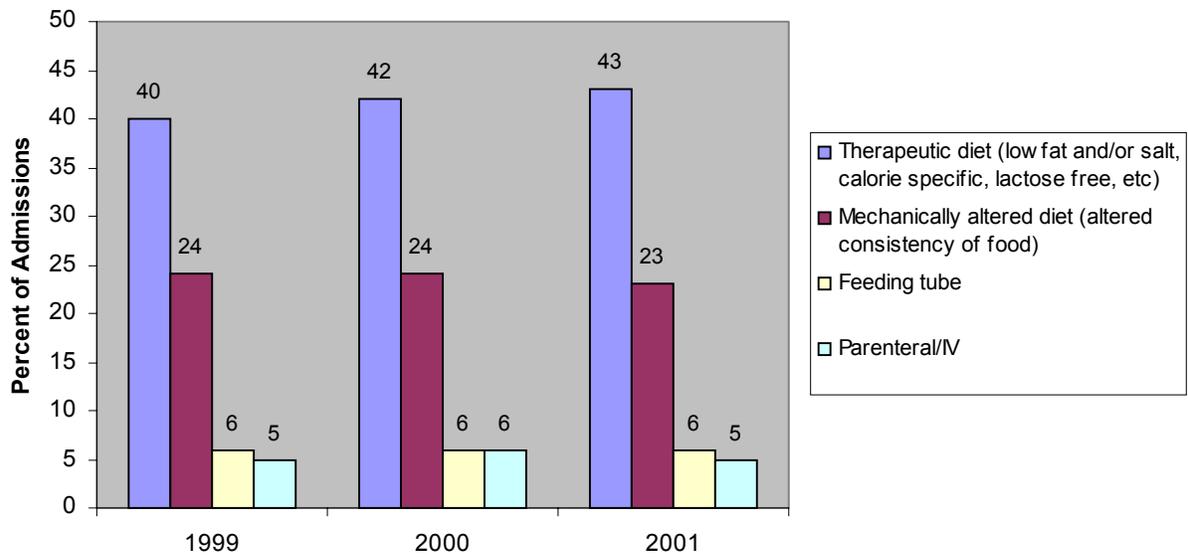


**Figure 44. Weight Loss and Gain Among Nursing Home Admissions by Year: Arizona, 1999-2001**



Note:  $\geq 5\%$  in last 30 days or  $\geq 10\%$  in last 180 days

**Figure 45. Selected Nutritional Approaches Among Nursing Home Admissions by Year: Arizona 1999-2001**

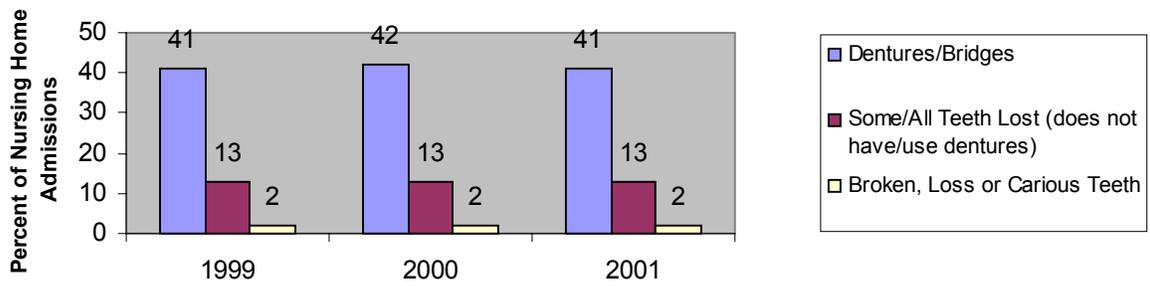


### *Oral and Dental Status*

- ❑ Almost half of nursing home residents had dentures or a removable bridge at admission. (Figure 46)
- ❑ About 1 in 8 nursing home residents had lost some or all of their natural teeth and either does not have or does not use their dentures. (Figure 46)
- ❑ Few nursing home residents had broken, loose, or carious teeth at admission. (Figure 46)



**Figure 46. Oral/Dental Status of Nursing Home Admissions by Year: Arizona, 1999-2001**

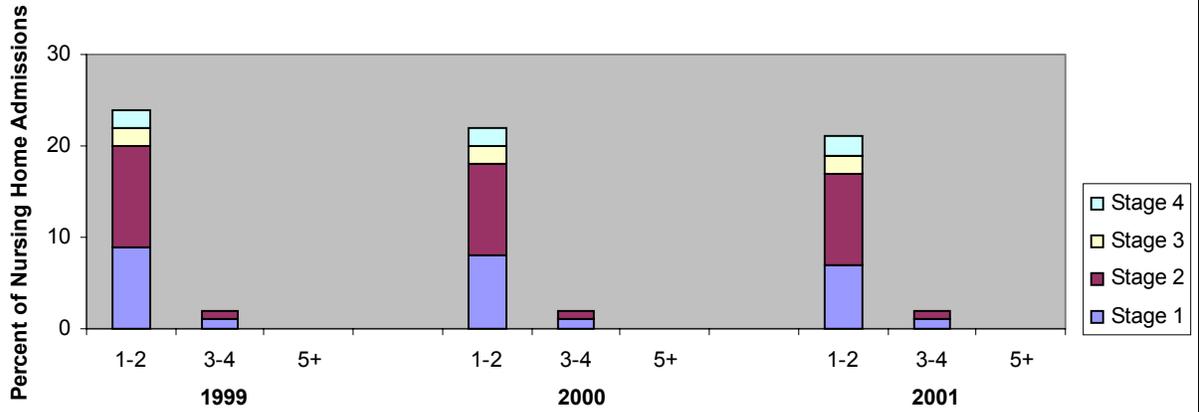


### *Skin Condition*

- ❑ About 8 percent of nursing home residents had 1 or 2 Stage 1 ulcers at admission; almost 1 percent had 3 or 4 Stage 1 ulcers at admission; and 0.10 percent had 5 or more Stage 1 ulcers at admission. (Figure 47)
- ❑ More residents (11 percent) had 1 or 2 Stage 2 ulcers at admission; 1 percent had 3 or 4 stage 2 ulcers at admissions; and 0.30 percent had 5 or more Stage 2 ulcers at admission. (Figure 47)
- ❑ About 2 percent of residents had 1 or 2 Stage 3 or Stage 4 ulcers at admission. (Figure 47)



**Figure 47. Skin Ulcers Among Nursing Home Admissions by Ulcer Stage and Year: Arizona, 1999-2001**



**Definitions:**

Stage 1: a persistent areas of skin redness (w/o a break in the skin)

Stage 2: a partial thickness loss of skin layers that presents clinically as an abrasion, blister or shallow crater

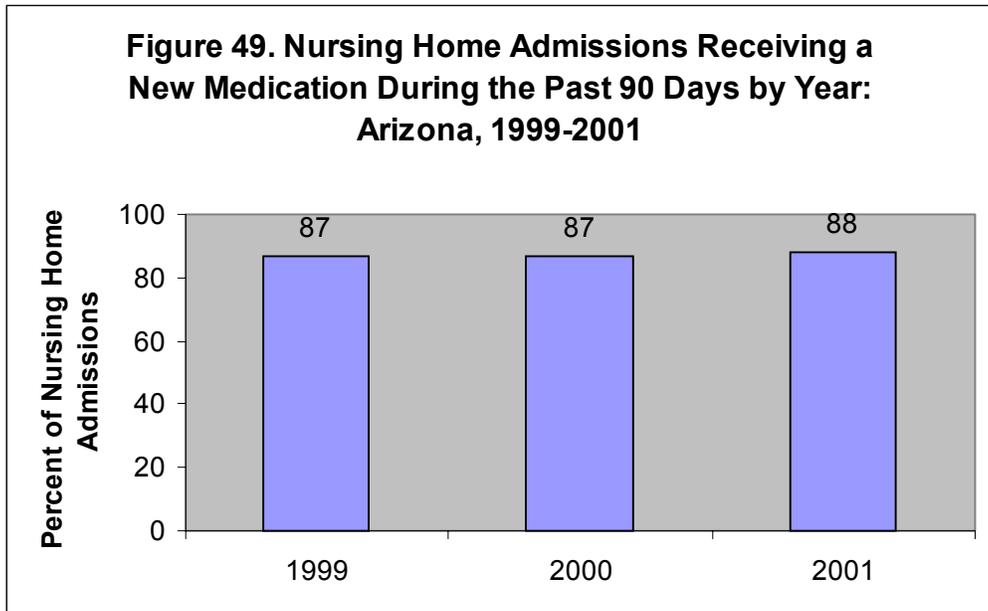
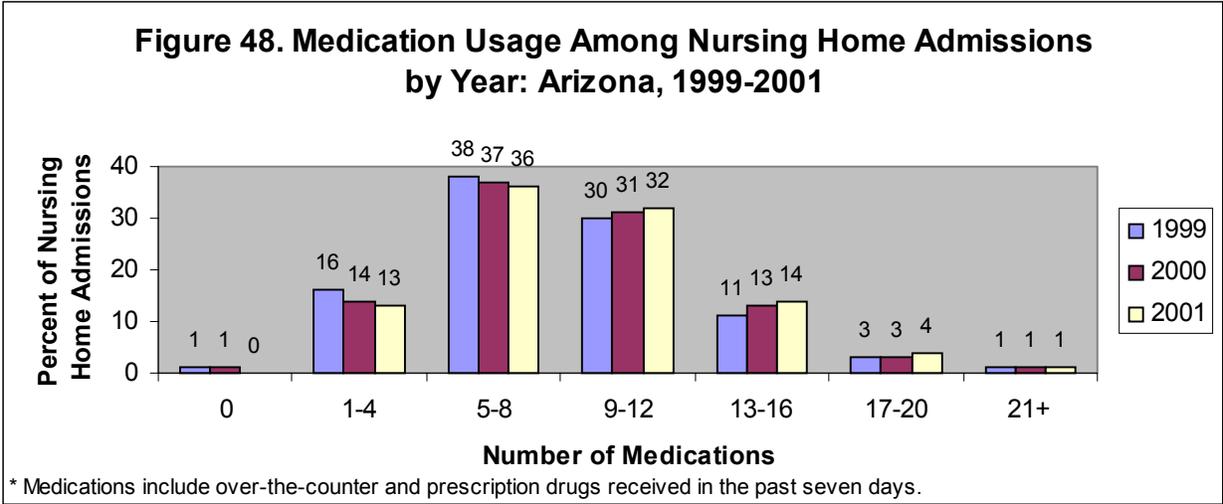
Stage 3: a full thickness of skin is lost, exposing the subcutaneous tissues – presents as a deep crater

Stage 4: a full thickness of skin and subcutaneous tissue is lost, exposing muscle or bone

### *Medications*

- ❑ Almost all of nursing home residents were taking at least one over-the-counter or prescription medications at admission. (Figure 48)
- ❑ Two-thirds of residents were taking between 5 to 12 over-the-counter or prescription medications at admission; almost one-fifth of residents were taking more than 12 medications. (Figure 48)
- ❑ Approximately nine of ten residents admitted to nursing homes had been prescribed a new medication in the last 90 days. (Figure 49)





## *Special Treatments and Procedures*

### Skills Training for Return to the Community

- ❑ At admission, approximately half of all residents received skills training for returning to the community. (Figure 50)
- ❑ The number of residents who received skills training for returning to the community increased from 49 percent of admission in 1999 and 2000 to 57 percent in 2001. (Figure 50)

### Therapies

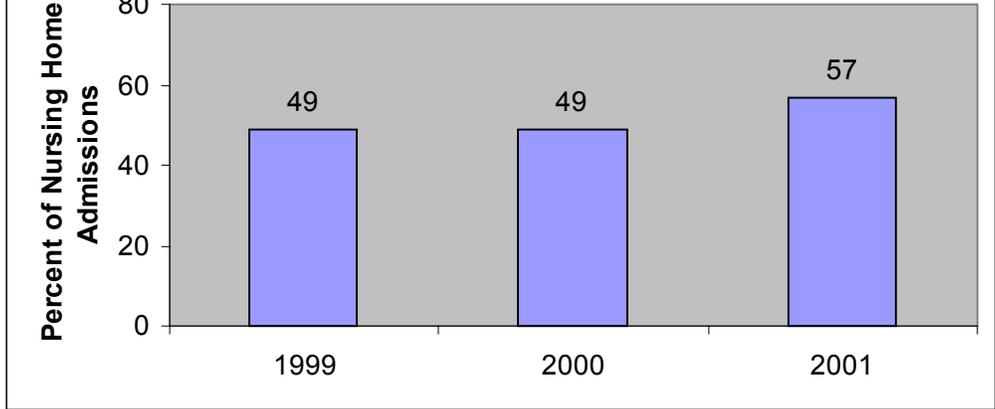
- ❑ At admission, approximately 10 percent of nursing home residents received speech therapy in the past seven days. (Figures 51, 52)
- ❑ About half of the residents received occupational therapy in the past seven days; most were given therapy four to six days in the past week for at least 15 minutes daily. (Figures 51, 53)
- ❑ The percentage of residents receiving occupational therapy at admission increased between 1999 and 2001. (Figure 51)
- ❑ Almost 2/3 of residents received physical therapy in the past seven days; about one-quarter were given physical therapy four to six days in the past week for at least 15 minutes daily. (Figures 51, 54)
- ❑ Almost 10 percent of residents received respiratory therapy at in the past seven days.

### Nursing Rehabilitation and Restorative Care

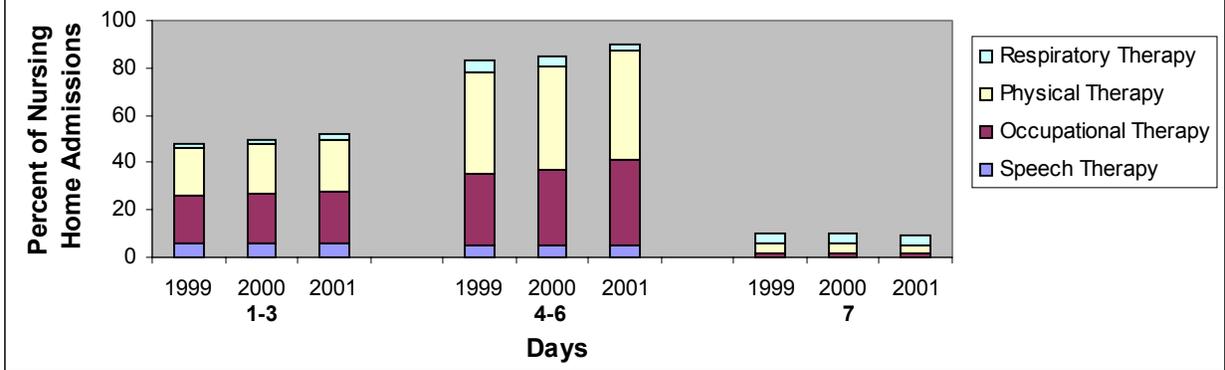
- ❑ Only 7 percent of nursing home residents performed active range of motion exercises for at least 15 minutes in the last seven days.
- ❑ Approximately 10 percent of residents received training and skill practice in bed mobility, transfer, walking, and dressing for at least 15 minutes per day in the last seven days.



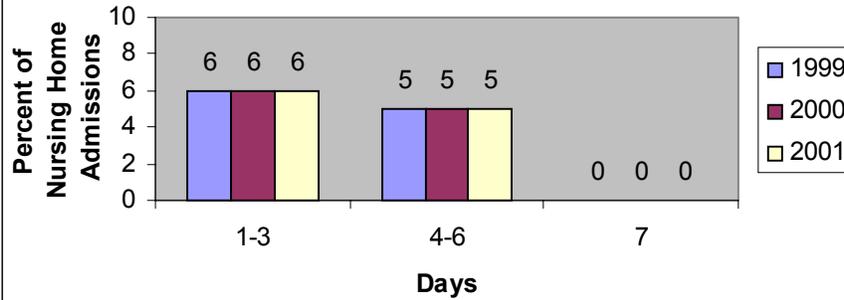
**Figure 50. Nursing Home Admissions Receiving Training for Return to Community by Year: Arizona, 1999-2001**



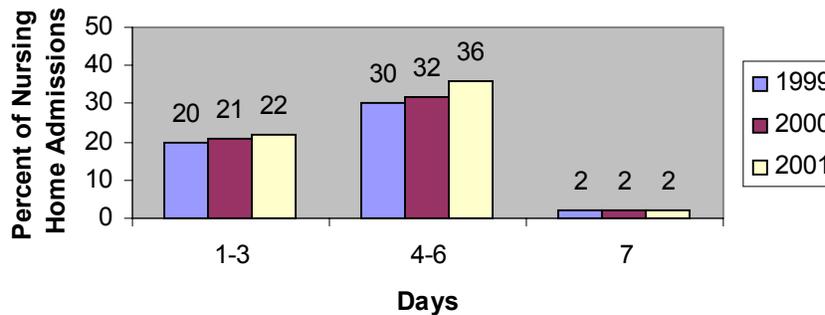
**Figure 51. Nursing Home Admissions by Type of Therapy Received In the Past Seven Days and Year: Arizona, 1999-2001**



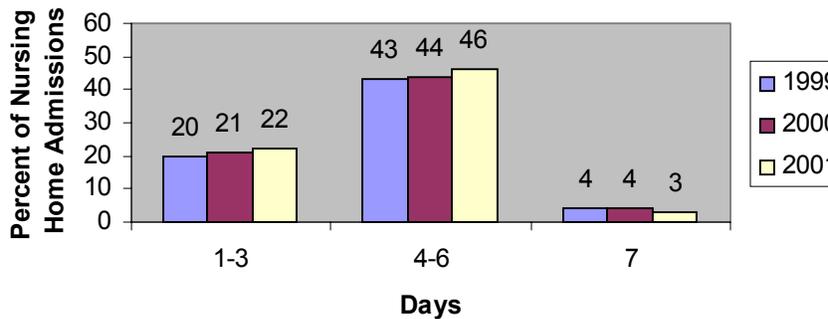
**Figure 52. Days of Speech Therapy Received in Nursing Home Admissions by Year: Arizona, 1999-2001**



**Figure 53. Days of Occupational Therapy Received in Nursing Home Admissions by Year: Arizona, 1999-2001**



**Figure 54. Days of Physical Therapy Received in Nursing Home Admissions by Year: Arizona, 1999-2001**



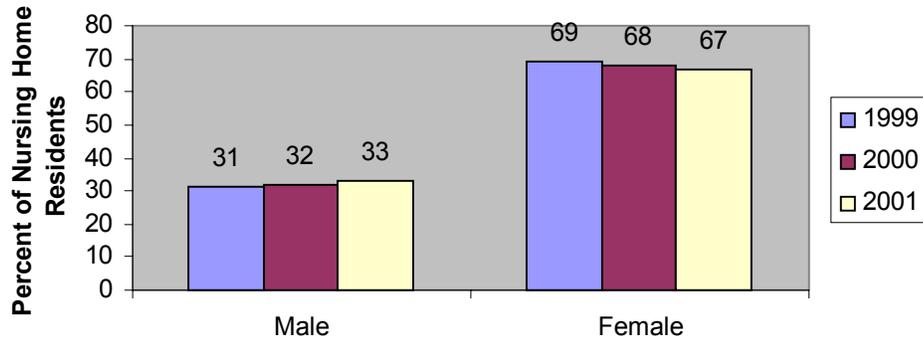
## II.B. Arizona's Nursing Home Residents On One Day of the Year

### *Demographic Profile*

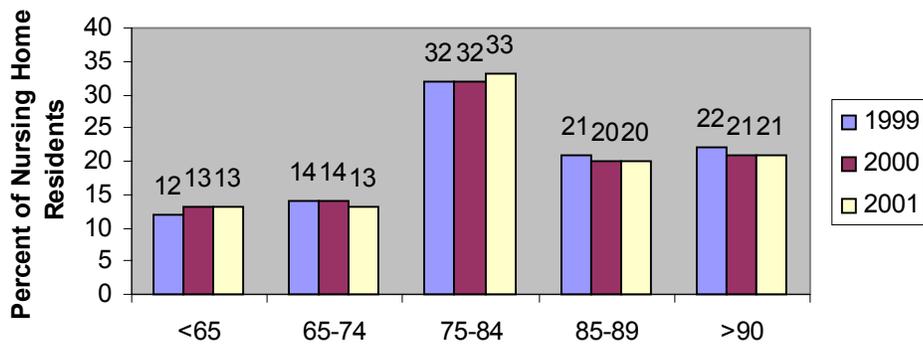
- ❑ For each year, approximately 68 percent of nursing home residents on July 1 were female. (Figure 55)
- ❑ The age distribution for residents remained stable from 1999, to 2000, to 2001. Residents under the age of 65 accounted for 13 percent of the individuals in nursing homes on July 1. (Figure 56)
- ❑ The largest group of residents was between 75 and 84 years. Almost three-quarters of the residents on July 1 were 75 years of age or older. (Figure 56)
- ❑ Race distribution rates in residents on one day of the year were stable from 1999, to 2000, and 2001. White residents made up approximately 81 percent of all residents. Hispanic, American Indian/Alaskan Native, and Black residents comprised 10 percent, 5 percent, and 3 percent of the resident population, respectively. Fewer than 1 percent of residents were Asian/Pacific Islanders. (Figure 57)
- ❑ About 44 percent of nursing home residents on July 1 lived in Maricopa County prior to admission. Pima County was the county of prior residence for 11 percent of residents. About 18 percent lived in one of the remaining 13 Arizona counties prior to admission. (Figure 58)



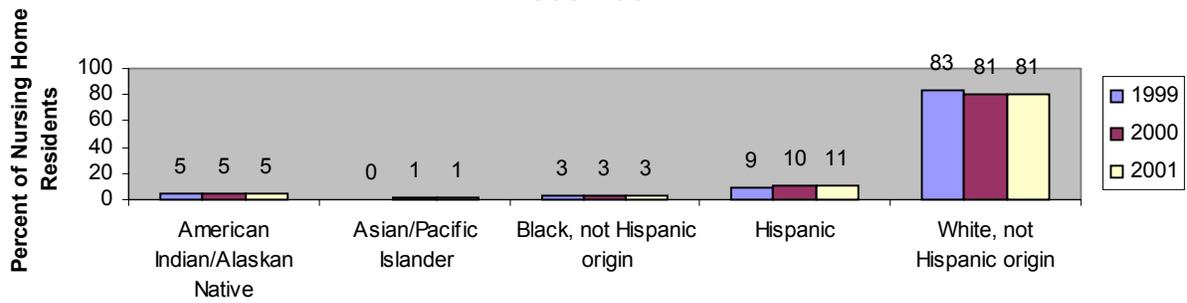
**Figure 55. Nursing Home Residents by Gender and Year: Arizona, 1999-2001**



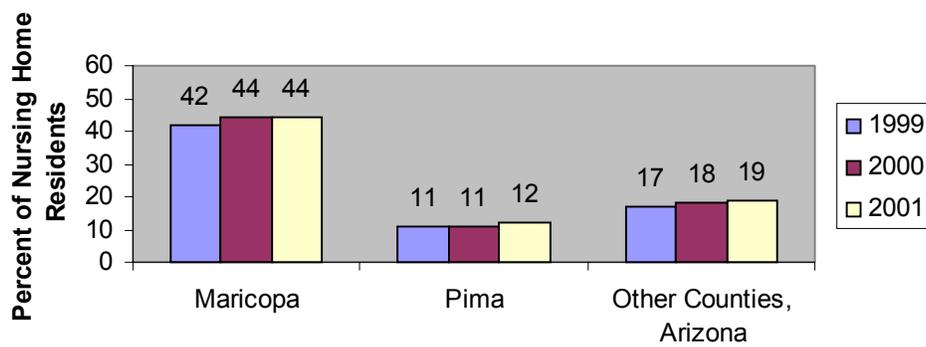
**Figure 56. Nursing Home Residents by Age and Year: Arizona, 1999-2001**



**Figure 57. Nursing Home Residents by Race and Year: Arizona, 1999-2001**



**Figure 58. Nursing Home Residents by County of Residence Prior to Admission and Year: Arizona, 1999-2001**

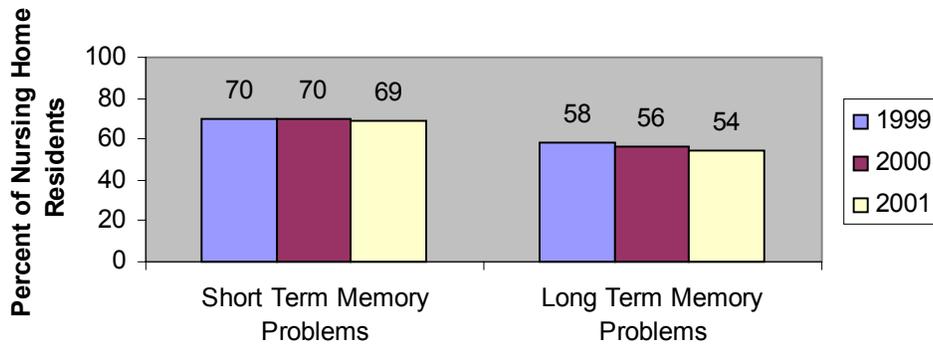


### *Cognitive Patterns*

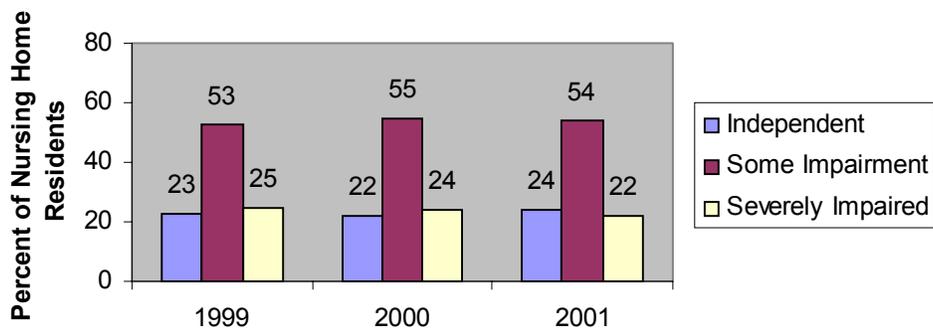
- ❑ About 70 percent of residents in nursing homes on July 1 had a short-term memory problem; a little more than half had a problem with long-term memory. (Figure 59)
- ❑ Less than one-quarter of residents in nursing homes on July 1 were independent in decision-making regarding tasks of daily life. Almost one of four residents were severely impaired in cognitive skills for daily decision-making. (Figure 60).



**Figure 59. Short and Long Term Memory Loss in Nursing Home Residents by Year: Arizona, 1999-2001**



**Figure 60. Cognitive Skills for Daily Decision Making in Nursing Home Residents in Year: Arizona, 1999-2001**

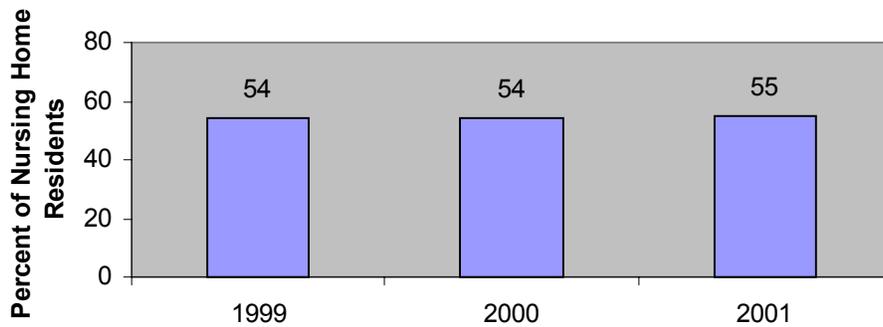


### *Communication and Hearing Patterns*

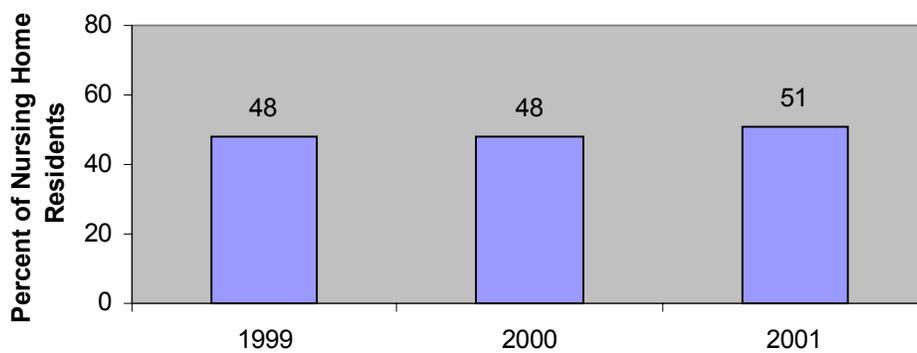
- ❑ Approximately half of the residents on July 1 were able to make themselves understood when communicating. (Figure 61)
- ❑ About half of the residents were able to understand others. (Figure 62)



**Figure 61. Always Makes Self Understood in Nursing Home Residents by Year: Arizona, 1999-2001**



**Figure 62. Always Understands Others in Nursing Home Residents by Year: Arizona, 1999-2001**

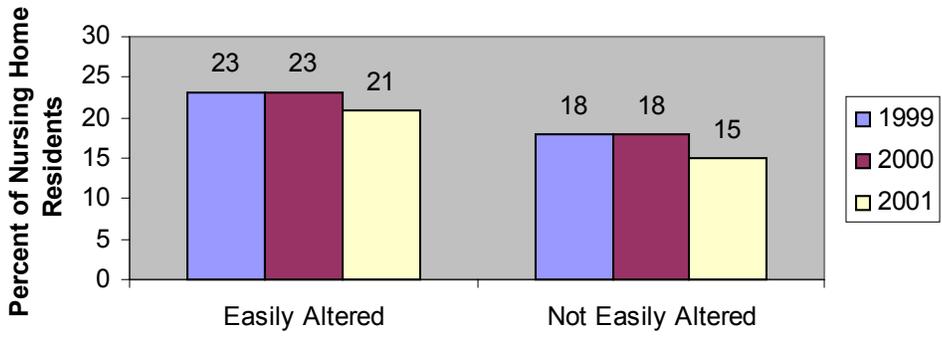


### *Mood and Behavior Patterns*

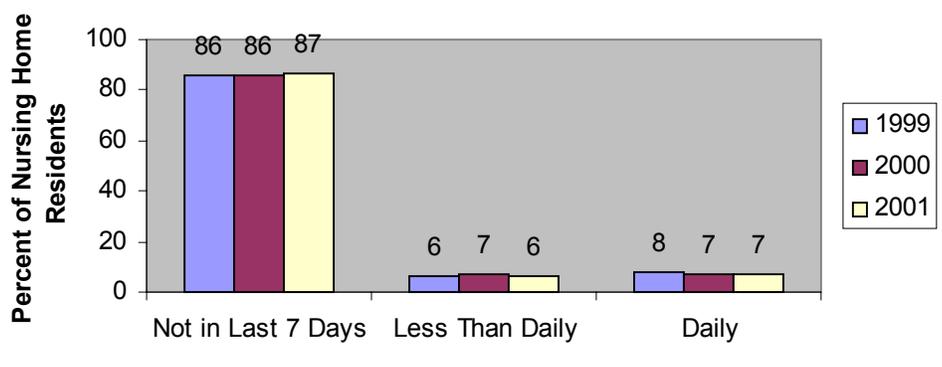
- ❑ Approximately 40 percent of residents had one or more indicators of a depressed, sad or anxious mood; for about half of these individuals the mood was easily altered by attempts to cheer up, console, or reassure the resident. (Figure 63)
- ❑ About 14 percent of nursing home residents on July 1 exhibited wandering behavior. (Figure 64)
- ❑ About 1 in 10 residents exhibited verbally or physically abusive behavior and 14 percent exhibited socially inappropriate and disruptive behavior. (Figures 65, 66)
- ❑ Approximately 20 percent of residents resisted care, such as resisting taking medications or injections, ADL assistance, or eating.



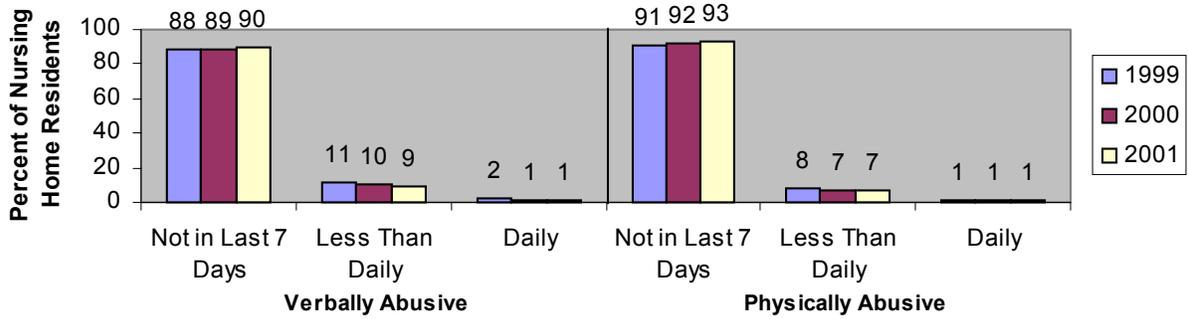
**Figure 63. Depressed, Sad, or Anxious Mood Present in Last 7 Days in Nursing Home Residents by Year: Arizona, 1999-2001**



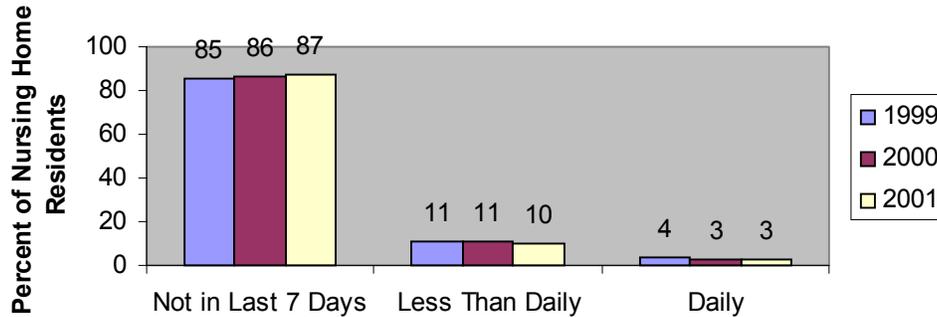
**Figure 64. Wandering in Nursing Home Residents by Year: Arizona, 1999-2001**



**Figure 65. Abusive Behaviors in Nursing Home Residents by Year: Arizona, 1999-2001**



**Figure 66. Socially Inappropriate and Disruptive Behavioral Symptoms in Nursing Home Residents by Year: Arizona, 1999-2001**



### *Physical Functioning*

- ❑ Residents in nursing homes on July 1 were more independent in bed mobility and eating than other activities of daily living. (Figure 67)
- ❑ About one-quarter of residents were independent in transferring; over 40 percent required extensive or full assistance in transfers. (Figure 67)
- ❑ Less than a quarter of residents were independent in toilet use; over half required extensive or full assistance. (Figure 67)
- ❑ Relatively few residents were independent in dressing or bathing; more than half required extensive or full assistance in dressing and 80 percent required extensive or full assistance in bathing. (Figure 67)

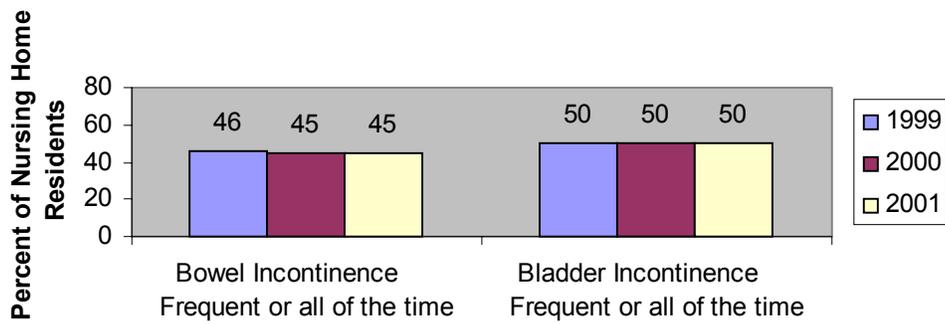


### *Continence*

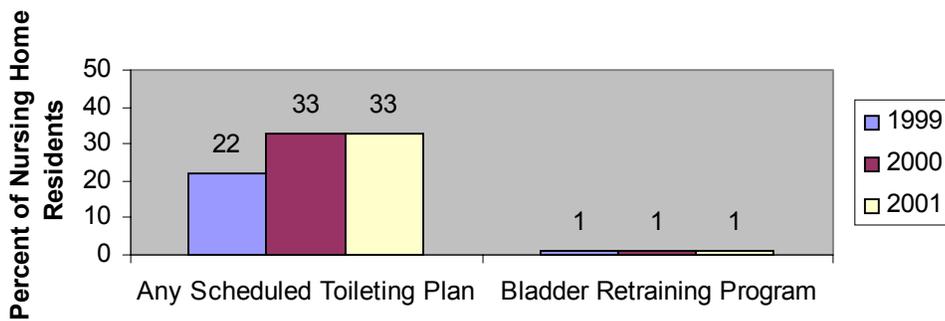
- ❑ About 40 percent of residents in nursing homes on July 1 had control of bowel movement and one-third had control of urinary bladder function, with appliance or continence program is employed.
- ❑ About half of residents were frequently incontinent of bowel or bladder function all or most of the time. (Figure 68)
- ❑ The percent of residents on any scheduled toileting plan increased from 22 percent in 1999 to 33 percent in 2000 and 2001. (Figure 69)
- ❑ One in 10 residents on July 1 had an indwelling catheter.



**Figure 68. Incontinence in Nursing Home Residents by Year: Arizona, 1999-2001**



**Figure 69. Bladder Programming in Nursing Home Residents by Year: Arizona, 1999-2001**

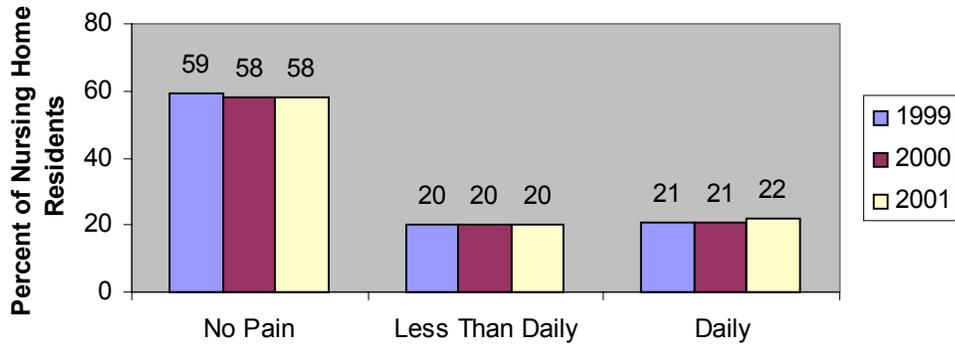


*Health Conditions*

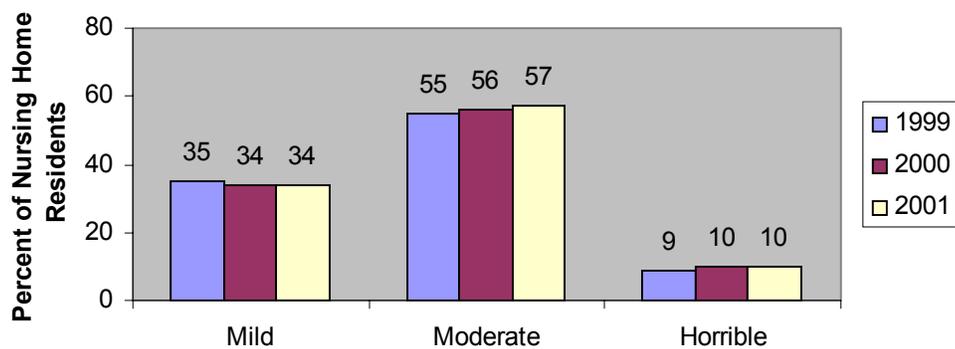
- ❑ About 40 percent of residents on July 1 complained or showed evidence of pain; one of five complained or showed evidence of pain daily. (Figure 70)
- ❑ Of residents who complained or showed evidence of pain, most reported moderate pain (56 percent), one third reported mild pain and 10 percent reported horrible or excruciating pain. (Figure 71)
- ❑ Almost one-fifth of residents fell in the past 30 days. (Figure 72)
- ❑ One-quarter of residents on July 1 fell in the past 31 to 180 days. (Figure 73)



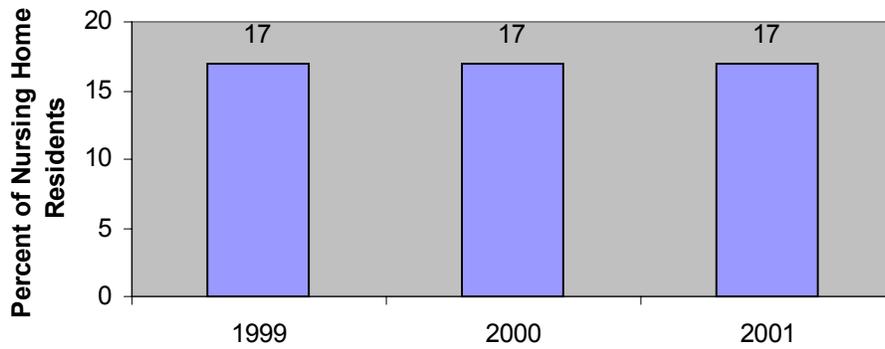
**Figure 70. Pain Symptoms in Nursing Home Residents by Year: Arizona, 1999-2001**



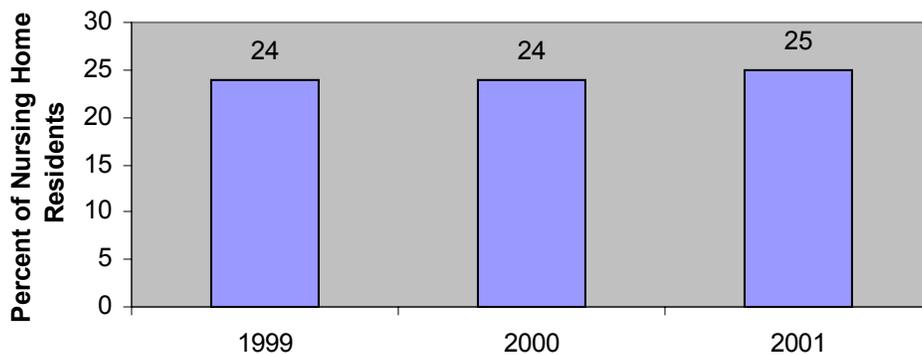
**Figure 71. Intensity of Pain Symptoms in Nursing Home Residents by Year: Arizona, 1999-2001**



**Figure 72. Falls in Past 30 Days in Nursing Home Residents by Year: Arizona, 1999-2001**



**Figure 73. Falls in Past 31-180 Days in Nursing Home Residents by Year: Arizona, 1999-2001**

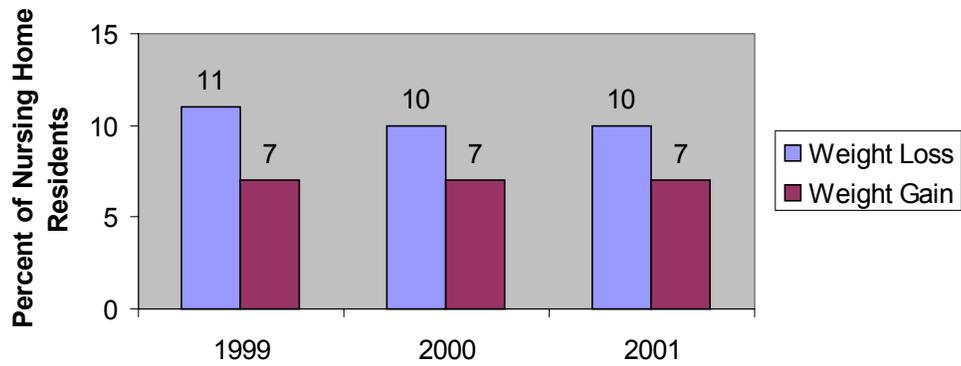


*Oral and Nutritional Status*

- ❑ About one in 10 residents on July 1 had either 5 percent or more weight loss in the last 30 days or 10 percent or more weight loss in the last 180 days. (Figure 74)
- ❑ Less than 10 percent of residents gained weight in the same period (Figure 74)



**Figure 74. Weight Loss and Gain in Nursing Home Residents by Year: Arizona, 1999-2001**

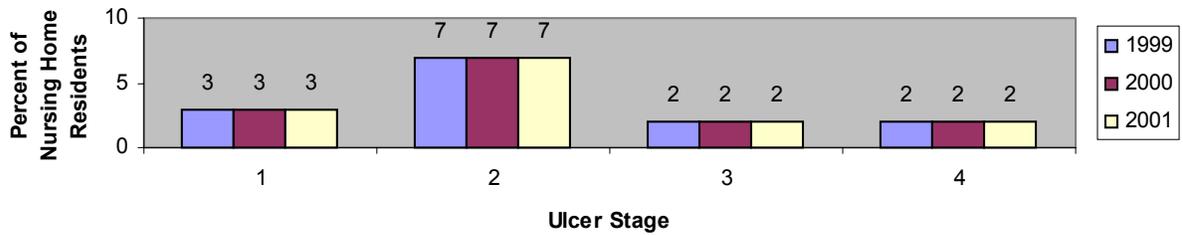


### *Skin Condition*

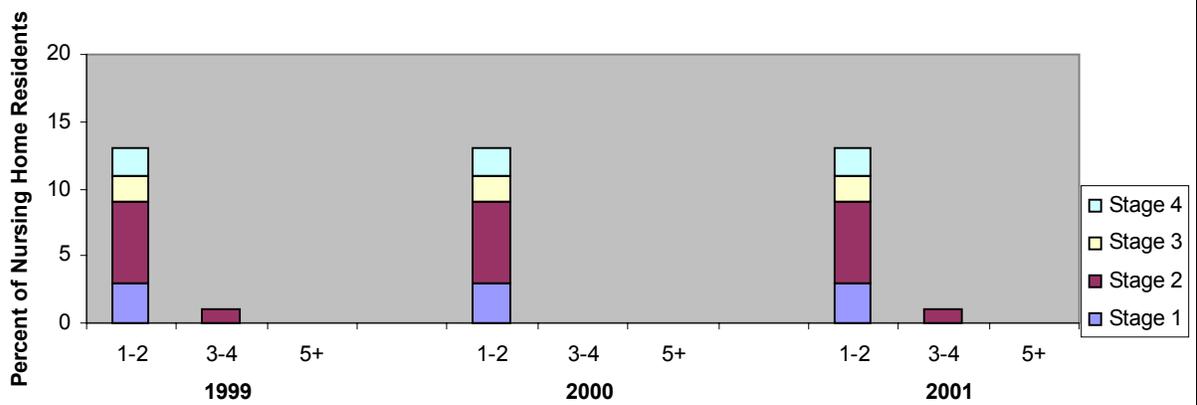
- ❑ Three percent of residents on July 1 had at least one Stage 1 ulcer; 2 percent of residents had at least one Stage 3 or 4 ulcers. (Figures 75, 76)
- ❑ More residents on July 1 (7 percent) had at least one Stage 2 ulcer. (Figures 75, 76)



**Figure 75. At Least One Ulcer by Stage in Nursing Home Residents by Year: Arizona, 1999-2001**



**Figure 76. Skin Ulcers Among Nursing Home Residents by Ulcer Stage and Year: Arizona, 1999-2001**



**Definitions:**

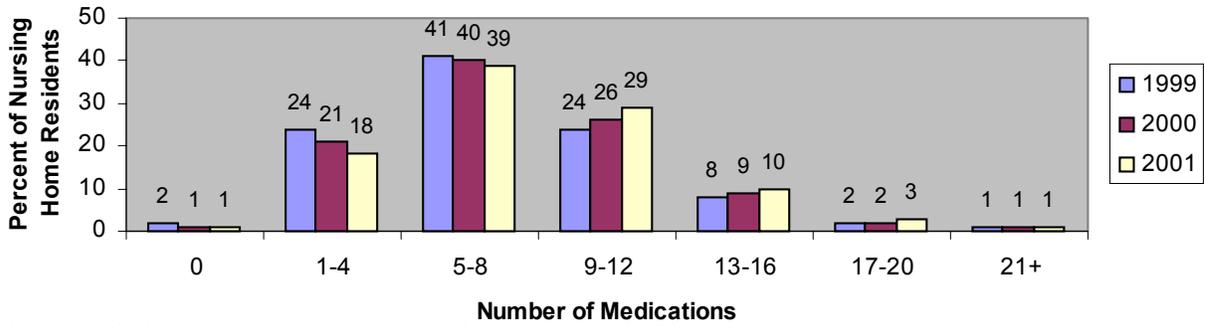
- Stage 1: a persistent areas of skin redness (w/o a break in the skin)
- Stage 2: a partial thickness loss of skin layers that presents clinically as an abrasion, blister or shallow crater
- Stage 3: a full thickness of skin is lost, exposing the subcutaneous tissues – presents as a deep crater
- Stage 4: a full thickness of skin and subcutaneous tissue is lost, exposing muscle or bone

### *Medications*

- ❑ Almost all of nursing home residents on July 1 were taking at least one over-the-counter or prescription medications. (Figure 77)
- ❑ Two-thirds of residents were taking between 5 to 12 over-the-counter or prescription medications; 12 percent were taking more than 12 medications. (Figure 77)



**Figure 77. Medication Usage Among Nursing Home Residents by Year: Arizona, 1999-2001**



\* Medications include over-the-counter and prescription drugs received in the past seven days.

### III. Resident Groups: Chronic Care Residents, Post-Hospitalization Residents, and Residents in Transition

In Section III, each of the three subgroups of nursing home residents are described at admission and on one day, July 1, for each of the three years. As in the previous section, the report follows the sequence and categories of major sections of the Minimum Data Set (MDS) Nursing Home Resident Assessment and Care Screening Tool.

#### **III.A. Resident Groups At Admission:**

At admission, a majority of residents (73 percent) were in the post-hospitalization or post-acute group, followed by the resident in transition or chronic/post-acute group (13 percent) and then the chronic care group (8 percent). It was not possible to categorize approximately 6 percent of individuals admitted to nursing homes in 1999, 2000, and 2001.

Table 3. Frequency of Admissions by Resident Category: Arizona, 1999-2001

Post Acute	20,732	19,996	20,035
Chronic/Post-Acute	3,367	3,402	3,472
Chronic	2,376	2,308	2,249
Undetermined	1,855	1,671	1,577
<b>Total</b>	<b>28,330</b>	<b>27,377</b>	<b>27,333</b>

At admission, individuals in the post-hospitalization or post-acute group were younger, and more likely to have lived alone prior to admission than individuals in the other groups. They were less likely to have one or more indicators of a depressed, sad, or anxious mood. Individuals in the post-hospitalization group were less independent in activities of daily living at admission and more likely to require extensive or total assistance than individuals in the chronic care or transition groups. They reported more pain and were likely to be on a greater number of medications at admission. Individuals in these groups were more likely to receive skills training to return to the community than members of the other two groups.

At admission, individuals in the chronic care group, in contrast to the post-hospitalization and transition group, had more problems with short-term and long-term memory. They had greater rates of bowel and bladder incontinence and they were more likely to engage in wandering behavior and physically or verbally abusive behavior.

## *Demographic Profile*

### Chronic Care Residents

- ❑ Approximately two-thirds of chronic care residents admitted to nursing homes were female. (Figure 78)
- ❑ About 15 percent of chronic care residents were under the age of 65; almost 40 percent were 85 years of age or older. (Figures 79, 80)
- ❑ The majority of chronic care residents (80 percent) were White (Figure 81); At admission, approximately 10 percent of chronic care residents were Hispanic, 5 percent were American Indian/Alaskan Natives, and 4 percent were Black
- ❑ Approximately 10 percent of chronic care residents lived alone prior to admission. (Figure 82)
- ❑ The majority of chronic care residents admitted to nursing homes lived in Maricopa County prior to admission; about one-quarter of chronic care residents lived in the non-metropolitan areas prior to admission. (Figure 83)
- ❑ The number of chronic care residents admitted to nursing homes with living wills declined from 26 percent in 1999 to 20 percent in 2001; more than half of chronic care residents had do not resuscitate (DNR) directives at admission. (Figure 84)

### Post-hospitalization Residents

- ❑ About 60 percent of post-hospitalization residents admitted to nursing homes were female. (Figure 78)
- ❑ About 15 percent of post-hospitalization residents were under the age of 65; approximately one-quarter were 85 years of age or older. (Figures 79, 80)
- ❑ Almost 9 out of 10 post-hospitalization residents were White (Figure 81); 7 percent were Hispanic, 2 percent were American Indian/Alaskan Natives, and 2 percent were Black.
- ❑ Almost one-third of post-hospitalizations residents lived alone prior to admission. (Figure 82)
- ❑ The majority of post-hospitalization residents admitted to nursing homes lived in Maricopa County prior to admission; about one-quarter of post-hospitalization residents lived in the non-metropolitan areas prior to admission. (Figure 83)
- ❑ The number of post-hospitalization residents admitted to nursing homes with living wills declined from 27 percent in 1999 to 20 percent in 2001; approximately 30 percent of post-hospitalization had do not resuscitate (DNR) directives at admission. (Figure 84)

### Residents in Transition

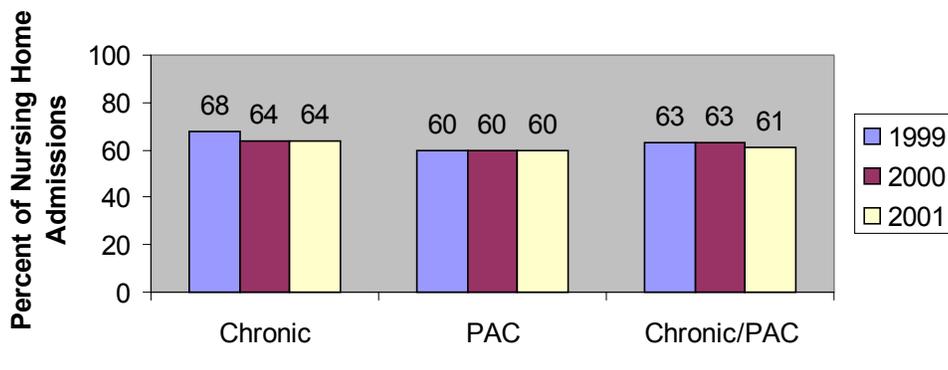
- ❑ About 60 percent of the residents in transition group were female. (Figure 78)
- ❑ Approximately 15 percent of the residents in transition were under the age of 65; about one-third were 85 years of age or older. (Figures 79, 80)
- ❑ Approximately 80 percent of residents in transition were White (Figure 81); 10 percent of residents in transition were Hispanic; 5 percent were American Indian, and 3 percent were Black.
- ❑ Approximately one-fifth of residents in transition lived alone prior to admission. (Figure 82)
- ❑ The majority of the residents in transition group admitted to nursing homes lived in Maricopa County prior to admission; about one-quarter of these residents lived in the non-metropolitan areas prior to admission. (Figure 83)
- ❑ The number of residents in transition admitted to nursing homes with living wills declined from 25 percent in 1999 to 17 percent in 2001; more than half of these residents had do not resuscitate (DNR) directives at admission. (Figure 84)

### Comparison Among Groups

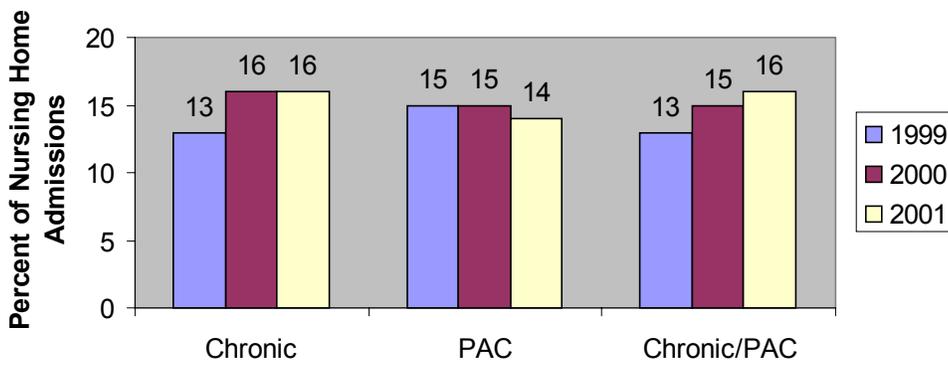
At admission, the majority of nursing home residents were women. This finding was consistent across the three resident groups. While each resident group was comprised of approximately 15 percent of individuals under the age of 65 years at admission, a greater percentage of chronic care residents and residents in the transition group were age 85 or older than those in the post-hospitalization group. A majority of all nursing home admission was White. The percentage of White residents in the post-hospitalization group was higher than in the other two resident groups. Post-hospitalization residents were most likely to live alone prior to admission (30 percent), followed by residents in the transition group (20 percent) and chronic care residents (10 percent). Within each resident group, the majority of residents lived in Maricopa County prior to admission. Finally, a minority of residents in all three groups was admitted with living wills. For each group, the percentage of individuals with living wills declined between 1999 and 2001. More than half of chronic care residents and residents in transition had DNR directives at admission.

Overall, at admission, residents in the post-hospitalization group were younger, more likely to be White, more likely to live alone prior to admission and less likely to have do-not-resuscitate directives than residents in the other two groups.

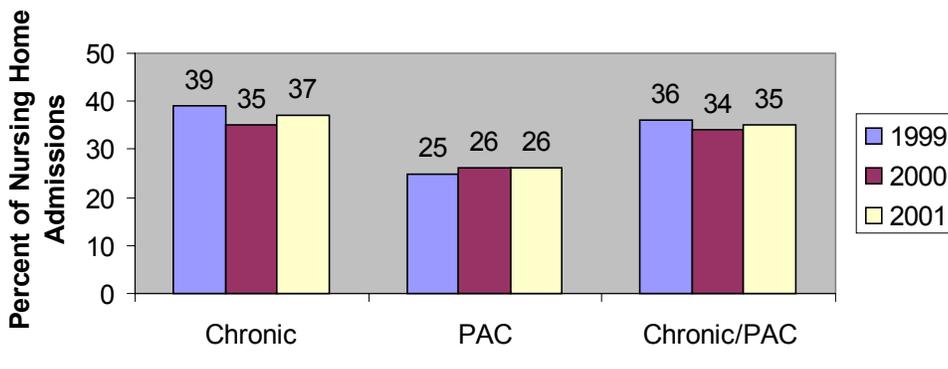
**Figure 78. Females in Nursing Home Admissions by Type and Year: Arizona, 1999-2001**



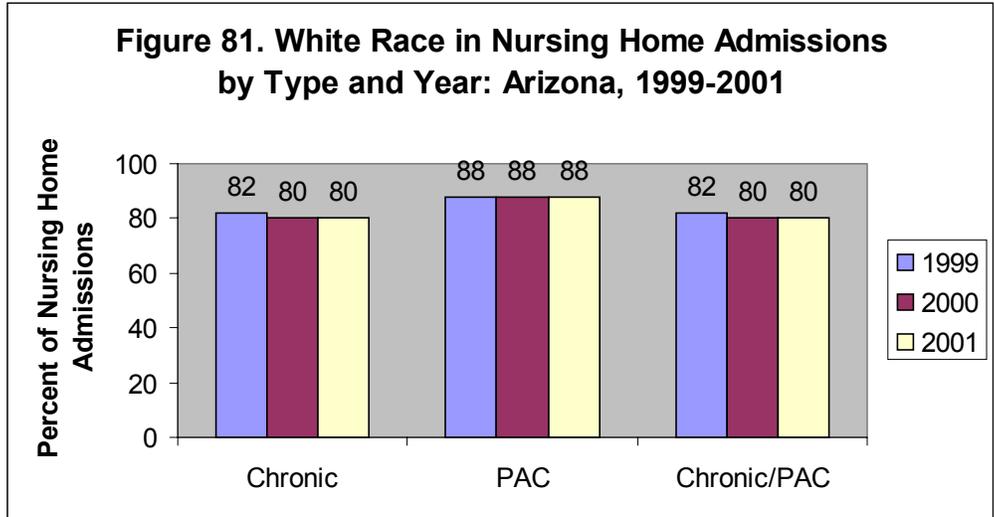
**Figure 79. Under 65 Years of Age in Nursing Home Admissions by Type and Year: Arizona, 1999-2001**



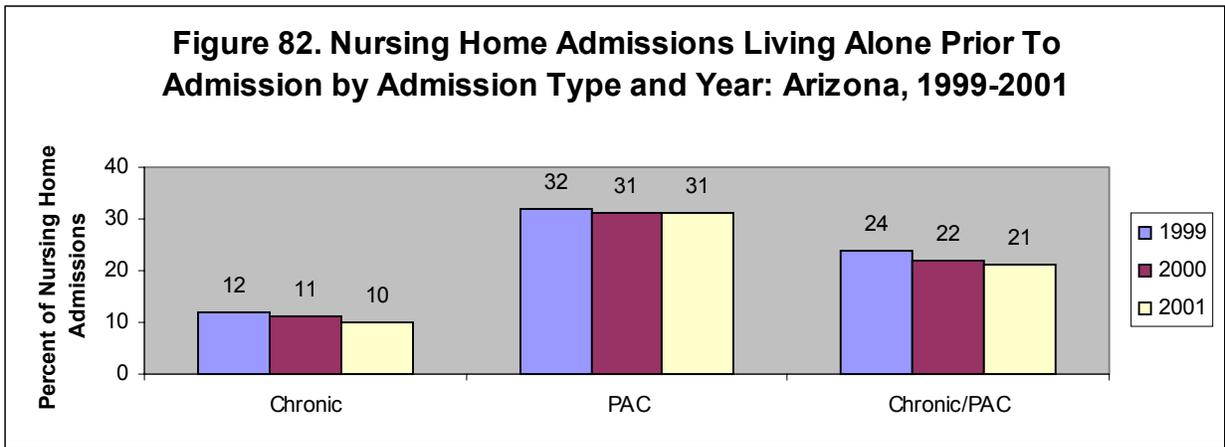
**Figure 80. Over 85 Years of Age in Nursing Home Admissions by Type and Year: Arizona, 1999-2001**



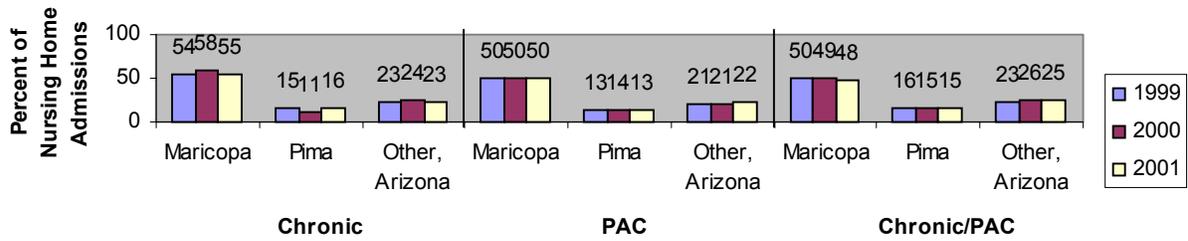
**Figure 81. White Race in Nursing Home Admissions by Type and Year: Arizona, 1999-2001**



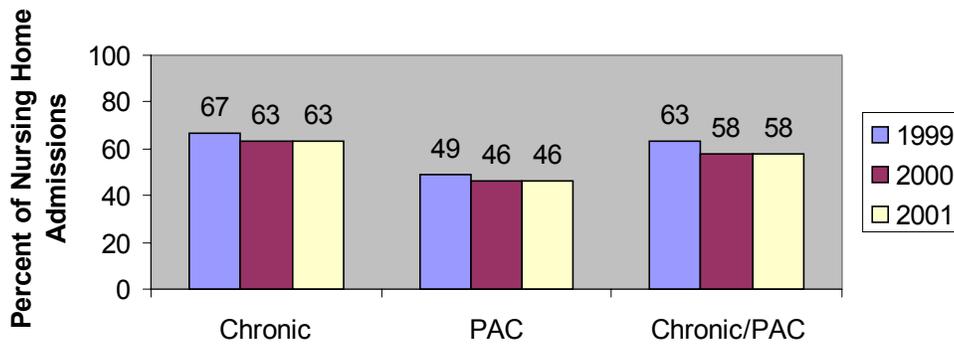
**Figure 82. Nursing Home Admissions Living Alone Prior To Admission by Admission Type and Year: Arizona, 1999-2001**



**Figure 83. Nursing Home Admissions by County of Prior Residence by Admission Type and Year: Arizona, 1999-2001**



**Figure 84. Advanced Directives of Any Type Among Nursing Home Admissions by Type and Year: Arizona, 1999-2001**



## *Cognitive Patterns*

### Chronic Care Residents

- ❑ At admission, over two-thirds of chronic care residents had short-term memory problems. (Figure 85)
- ❑ More than half of the chronic care residents had long-term memory problems. (Figure 86)
- ❑ More than half of the chronic care residents were moderately or severely impaired in daily decision-making. (Figure 87, 88)
- ❑ The percentage of chronic care residents with short-term and long-term memory problems and impaired decision-making increased with age.
- ❑ At admission, there were a lower percentage of Native American residents with short-term and long-term memory loss than Black, Hispanic, or White residents.

### Post-hospitalization Residents

- ❑ At admission, about one-third of post-hospitalization residents had short-term memory problems. (Figure 85)
- ❑ About one-fifth of post-hospitalization residents had long-term memory problems. (Figure 86)
- ❑ Approximately one-quarter of these residents were moderately or severely impaired in daily decision-making at admission (Figure 87, 88)
- ❑ The percentage of post-hospitalization residents with short-term and long-term memory loss increased with age.
- ❑ At admission, there were a lower percent of Native American residents with short-term than Black, Hispanic or White residents.

### Residents in Transition

- ❑ At admission, about two-thirds of residents in transition had short-term memory problems. (Figure 85)
- ❑ About half of these residents had long-term memory problems. (Figure 86)
- ❑ Over half of residents in transition were moderately or severely impaired in daily decision-making at admission. (Figure 87, 88)

- ❑ Residents from Pima County were slightly less likely to be independent in daily decision-making than residents from Maricopa County or the 13 other counties.

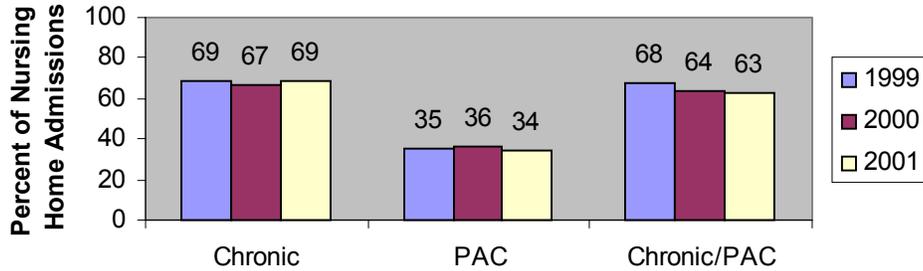
### Comparison Among Groups

Overall, almost half of nursing home admissions had short-term memory problems and about one-quarter had long-term memory problems. About half come into the nursing home independent in daily decision-making. Twice as many chronic care and transitional residents have short-term memory problems compared to post-hospitalization residents.

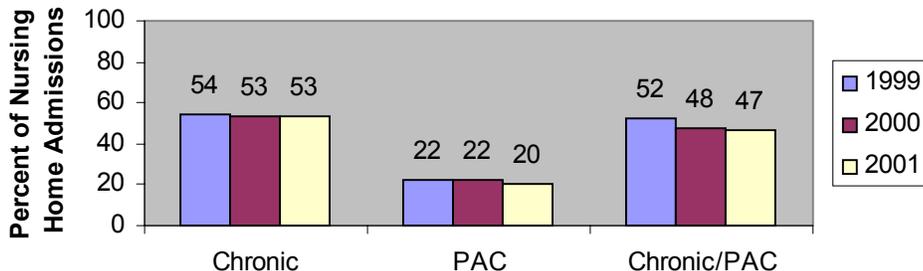
More than twice as many chronic care and transitional residents have long-term memory problems compared to post-hospitalization residents. The chronic care and transitional resident groups have twice the percent of residents with moderate or severe impairments in daily decision-making.



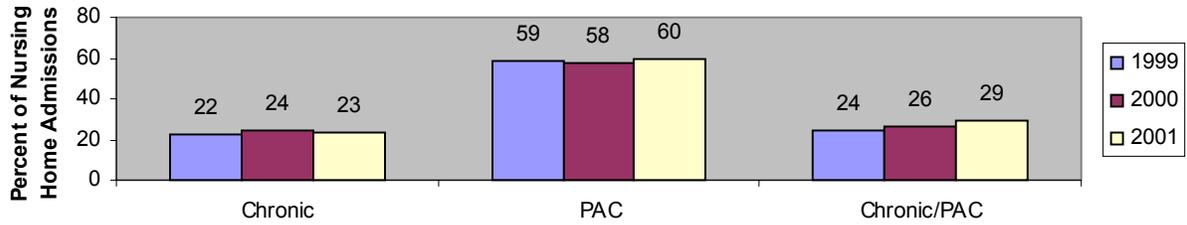
**Figure 85. Short Term Memory Problem in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



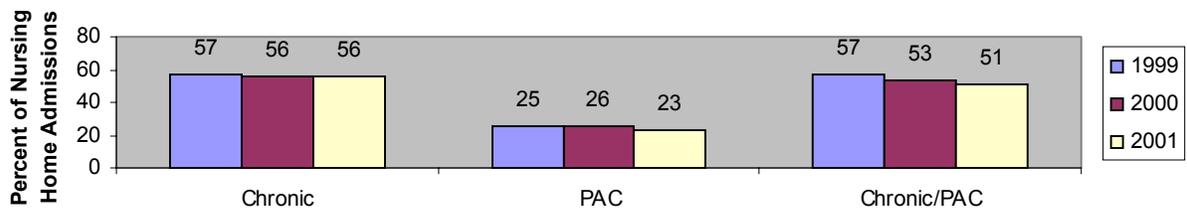
**Figure 86. Long Term Memory Problem in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



**Figure 87. Independent Cognitive Skills for Daily Decision Making in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



**Figure 88. Moderately to Severely Impaired Cognitive Skills for Daily Decision Making in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



## *Communication and Hearing Patterns*

### Chronic Care Residents

- ❑ More than three-quarters of chronic care residents were able to hear adequately, with hearing appliances, if used. (Figure 89)
- ❑ Less than 10 percent of these residents had a hearing aid and used it.
- ❑ At admission, about half of chronic care residents had difficulty understanding others or making themselves understood. (Figures 90, 91)
- ❑ The percent of residents who were able to hear adequately with hearing appliances, if used declined with age. The percent of residents who had and used a hearing aid increased with age.
- ❑ White chronic care residents were twice as likely to have and use a hearing aid as Hispanic residents and eight times as likely as Black and American Indian residents.
- ❑ The percent of Hispanics chronic care residents able to make themselves understood was 10 percent lower than White residents.

### Post Hospitalization Residents

- ❑ More than three-quarters of post-hospitalization residents were able to hear adequately, with hearing appliances, if used. (Figure 92)
- ❑ Less than 10 percent of these residents had a hearing aid and used it.
- ❑ At admission, less than one-quarter of post-hospitalization residents had difficulty understanding others or making themselves understood. (Figures 90, 91)
- ❑ The percent of residents who were able to hear adequately with hearing appliances, if used declined with age. The percent of residents who were able to understand others or make themselves understood declined with age.
- ❑ White chronic care residents were more likely to have and use a hearing aid than Hispanic and American Indian residents.

### Residents in Transition

- ❑ More than three-quarters of residents in transition were able to hear adequately, with hearing appliances, if used. (Figure 93)
- ❑ Less than 10 percent of these residents had a hearing aid and used it.

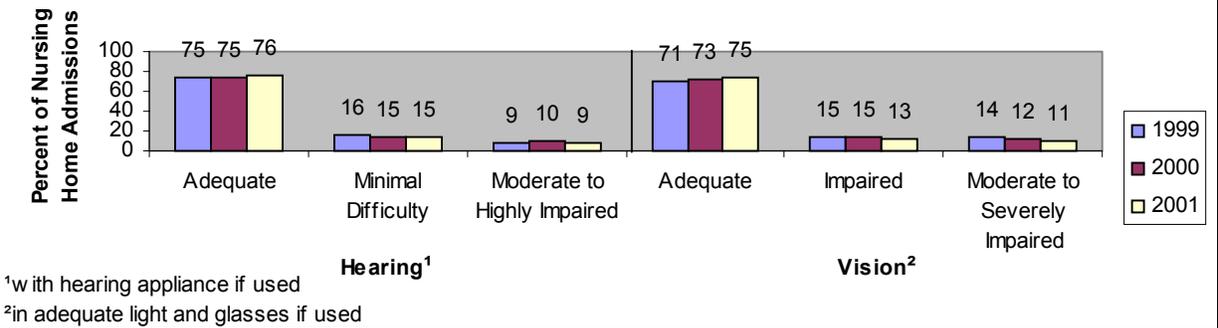
- ❑ At admission, about half of residents in transition had difficulty understanding others or making themselves understood (Figures 90, 91)
- ❑ The percent of residents who were able to hear adequately with hearing appliances, if used declined with age. The percent of residents who were able to understand others or make themselves understood declined with age.
- ❑ White residents were more likely to have and use a hearing aid than Hispanic, Black and American Indian residents.
- ❑ A greater percent of White residents were able to understand others and make themselves understood than American Indian and Hispanic residents.

### Comparison Among Groups

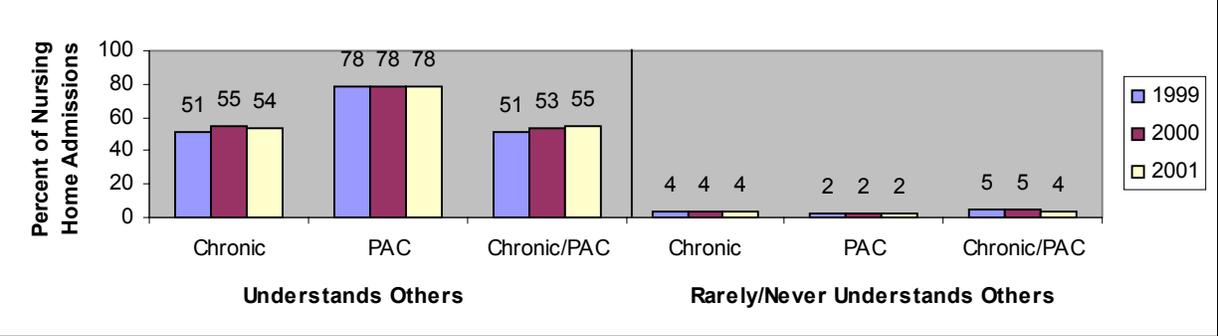
Overall, a majority of nursing home residents were able to hear adequately at admission. Few residents had a hearing aid and used it. The percent of chronic care and transitional residents with difficulty understanding others or making themselves understood was more than double that of post-hospitalization residents. In all resident groups, White residents were more likely to have a hearing aid and use it.



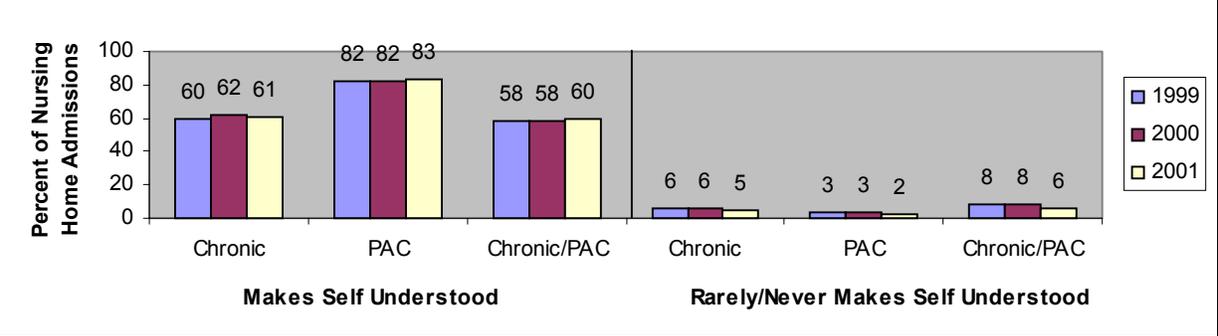
**Figure 89. Hearing and Vision Loss in Chronic Nursing Home Admissions by Year: Arizona, 1999-2001**



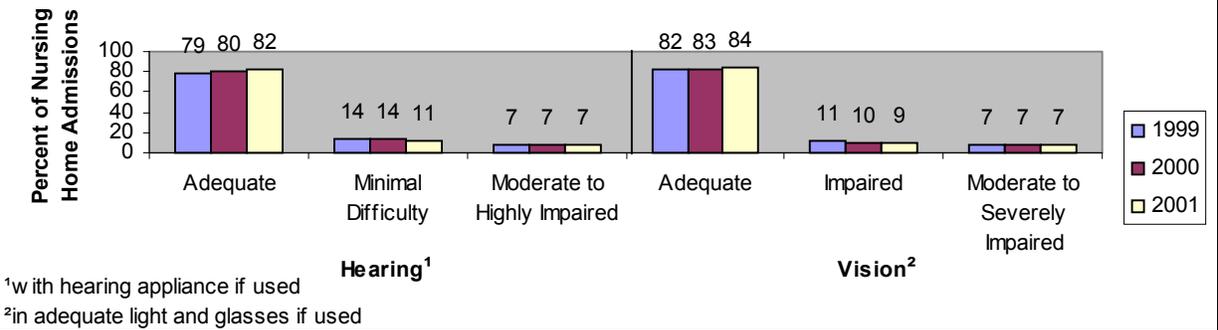
**Figure 90. Ability to Understand Others in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



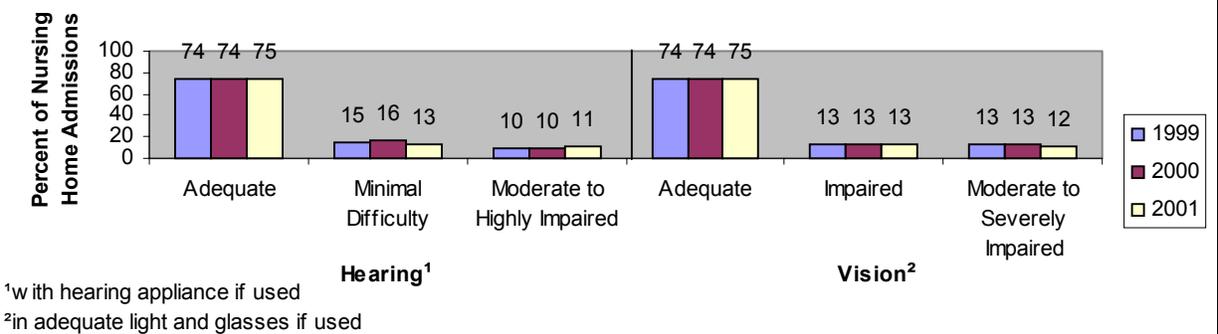
**Figure 91. Making Self Understood in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



**Figure 92. Hearing and Vision Loss in PAC Nursing Home Admissions by Year: Arizona, 1999-2001**



**Figure 93. Hearing and Vision Loss in Chronic/PAC Nursing Home Admissions by Year: Arizona, 1999-2001**



## *Vision Patterns*

### Chronic Care Residents

- ❑ Almost three-quarters of chronic care residents were able to see adequately, with adequate light and glasses, if needed. (Figure 89)
- ❑ The percent of chronic care residents with adequate vision decreased with age.
- ❑ Fewer American Indian chronic care residents (66 percent) had adequate vision than White (74 percent), Hispanic (71 percent), or Black residents (71 percent).

### Post-Hospitalization Residents

- ❑ At admission, over 80 percent of post-hospitalization residents were able to see adequately, with adequate light and glasses, if needed. (Figure 92)
- ❑ The percent of post-hospitalization residents with adequate vision decreased with age.
- ❑ Fewer American Indian post-hospitalization residents (77 percent) had adequate vision than White (85 percent), Hispanic (81 percent), or Black residents (81 percent).

### Residents in Transition

- ❑ Almost three-quarters of residents in the transition group were able to see adequately at admission. (Figure 93)
- ❑ At admission, fewer American Indian residents in transition (66 percent) had adequate vision than White (74 percent), Hispanic (71 percent), or Black residents (71 percent).

### Comparison Among Groups

Overall, a majority of nursing home residents were able to see adequately at admission. The number of residents with visual impairments tended to increase with age. In all resident groups, Native American residents were more likely to have visual problems than White, Hispanic, or Black residents.

## *Mood and Behavior Patterns*

### Chronic Care Residents

- ❑ At admission, about 40 percent of chronic care residents had one or more indicators of a depressed, sad, or anxious mood. For more than half of these individuals the mood was easily altered by attempts to cheer up, console, or reassure the resident over the last 7 days. (Figure 94)
- ❑ Between 1999 and 2001, the percent of chronic care residents who had one or more indicators of a depressed, sad, or anxious mood decreased from 42 percent to 35 percent.
- ❑ At admission, a majority of chronic care residents had no change in their mood compared to the last assessment; however about 8 percent of these residents had a deterioration in their mood status. (Figure 95)
- ❑ About 20 percent of chronic care residents engaged in wandering behavior in the last 7 days. (Figure 96)
- ❑ At admission, approximately 10 percent of chronic care residents engaged in verbally abusive and physically abusive behaviors (Figures 97, 98). Younger residents were more likely to engage in verbally abusive behavior.

### Post-Hospitalization Residents

- ❑ At admission, about 30 percent of post-hospitalization residents had one or more indicators of a depressed, sad, or anxious mood. For more than half of these individuals the mood was easily altered by attempts to cheer up, console, or reassure the resident over the last 7 days. (Figure 94)
- ❑ The percent of post-hospitalization residents with one or more indicators of depressed, sad, or anxious mood at admission remained stable between 1999 and 2001.
- ❑ At admission, a majority of post-hospitalization residents had no change in their mood compared to the last assessment; however about 11 percent of these residents had a deterioration in their mood status. (Figure 95)
- ❑ Few post-hospitalization residents engaged in wandering behavior at admission or exhibited verbally or physically abusive behavior. (Figures 96, 97, 98)

### Residents in Transition

- ❑ At admission, about 40 percent of residents in transition had one or more indicators of a depressed, sad, or anxious mood. For more than half of these individuals the mood was easily altered by attempts to cheer up, console, or reassure the resident over the last 7 days. (Figure 94)

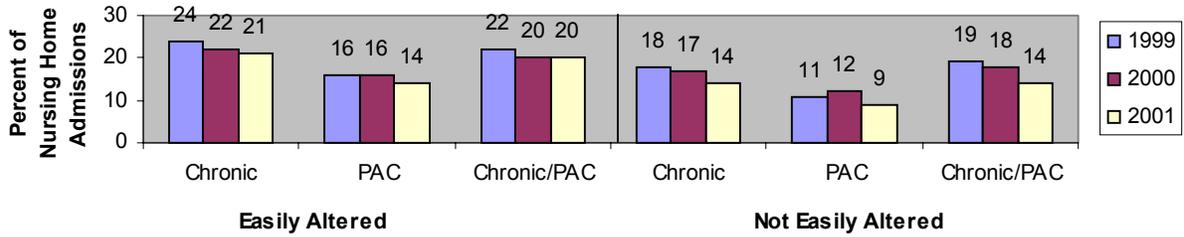
- Between 1999 and 2001, the percent of residents in transition who had one or more indicators of a depressed, sad, or anxious mood decreased from 40 percent to 33 percent.
- At admission, a majority of residents in transition had no change in their mood compared to the last assessment; however about 12 percent of these residents had a deterioration in their mood status. (Figure 95)
- About 8 percent of residents in transition engaged in wandering behavior at admission. (Figure 96)
- At admission, approximately 6 percent of residents in transition engaged in verbally abusive and physically abusive behaviors. (Figures 97, 98)

### Comparison Among Groups

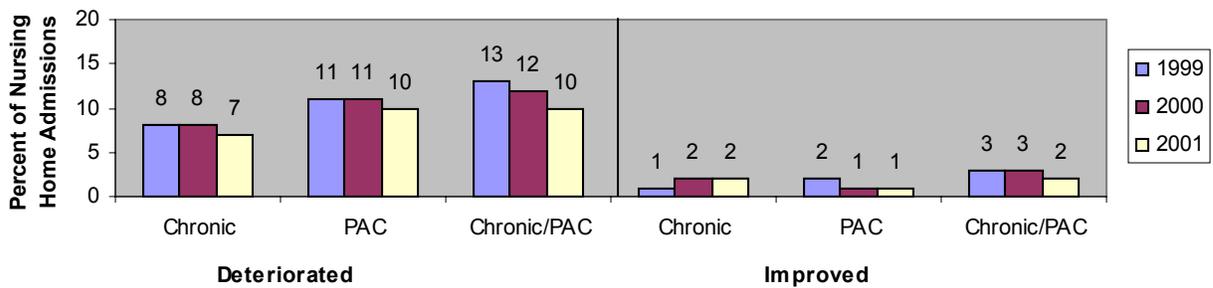
Overall, about one-third of nursing home admissions had one or more indicators of a depressed, sad, or anxious mood. Fewer post-hospitalization residents were admitted with one or more indicators of these moods than chronic residents or residents in transition. Between 1999 and 2001, the percent of individuals in the chronic and transition groups with indicators of depressed, sad, or anxious moods decreased. Twenty percent of chronic care residents exhibited wandering behavior at admission compared to 8 percent of residents in transition and 3 percent in post-hospitalization residents. More chronic care residents engaged in verbally or physically abusive behavior than post-hospitalization residents or residents in transition.



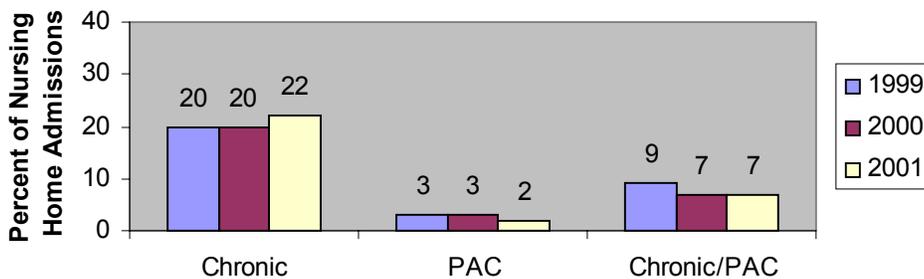
**Figure 94. Depressed, Sad, or Anxious Mood Present in Last 7 Days in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



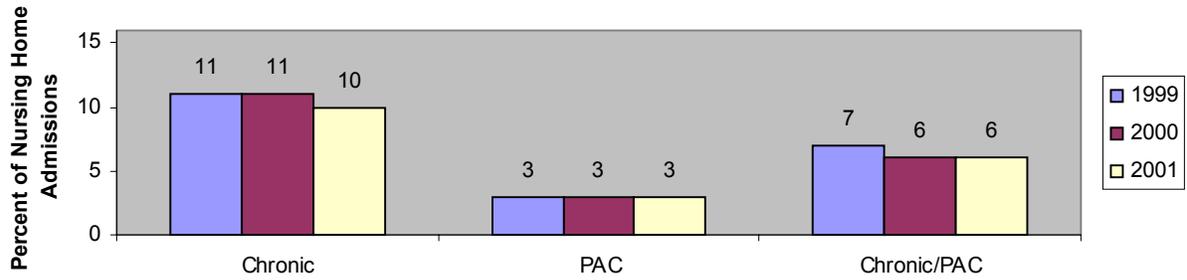
**Figure 95. Mood Change in Past 90 Days in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



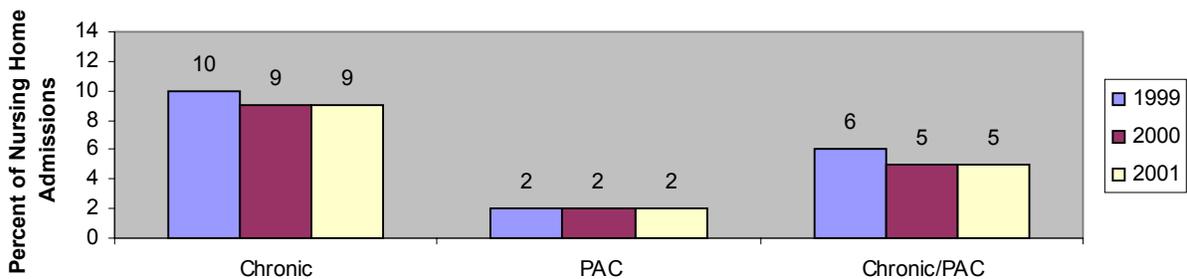
**Figure 96. Wandering in Past 7 Days in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



**Figure 97. Verbally Abusive in Past 7 Days in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



**Figure 98. Physically Abusive in Past 7 Days in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



## *Psychosocial Well-Being*

### Chronic Care Residents

- ❑ At admission, most of the chronic care residents were at ease interacting with others; fewer were at ease doing planned or self-initiated activities. (Figure 99)
- ❑ Only about 11 percent of the chronic care residents established their own goals. (Figure 100)
- ❑ The percent of chronic care residents who established their own goals and pursued involvement in the life of the facility decreased after age 65.

### Post-Hospitalization Residents

- ❑ The majority of post-hospitalization residents were at ease interacting with others and were at ease doing self-initiated activities. (Figure 101)
- ❑ At admission, About a quarter of the post-hospitalization residents established their own goals. (Figure 100)
- ❑ The percent of residents in this group who established their own goals at admission decreased with age from approximately 28 percent in residents under age 50 to 15 percent in residents 90 or more years.
- ❑ Residents of Maricopa and Pima counties were less likely to establish their own goals at admission than residents in the post hospitalization group from the other counties.

### Residents in Transition

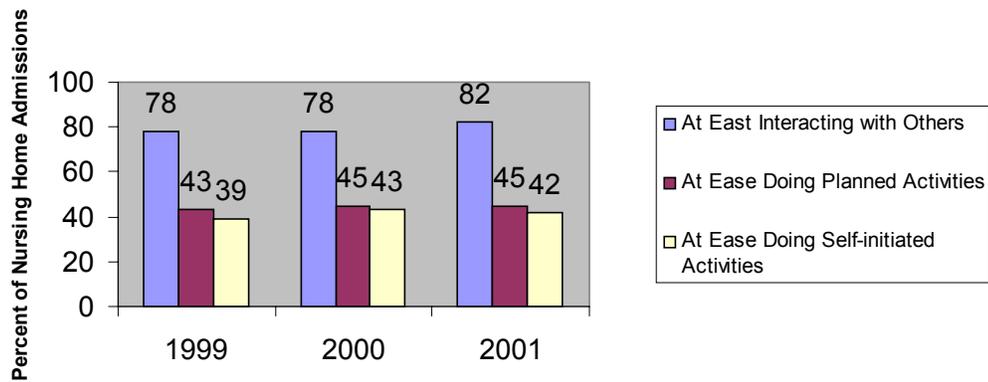
- ❑ Most of the residents in the transition group were at ease interacting with others (78 percent). Fewer were at ease doing planned (44 percent) or self-initiated activities. (Figure 102)
- ❑ Only about 11 percent of these residents established their own goals at admission. (Figure 100)
- ❑ The percent of residents in this group who established their own goals at admission decreased with age from approximately 20 percent in residents under age 50 to 9 percent in residents 90 or more years.

### Comparison among Resident Groups

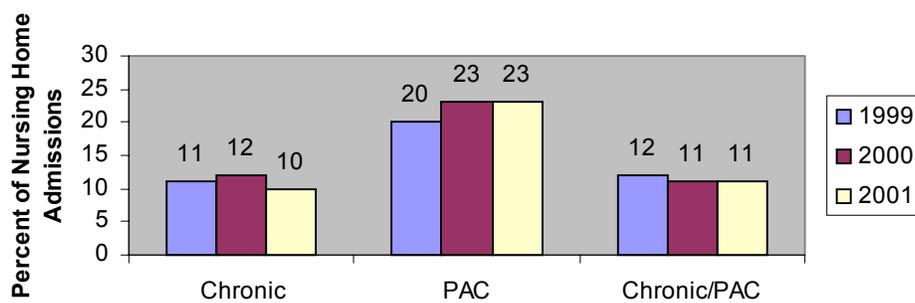
Overall, residents admitted to nursing homes were comfortable interacting with others, but were less at ease engaging in activities in the nursing home. A minority established their own goals at admission. At admission, post-hospitalization residents were more at ease interacting with others than residents in the other groups and were twice as likely to establish their own goals at admission. The percent of residents who established their own goals declined with age in all groups.



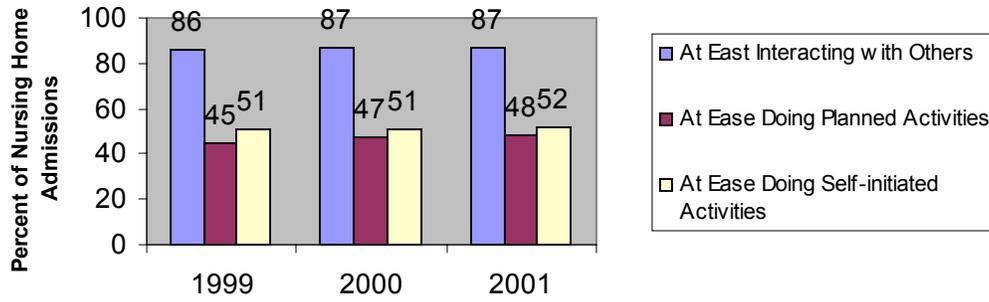
**Figure 99. Psychological Well Being at Admission by Year - Chronic: Arizona, 1999-2001**



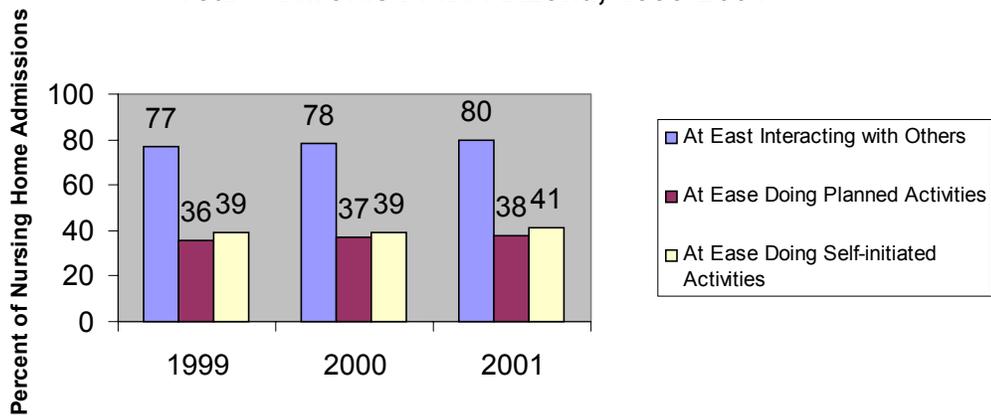
**Figure 100. Establishes Own Goals at Nursing Home Admissions by Admissions and Year: Arizona, 1999-2001**



**Figure 101. Psychological Well Being at Admission by Year - PAC: Arizona, 1999-2001**



**Figure 102. Psychological Well Being at Admission by Year - Chronic/PAC: Arizona, 1999-2001**



## *Physical Functioning*

### Chronic Care Group

- ❑ About half of chronic care residents were independent in bed mobility (i.e., moves, turns, positions self without help or oversight); about one-fifth required extensive or full assistance. (Figure 103)
- ❑ About one-third chronic care residents were independent in transfers; one-third required extensive or full assistance. (Figure 104)
- ❑ About one-fifth of chronic care residents were independent in toilet use; almost half required extensive or full assistance. (Figure 105)
- ❑ Few chronic care residents were independent in dressing or bathing at admission; over 40 percent required extensive or full assistance in dressing and 75 percent required extensive or full assistance in bathing. (Figures 106, 107)
- ❑ In the chronic care group, more men were independent on admission in bed mobility, transfers, dressing, toilet use, and bathing.
- ❑ At admission, only about one of 10 chronic care residents believed they were capable of increased independence in at least some activities of daily living; In contrast, staff believed that 20 percent of these residents were capable of increased independence in at least some activities of daily living. (Figure 108)

### Post Hospitalization Group

- ❑ About one-quarter of post-hospitalization residents were independent in bed mobility (i.e., moves, turns, positions self without help or oversight); about one-quarter required extensive or full assistance. (Figure 103)
- ❑ About 13 percent of post-hospitalization residents were independent in transfers; over one-third required extensive or full assistance. (Figure 104)
- ❑ About 13 percent of post-hospitalization residents were independent in toilet use; 40 percent required extensive or full assistance. (Figure 105)
- ❑ About 12 percent of post-hospitalization residents were independent in dressing; more than one-third required extensive or full assistance. (Figure 106)
- ❑ Few residents in this group were independent in bathing at admission; two-thirds required extensive or full assistance. (Figure 107)
- ❑ The percent of post-hospitalization residents requiring extensive or full assistance in transfers, dressing and toilet use increased 5-6 percent between 1999 and 2001.

- ❑ More men were independent on admission in bed mobility, transfers, dressing, toilet use, and bathing.
- ❑ At admission, almost two-thirds of post-hospitalization residents believed they were capable of increased independence in at least some activities of daily living; staff believed that 70 percent of these residents were capable of increased independence in at least some activities of daily living. (Figure 108)
- ❑ The percent of residents coming from Pima County requiring extensive or full assistance in bed mobility, transfers, dressing, toilet use, and bathing increased around 13 percent between 1999 and 2001.

### Residents in Transition

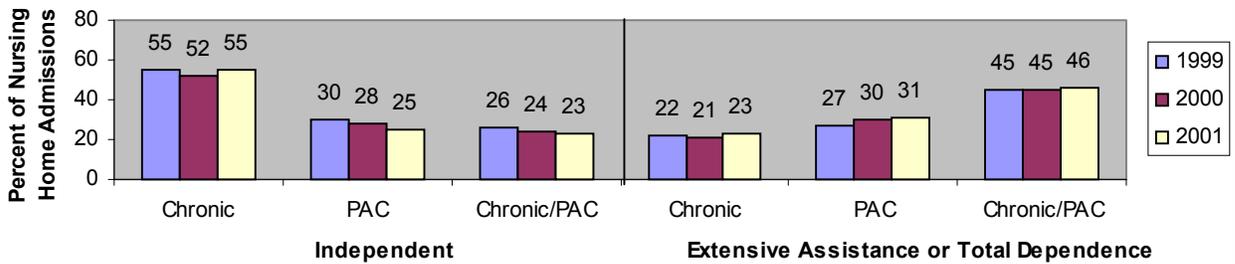
- ❑ About one-quarter of these residents were independent in bed mobility (i.e., moves, turns, positions self without help or oversight); almost half required extensive or full assistance. (Figure 103)
- ❑ About 12 percent of residents in transition were independent in transfers; over half required extensive or full assistance. (Figure 104)
- ❑ About 10 percent of residents in transition were independent in toilet use; almost two-thirds required extensive or full assistance. (Figure 105)
- ❑ Fewer than 10 percent of these residents were independent in dressing at admission; almost half required extensive or full assistance. (Figure 106)
- ❑ Few residents in this group were independent in bathing at admission; 85 percent required extensive or full assistance. (Figure 107)
- ❑ The percent of post-hospitalization residents requiring extensive or full assistance in transfers, dressing and toilet use increased 5-6 percent between 1999 and 2001.
- ❑ More men were independent on admission in bed mobility, transfers, dressing, toilet use, and bathing.
- ❑ At admission, a little over one-third of residents in transition believed they were capable of increased independence in at least some activities of daily living; staff believed that half of these residents were capable of increased independence in at least some activities of daily living. (Figure 108)
- ❑ The percent of residents coming from Pima County requiring extensive or full assistance in bed mobility, transfers, and, toilet use, increased between 1999 and 2001. Fewer residents from Pima County were independent in bed mobility, transfers, and toilet use than residents from Maricopa County or the 13 other counties.

### Comparison Among Groups

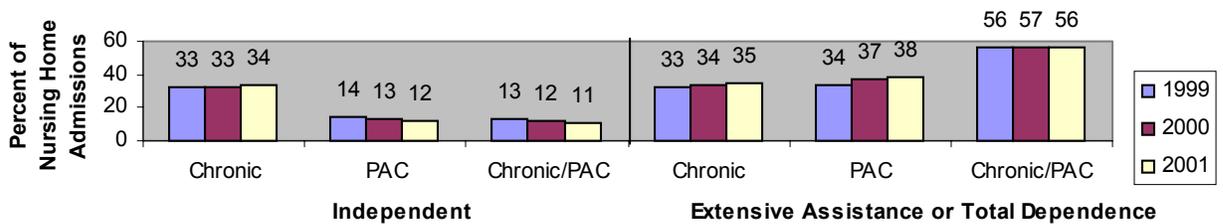
At admission, chronic care residents are more likely to be independent in all activities of daily living, with the exception of bathing, than the post-hospitalization or transition. Residents in transition had the highest percentage of residents requiring extensive or total assistance in the majority of activities of daily living. Substantially more post-hospitalization residents (around 60 percent) believed that they were capable of increased independence in at least some activities of daily living followed by residents in transition (35 percent) and chronic care residents (13 percent). Within each resident group, staff believed more residents were capable of increased independence in at least some activities of daily living than did residents. The difference in staff and resident perceptions was greatest in the transition residents.



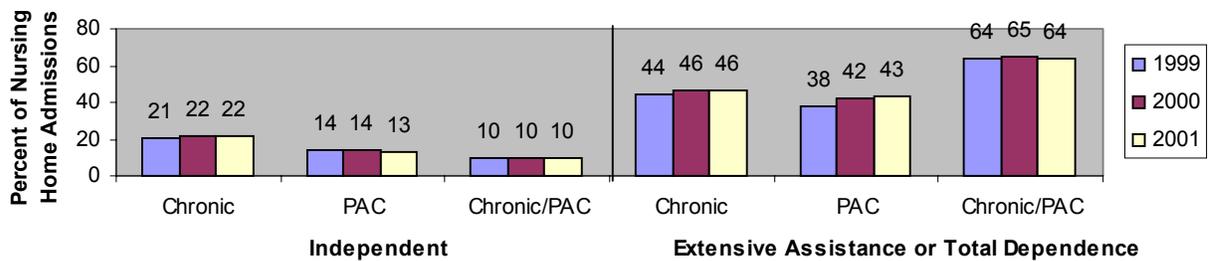
**Figure 103. Independence in Bed Mobility in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



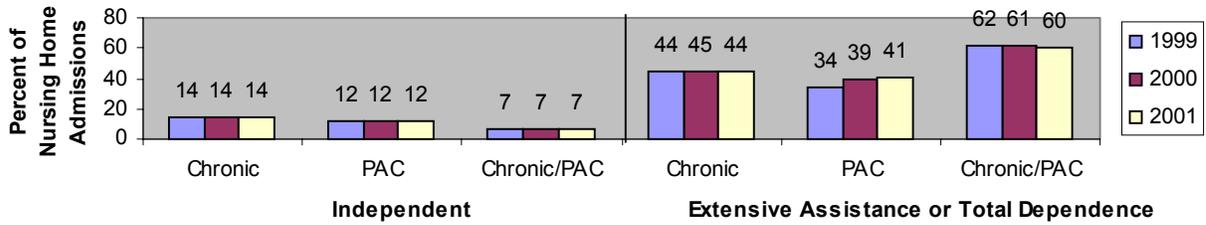
**Figure 104. Independence in Transferring in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



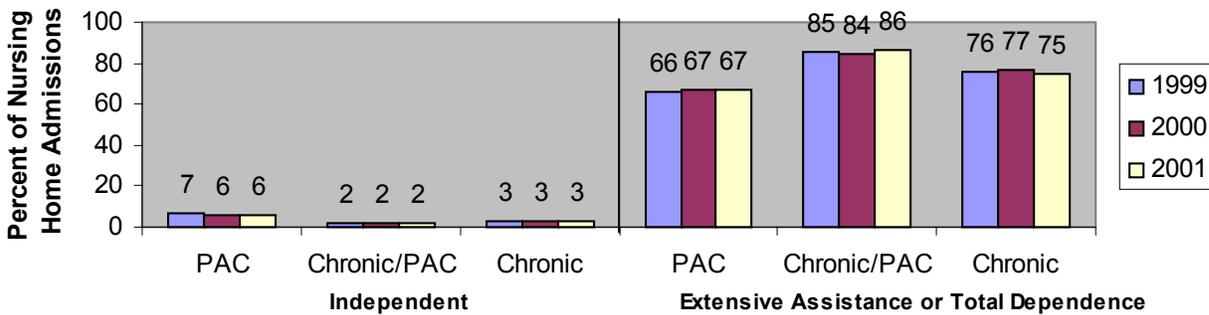
**Figure 105. Independence in Toilet Use in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



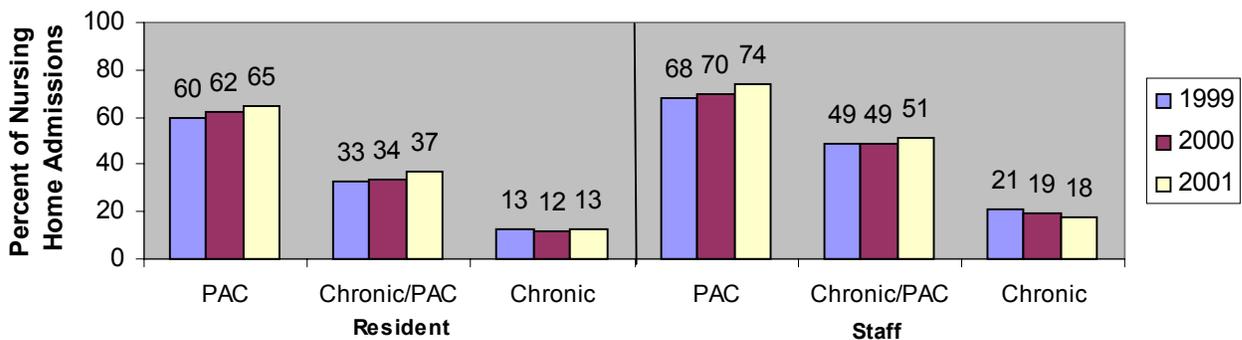
**Figure 106. Independence in Dressing in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



**Figure 107. Independence in Bathing in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



**Figure 108. Rehabilitation Potential at Nursing Home Admission by Admission Type and Year: Arizona, 1999-2001**



## *Continence*

### Chronic Care Residents

- ❑ At admission, approximately half of chronic care residents were continent of bowel movement, with appliance or continence program, if employed.
- ❑ About 36 percent were frequently incontinent of bowel movement or incontinent all or most of the time. (Figure 109)
- ❑ About 42 percent of chronic care residents were continent of bladder function, with appliance or continence program, if employed
- ❑ Approximately 41 percent of chronic care residents were incontinent of bladder function daily or multiple times daily. (Figure 110)
- ❑ Women had a higher percent of bladder incontinence than men in this group.
- ❑ The percent of residents who were continent of bladder function decreased with age until 75 years and then became stable.
- ❑ The percent of chronic care residents on any scheduled toileting plan increased from 25 percent in 1999 to 30 percent in 2001.
- ❑ Less than 10 percent of chronic care residents had an indwelling catheter. (Figure 111)
- ❑ Chronic care residents under age 50 had the greatest percentage indwelling catheters (20 percent).

### Post Hospitalization Residents

- ❑ At admission, almost three-quarters of post-hospitalization residents were continent of bowel movement, with appliance or continence program, if employed.
- ❑ About 20 percent were frequently incontinent of bowel movement or incontinent all or most of the time. (Figure 109)
- ❑ Approximately three-quarters of post-hospitalization residents were continent of bladder function, with appliance or continence program, if employed.
- ❑ About 15 percent were incontinent of bladder function daily or multiple times daily. (Figure 110)
- ❑ Both bladder and bowel control decreased with age in post-hospitalization residents.
- ❑ At admission, about one-quarter of these residents have an indwelling catheter. (Figure 111)

- ❑ The percent of post-hospitalization residents with an indwelling catheter on admission increased with age from 19 percent in 49 years and under to 30 percent in 90 years and over.

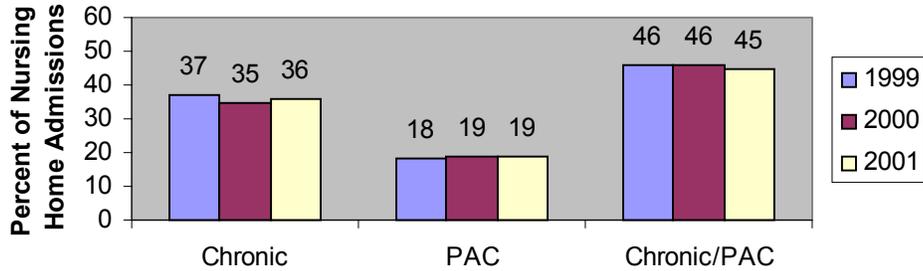
### Residents in Transition

- ❑ At admission, about 42 percent of residents in transition were continent of bowel movement, with appliance or continence program, if employed.
- ❑ Almost half were frequently incontinent of bowel movement or incontinent all or most of the time. (Figure 109)
- ❑ Approximately half of these residents were continent of bladder function, with appliance or continence program, if employed.
- ❑ Over one-third were incontinent of bladder function daily or multiple times daily. (Figure 110)
- ❑ Bladder control decreased with age from about 75 percent in 49 years and under to 45 percent in 90 years and older..
- ❑ At admission, almost one-third of residents in transition have an indwelling catheter. (Figure 111)
- ❑ The percent of residents in transition with an indwelling catheter decreased with age from 37 percent in 49 years and under to 30 percent in age groups over 65 years.
- ❑ The percent of residents in transition with an indwelling catheter increased from 26 to 32 percent in Maricopa County between 1999 and 2001 and decreased in Pima County from 30 percent to 24 percent in the same period.

### Comparison Among Groups

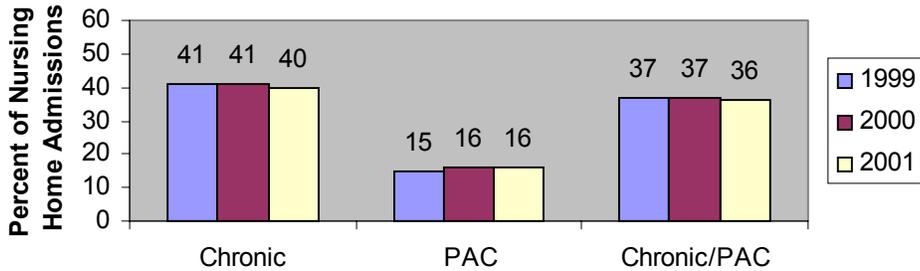
Overall, a majority of nursing home residents were continent of bowel and bladder function on admission, with appliance or continence programs, if employed. At the same time, almost one-quarter or residents were frequently incontinent or incontinent all of the time. About one of five residents has an indwelling catheter at admission. Residents in the chronic care and transition groups had more than twice the rate of bladder and bowel incontinence in the post-hospitalization group. The percent of residents in the transition and post-hospitalization groups with an indwelling catheter was more than three times that of the chronic care group. The percent of residents with an indwelling catheter increased with age in the post-hospitalization group and decreased with age in the chronic care and transition group.

**Figure 109. Bowel Incontinence\* in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



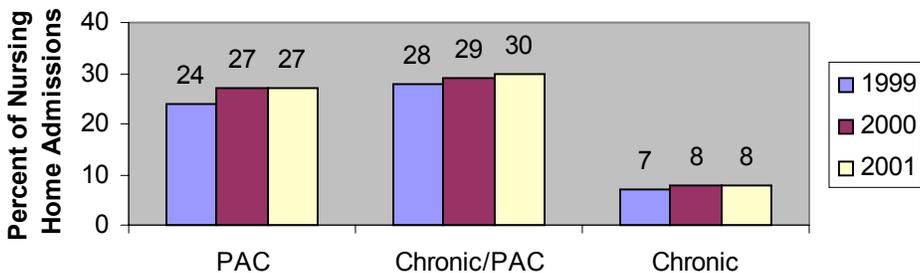
\* Frequent or all of the time

**Figure 110. Bladder Incontinence\* in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



\* Frequent or all of the time

**Figure 111. Indwelling Catheter in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



## *Disease Diagnoses*

### Chronic Care Residents

- ❑ At admission, more than half of chronic care residents had a diagnosis of hypertension; almost one-fifth had a diagnosis of diabetes (Figure 112)
- ❑ Almost 40 percent of chronic care residents had a diagnosis of dementia other than Alzheimer's disease; 20 percent had a diagnosis of Alzheimer's disease. (Figure 112)
- ❑ Almost one-third of chronic care residents had a diagnosis of depression. (Figure 112)
- ❑ The percent of chronic care residents with hypertension and depression at admission increased by five and six percent respectively between 1999 and 2001.
- ❑ One-fifth of nursing home residents had diagnoses of other common chronic illnesses, including arthritis, stroke, and congestive heart failure. (Figure 112)
- ❑ More women than men had active diagnoses of hypothyroidism, congestive heart failure, hypertension, arthritis, osteoporosis, and depression.
- ❑ More men than women had a diagnosis of diabetes.
- ❑ The percent of chronic care residents from Pima County with diabetes increased five percent between 1999 and 2001; the percent of residents from Maricopa County and the 13 non-urban counties with depression increased between 1999 and 2001.

### Post Hospitalization Residents

- ❑ At admission, more than half of the post-hospitalization residents had a diagnosis of hypertension; almost one-quarter had a diagnosis of diabetes (Figure 113)
- ❑ The percent of post-hospitalization residents with hypertension at admission increased by five percent between 1999 and 2001.
- ❑ One-fifth of post hospitalization residents had diagnoses of other common chronic illnesses, including arthritis, emphysema/COPD, and congestive heart failure.
- ❑ Almost 11 percent of post-hospitalization residents had a diagnosis of dementia other than Alzheimer's disease; less than 5 percent had a diagnosis of Alzheimer's disease.
- ❑ More women than men had active diagnoses of hypothyroidism, congestive heart failure, hypertension, arthritis, and osteoporosis.
- ❑ More men than women had a diagnosis of diabetes.

- ❑ The percent of residents from Maricopa County with depression increased six percent between 1999 and 2001.

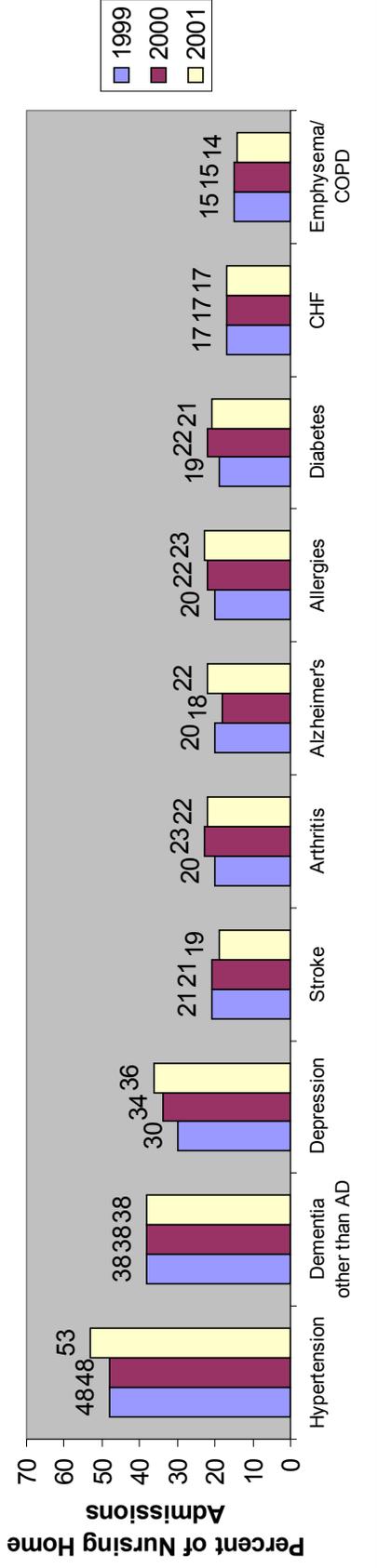
### Residents in Transition

- ❑ At admission, more than half of the residents in transition had a diagnosis of hypertension; one-quarter had a diagnosis of diabetes (Figure 114)
- ❑ The percent of residents in transition with hypertension at admission increased by six percent between 1999 and 2001.
- ❑ One-third of residents in transition had a diagnosis of dementia other than Alzheimer's disease; 11 percent had a diagnosis of Alzheimer's disease. (Figure 114).
- ❑ Almost one-third of residents in transition had a diagnosis of depression (Figure 114).
- ❑ The percent of these residents with hypertension at admission increased by six percent between 1999 and 2001.
- ❑ One-fifth of nursing home residents had diagnoses of other common chronic illnesses, including stroke, congestive heart failure, and emphysema/COPD (Figure 114)
- ❑ More women than men had active diagnoses of hypothyroidism, congestive heart failure, hypertension, arthritis, hip fracture, and osteoporosis.
- ❑ More men than women had a diagnosis of stroke. The percent of men with a diagnosis of depression increased five percent between 1999 and 2001,

### Comparison Among Groups

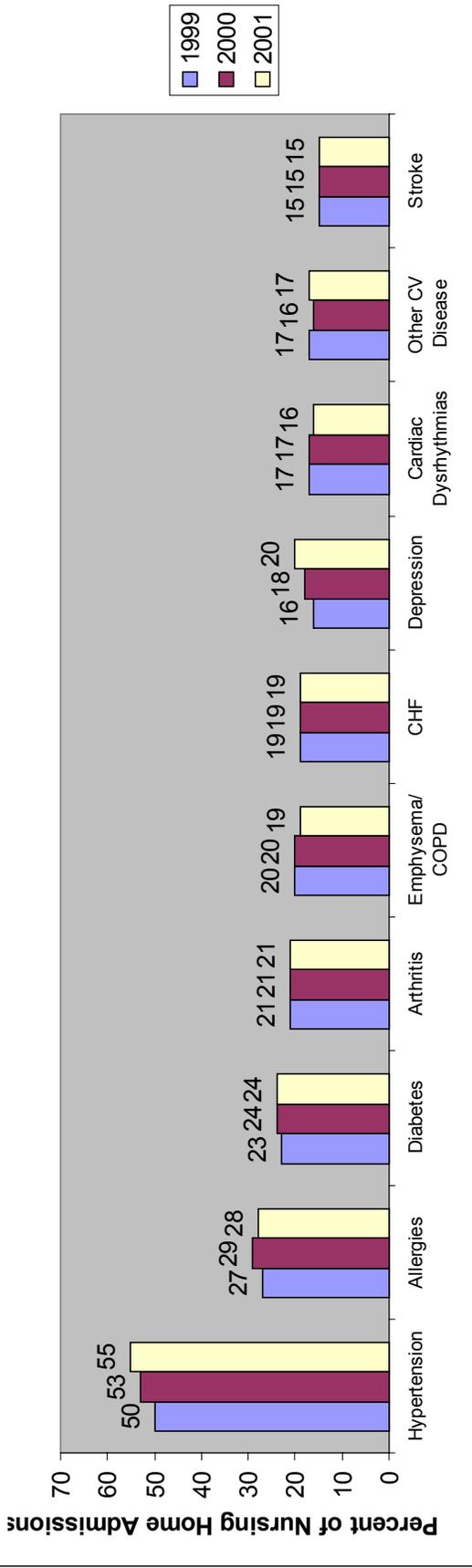
Overall, a substantial percent of nursing home residents had active chronic health conditions at admission. Across all resident groups, the percent of residents with hypertension was over 50 percent and increasing, The percent of all residents with diabetes ranged from 20 percent in the chronic care group to around 25 percent in the post hospitalization and transition groups. Residents in the chronic care group had the highest percentage of dementia other than Alzheimer's disease (40 percent) and Alzheimer's disease (20 percent) followed by the transition group (33 percent, 11 percent) and the post-hospitalization group (11 percent, 4 percent). One-third of residents in the chronic care group and the transition group had a diagnosis of depression compared to 18 percent in the post-hospitalization group.

**Figure 112. Ten Most Frequent Occurring Conditions\* in Nursing Home Admissions by Year - Chronic: Arizona, 1999-2001**



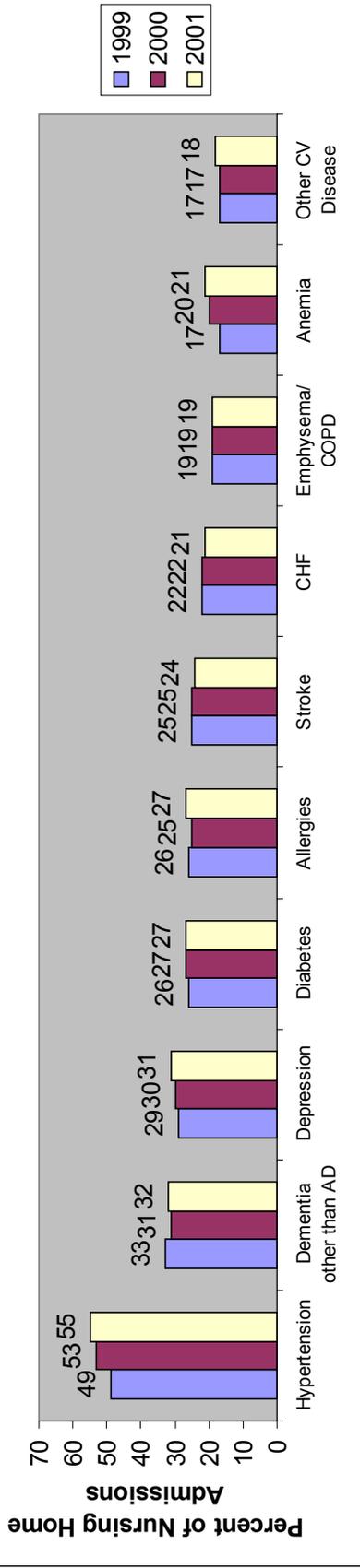
\* Conditions with a relationship to current ADL status, cognitive status, mood and behavior status, medical treatments, nursing monitoring, or risk of death. Does not include inactive diagnoses.

**Figure 113. Ten Most Frequent Occurring Conditions\* in Nursing Home Admissions by Year - PAC: Arizona, 1999-2001**



\* Conditions with a relationship to current ADL status, cognitive status, mood and behavior status, medical treatments, nursing monitoring, or risk of death. Does not include inactive diagnoses.

**Figure 114. Ten Most Frequent Occurring Conditions\* in Nursing Home Admissions by Year - Chronic/PAC: Arizona, 1999-2001**



\* Conditions with a relationship to current ADL status, cognitive status, mood and behavior status, medical treatments, nursing monitoring, or risk of death. Does not include inactive diagnoses.

## *Health Conditions: Pain Symptoms and Accidents*

### Chronic Care Residents

- ❑ At admission, about 60 percent of chronic care residents did not complain of pain or show evidence of pain.
- ❑ About 20 percent of chronic care residents complained or showed evidence of pain daily. (Figure 115)
- ❑ Of chronic care residents who complained or showed evidence of pain, approximately one-third reported mild pain, almost 60 percent reported moderate pain, and 10 percent reported times when the pain was horrible or excruciating. (Figure 116)
- ❑ About one-quarter of chronic care residents fell in the past 30 days. (Figure 117)

### Post Hospitalization Residents

- ❑ At admission, about 30 percent of post-hospitalization residents did not complain of pain or show evidence of pain.
- ❑ About 43 percent of post-hospitalization residents complained or showed evidence of pain daily. (Figure 115)
- ❑ Of post-hospitalization residents who complained or showed evidence of pain, approximately one-fifth reported mild pain, 65 percent reported moderate pain, and 17 percent reported times when the pain was horrible or excruciating. (Figure 116)
- ❑ About one-third of post-hospitalization residents fell in the past 30 days. (Figure 117).

### Residents in Transition

- ❑ At admission, about half of residents in transition did not complain of pain or show evidence of pain.
- ❑ About 30 percent of these residents complained or showed evidence of pain daily. (Figure 115)
- ❑ Of residents in transition who complained or showed evidence of pain, approximately one-quarter reported mild pain, 60 percent reported moderate pain, and 15 percent reported times when the pain was horrible or excruciating. (Figure 116)
- ❑ About one-third of residents in transition fell in the past 30 days. (Figure 117)

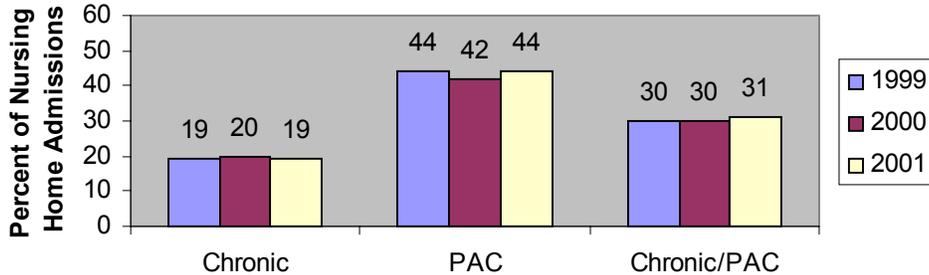
### Comparison Among Groups

More than half of nursing home residents complained or showed evidence of pain on admission. A majority of individuals with pain had moderate pain. A substantial number (16 percent) reported that their pain was horrible or excruciating at times. About 70 percent of post-hospitalization residents complained or showed evidence of pain at admission compared to half of residents in transition and 40 percent of chronic care residents. Post hospitalization residents had a substantially higher rate of daily pain and reported more times with horrible and excruciating pain than the other groups. Almost one of five post-hospitalization residents complained or showed evidence of times of horrible or excruciating pain at admission.

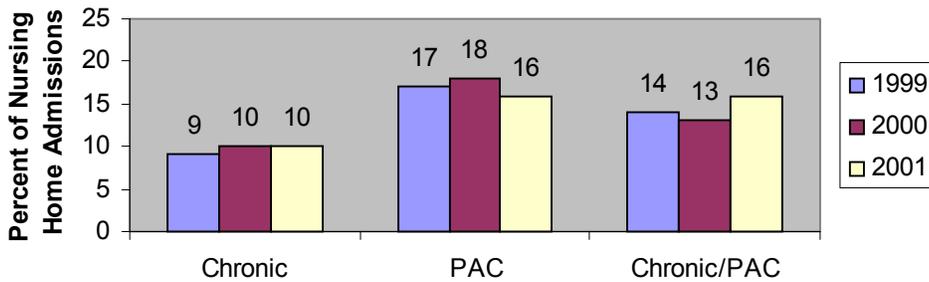
Almost one-third of nursing home residents fell in the past 30 days. The post-hospitalization and transition resident groups had greater percentages of residents with falls than the chronic care group.



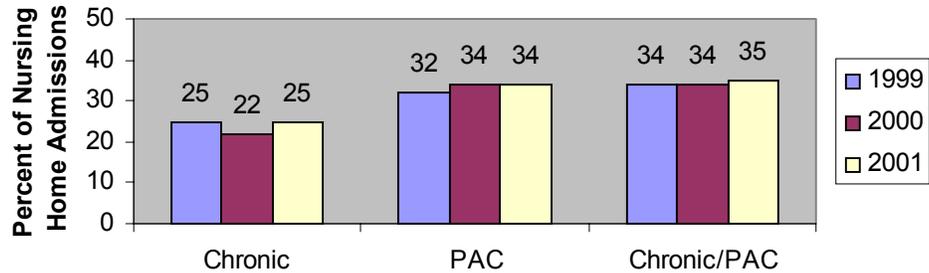
**Figure 115. Daily Pain in Past 7 Days in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



**Figure 116. Intensity of Pain (Horrible or Excruciating) in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



**Figure 117. Falls in Past 30 Days in Nursing Home Admissions by Admission Type and Year: Arizona, 1999-2001**



## *Oral and Nutritional Status*

### Chronic Care Residents

- ❑ At admission, approximately one-quarter of chronic care residents had chewing problems; while 10 percent had swallowing problems. (Figure 118, 119)
- ❑ Chewing problems increased with age among chronic care residents. Approximately 16 percent of residents ages 49 or less had chewing problems increasing to 30 percent of residents 90 years or older.
- ❑ Swallowing problems were greatest among younger chronic care residents at admission. About 13 percent of residents ages 49 or less had swallowing problems decreasing to 8 percent of chronic care residents ages 90 years or older.
- ❑ Among the chronic care residents, American Indians has the highest percentage of chewing problems (45 percent) compared to 30 percent of Black and Hispanic residents and 20 percent of White residents.
- ❑ About 10 percent of chronic care residents had 5 percent or more weight loss in the last 30 days or 10 percent or more weight loss in the last 180 days. (Figure 120)
- ❑ Approximately 40 percent of chronic care residents left 25 percent or more of their food uneaten at most meals.
- ❑ Almost twice as many female chronic care residents (36 percent) than male chronic care residents (19 percent) left 25 percent or more of their food uneaten at most meals.
- ❑ Over half of chronic care residents ages 90 years or older left 25 percent or more of their food uneaten at most meals, a much higher percentage than residents in the younger age groups.
- ❑ Few chronic care residents received parenteral or intravenous nutrition at admission; approximately 3 percent had a feeding tube at admission. (Figure 121)
- ❑ Highest among age groups, about 8 percent of the chronic care residents ages 49 years or less had a feeding tube.

### Post Hospitalization Residents

- ❑ At admission, about 14 percent of post-hospitalization residents had difficulty chewing or swallowing. (Figures 118, 119)
- ❑ Chewing problems increased with age among the post-hospitalization residents. Approximately 7 percent of residents ages 49 or less had chewing problems increasing to 23 percent of residents 90 years or older.

- ❑ Swallowing problems were greatest among older post-hospitalization residents at admission. About 15 percent of residents over the age of 75 years had swallowing problems.
- ❑ Approximately 15 percent of post-hospitalization residents had 5 percent or more weight loss in the last 30 days or 10 percent or more weight loss in the last 180 days. (Figure 120)
- ❑ Almost 40 percent of this resident group left 25 percent or more of their food uneaten at most meals.
- ❑ A greater percentage of women than men in the post-hospitalization group left 25 percent or more of their food uneaten at most meals.
- ❑ Residents over 85 years in the post-hospitalization group were almost twice as likely to leave 25 percent or more of their food uneaten at most meals than residents in the younger age groups.
- ❑ About 7 percent of post-hospitalization residents received parenteral or intravenous nutrition on admission; a similar percent had a feeding tube. (Figure 122)
- ❑ The highest percentage of post-hospitalization residents with a feeding tube was in the youngest age group, 49 years or less.

### Residents in Transition

- ❑ At admission, about one-quarter of the residents in transition had difficulty chewing or swallowing. (Figures 118, 119)
- ❑ Chewing problems increased with age among the residents in transition. Approximately 14 percent of residents ages 49 or less had chewing problems increasing to 35 percent of residents 90 years or older.
- ❑ Among the residents in transition, American Indians had the highest percentage of chewing problems (approximately 42 percent)
- ❑ Approximately 14 percent of residents in transition had 5 percent or more weight loss in the last 30 days or 10 percent or more weight loss in the last 180 days. (Figure 120).
- ❑ About 42 percent of this resident group left 25 percent or more of their food uneaten at most meals.
- ❑ A greater percentage of women than men in the transition group left 25 percent or more of their food uneaten at most meals.
- ❑ Highest among all age groups, over half of residents in transition left 25 percent or more of their food uneaten at most meals than residents.

- ❑ Few residents in this group (3 percent) received parenteral or intravenous nutrition on admission; while 11 percent had feeding tubes. (Figure 123)
- ❑ A higher percentage of men in the transition group (16 percent) had a feeding tube than women (9 percent).
- ❑ Feeding tubes were more common in the younger age groups. About 23 percent of residents ages 49 years or less had a feeding tube.

### Comparison Among Resident Groups

Overall, about 16 percent of residents admitted to nursing homes had chewing and swallowing problems. The percentage of residents with chewing problems on admission was higher in the chronic care and transitional groups than the post-hospitalization groups. Chewing problems increased with age in all resident groups. The transitional group had the highest rate of residents with swallowing problems on admission.

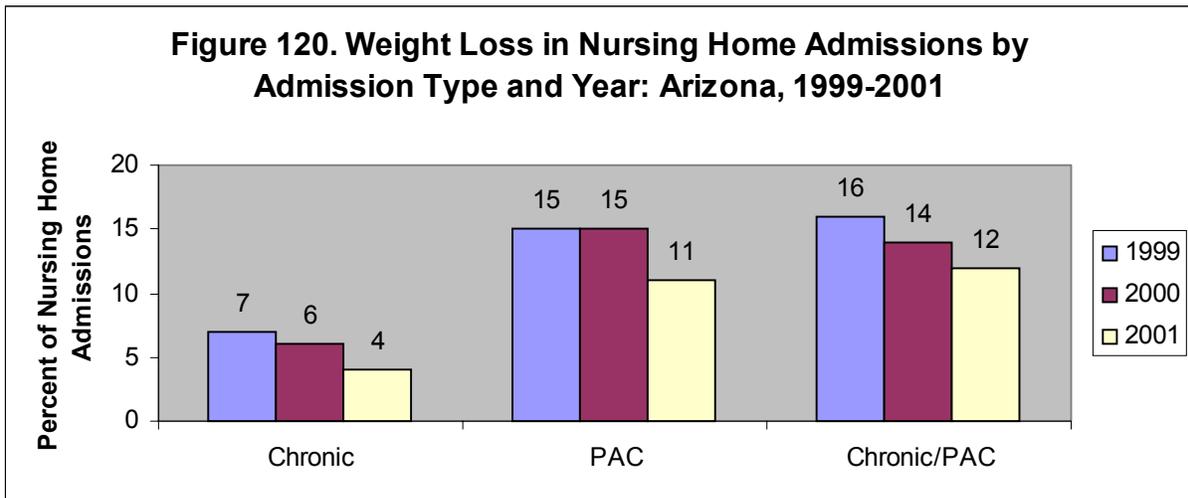
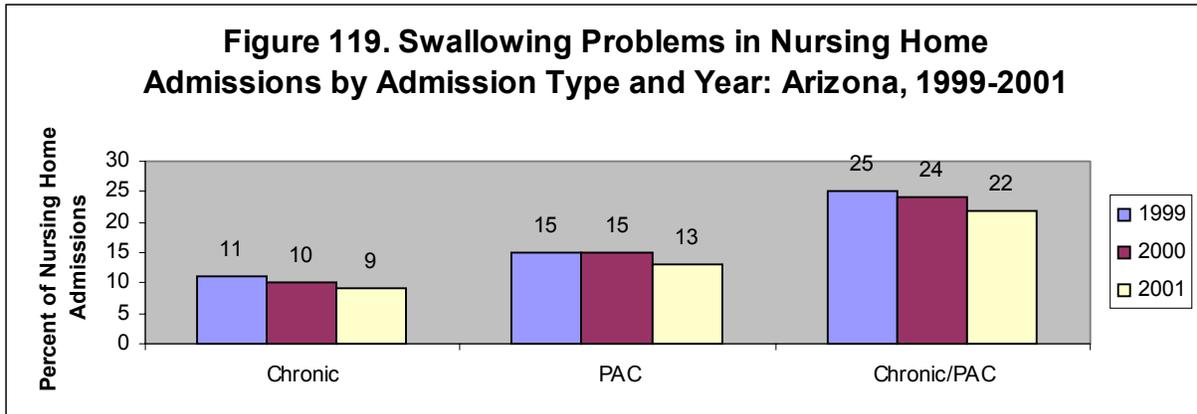
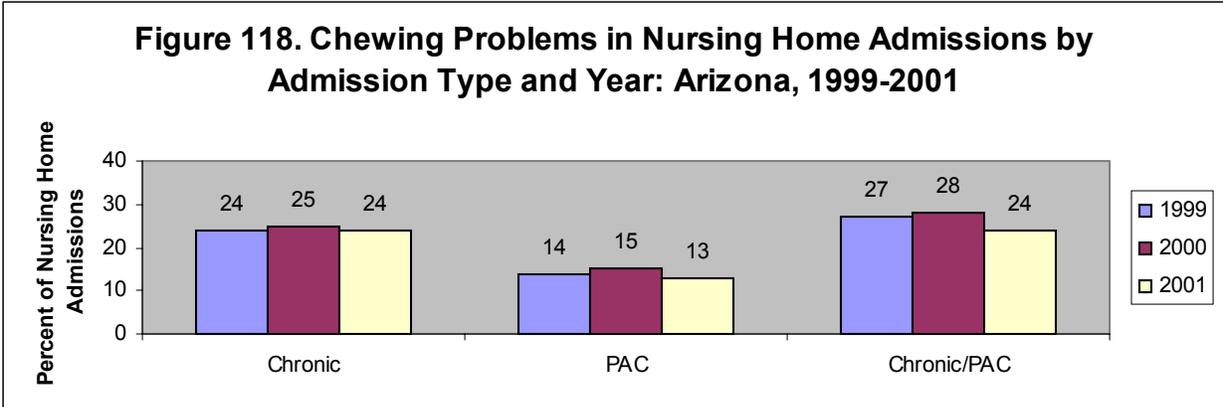
About 1 in 10 residents had lost weight in months prior to admission. A slightly higher percentage of residents in the post-hospitalization group had lost weight prior to admission. There were minimal differences in weight loss with age, gender, race/ethnic group or prior county of residence.

At admission, a substantial percentage of residents left more than a quarter of their meals at each meal. Across all resident groups, women and older adults were more likely to leave a portion of their meals than men and younger adults.

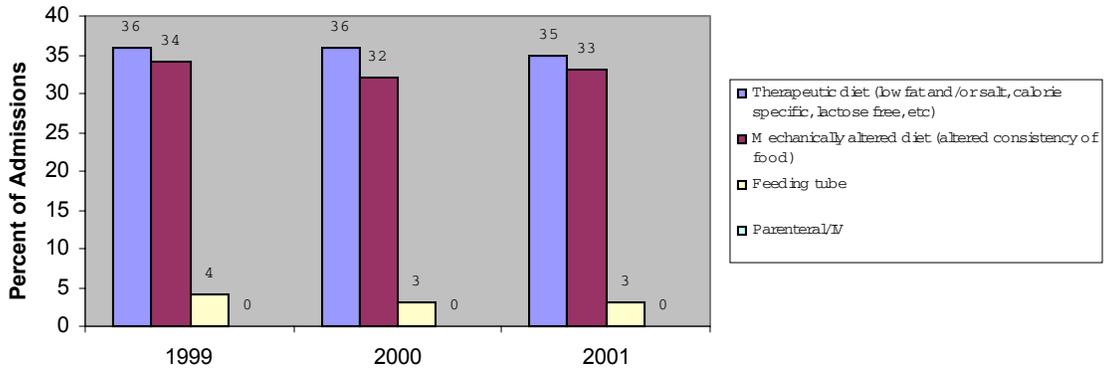
Only about 5 percent of residents received parenteral or intravenous nutrition at admission. Residents in the post-hospitalization group had more than twice the percentage of admissions on parenteral or intravenous nutrition (7 percent) than the transition group (3 percent) or chronic care group (less than 1 percent).

About 7 percent of all nursing home residents had a feeding tube at admission. Residents in the transition group were most likely to have a feeding tube (11 percent) followed by the post-hospitalization group (7 percent) and the chronic care group (3 percent).

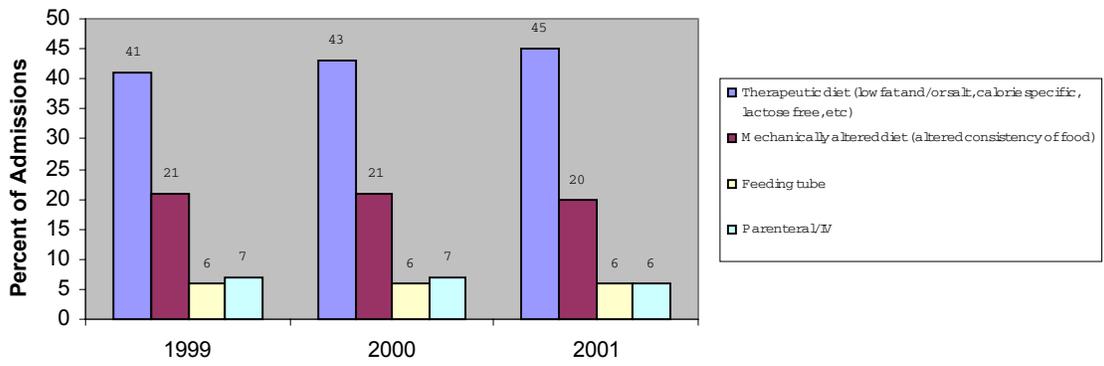




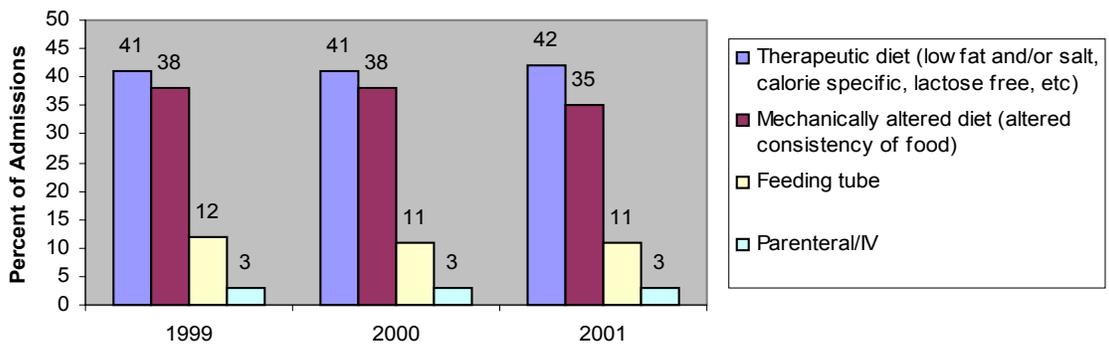
**Figure 121. Selected Nutritional Approaches Among Nursing Home Admissions by Year - Chronic: Arizona 1999-2001**



**Figure 122. Selected Nutritional Approaches Among Nursing Home Admissions by Year - PAC: Arizona 1999-2001**



**Figure 123. Selected Nutritional Approaches Among Nursing Home Admissions by Year - Chronic/PAC: Arizona 1999-2001**



## *Oral and Dental Status*

### Chronic Care Residents

- ❑ Almost half of chronic care residents had dentures or removable bridges at admission.
- ❑ A greater percentage of White residents (44 percent) in the chronic care group had dentures or a removable bridge than Hispanic (28 percent), Black (26 percent) or American Indian residents (22 percent). While the percent of Black chronic care residents with dentures or removable bridges increased between 1999 and 2001, the percent of American Indian chronic care residents with dentures or removable bridges decreased in this timeframe.
- ❑ About 1 in 5 chronic care residents had lost some or all of their natural teeth and did not have or did not use dentures at admission. (Figure 124)
- ❑ About 4 percent of chronic care residents had broken, loose, or carious teeth.
- ❑ American Indian, Hispanic and Black chronic care residents had higher percentages of broken, loose, or carious teeth than White residents.

### Post Hospitalization Residents

- ❑ Almost half of post-hospitalization residents had dentures or removable bridges at admission.
- ❑ A greater percentage of White residents in the post-hospitalization group had dentures or a removable bridge than other race/ethnic groups.
- ❑ About 1 in 10 post-hospitalization residents had lost some or all of their natural teeth and did not have or did not use dentures (Figure 125)
- ❑ Less than 2 percent of this group had broken, loose, or carious teeth at admission.
- ❑ American Indian, Black and Hispanic residents had higher rates of broken loose or carious teeth than White residents.

### Residents in Transition

- ❑ Almost half of the residents in transition had dentures or removable bridges at admission.
- ❑ White residents in the transition group were more likely to have dentures or a removable bridge than other race/ethnic groups. White residents in this group were almost three times more likely to have dentures or removable bridges than American Indians residents in this group.
- ❑ Approximately 1 in 5 residents in the transition group had lost some or all of their natural teeth and did not have or did not use dentures (Figure 126)

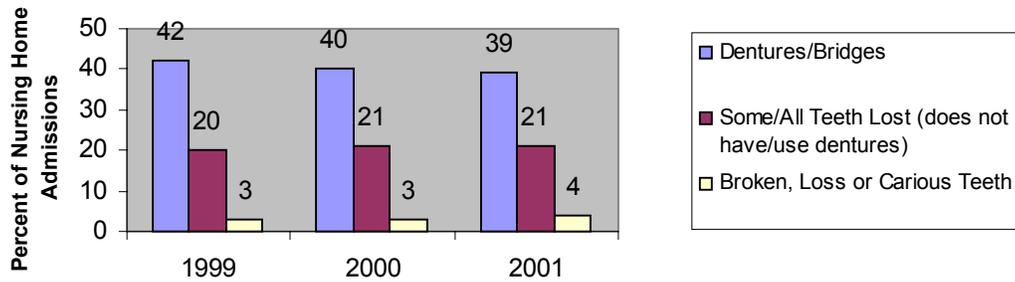
- About 4 percent of this group had broken, loose, or carious teeth.
- American Indian, Black and Hispanic residents had higher rates of broken, loose, or carious teeth than White residents.

### Comparison Among Groups

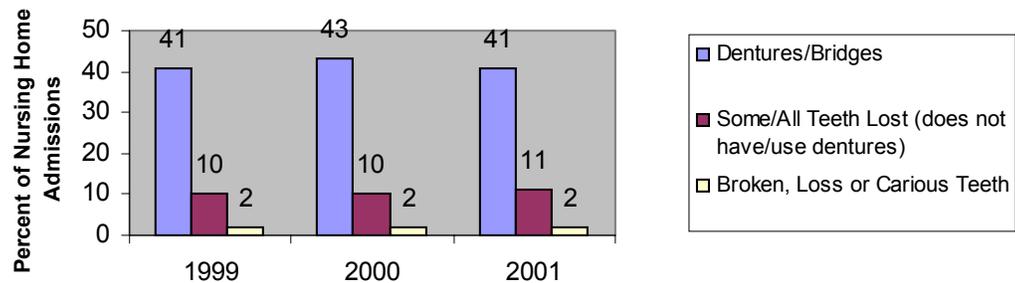
Overall, about half on nursing home residents had dentures or removable bridges at admission. There were no differences in the percent of residents with dentures or removable bridges among the three resident groups. However, women, White residents, older residents, and those residing in the rural areas prior to admission were more likely to have dentures or removable bridges at admission. More chronic care residents and residents in transition had lost some or all of their natural teeth and did not have or use dentures than residents in the post-hospitalization group. More members of these two groups had broken, loose, or carious teeth. A greater proportion of American Indian, Black and Hispanic residents had broken, loose, or carious teeth than White residents in all resident groups.



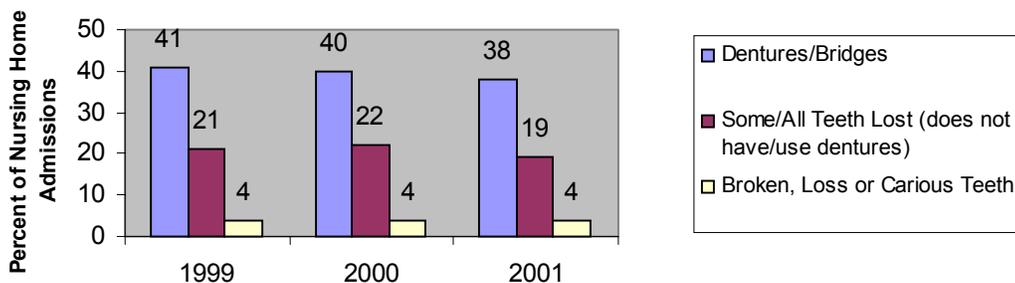
**Figure 124. Oral/Dental Status of Nursing Home Admissions by Year - Chronic: Arizona, 1999-2001**



**Figure 125. Oral/Dental Status of Nursing Home Admissions by Year - PAC: Arizona, 1999-2001**



**Figure 126. Oral/Dental Status of Nursing Home Admissions by Year - Chronic/PAC: Arizona, 1999-2001**



## *Skin Condition*

### Chronic Care Residents

- ❑ At admission, chronic care residents were most likely to have Stage 2 ulcers than Stage 1, 3, or 4 ulcers. (Figure 127)
- ❑ About 5 percent of chronic care residents had at least one Stage 1 ulcer at admission; 8 percent had at least one Stage 2 ulcer; and 2 percent had at least one Stage 3 and 4 ulcer. (Figure 127)
- ❑ The percent of chronic care residents with at least one Stage 4 ulcer decreases from 6 percent in the age group 49 years or less to 1 percent in the age group 90 years and older.

### Post Hospitalization Residents

- ❑ At admission, post hospitalization residents were more likely to have Stage 2 ulcers than Stage 1, 3, or 4 ulcers. (Figure 128)
- ❑ About 10 percent of post-hospitalization residents had at least one Stage 1 ulcer at admission; 12 percent had at least one Stage 2 ulcer; 2 percent had at least one Stage 3 ulcer, and 3 percent had at least one Stage 4 ulcer. (Figure 128)
- ❑ The percent of post-hospitalization residents with at least one Stage 1 ulcer increases from 3 percent in the age group 49 years or less to 15 percent in the age group 90 years and older.
- ❑ Younger age groups had more Stage 3 ulcers than older age groups.

### Residents in Transition

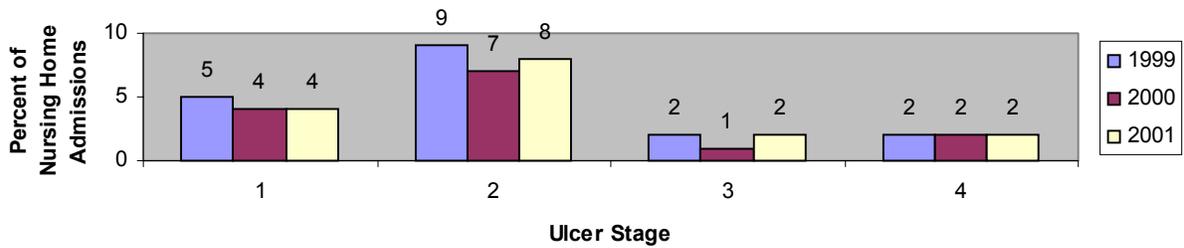
- ❑ At admission, residents in transition were more likely to have Stage 2 ulcers than Stage 1, 3, or 4 ulcers. (Figure 129)
- ❑ About 10 percent of residents in transition had at least one Stage 1 ulcer at admission, 16 percent had at least one Stage 2 ulcer; 4 percent had at least one Stage 3 ulcer; and 5 percent had at least one Stage 4 ulcer. (Figure 129)
- ❑ The percent of residents in transition with at least one Stage 1 ulcer increases from 7 percent in the age group 49 years or less to 12 percent in the age group 90 years or older.
- ❑ The percent of residents in transition with at least one Stage 3 ulcer decreases from 8 percent in the age group 49 years or less to 2 percent in the age group 90 years or more.
- ❑ The percent of residents in transition with at least one Stage 4 ulcer decreases from 9 percent in the age group 49 years or less to 3 percent in the age group 90 years or more.

### Comparison Among Groups

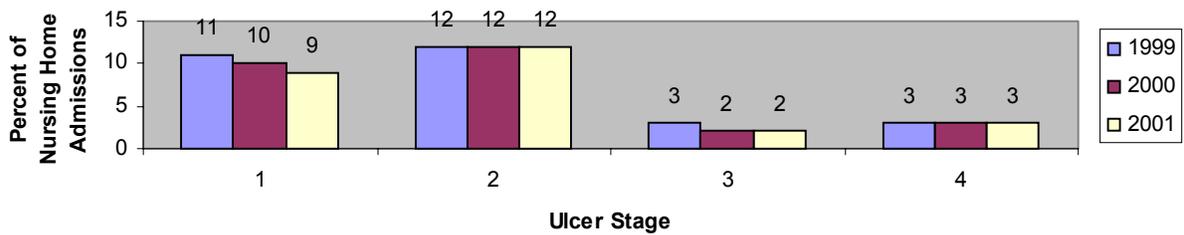
More residents in each group had at least one Stage 2 ulcer on admission than residents with at least one Stage 1, 3, or 4 ulcers. The percent of residents with at least one Stage 2 ulcers is greatest in the transition group (16 percent), followed by the post-hospitalization group (12 percent) and the chronic care group (8 percent). Overall, the chronic care group has the lowest percentage of residents with at least one Stage 1, 2, and 4 ulcers at admission. The percent of residents with at least one Stage 1 ulcer increased with age in the post-hospitalization and transition residents. In contrast, the percentage of residents with higher stage ulcers decreased with age in all three resident groups.



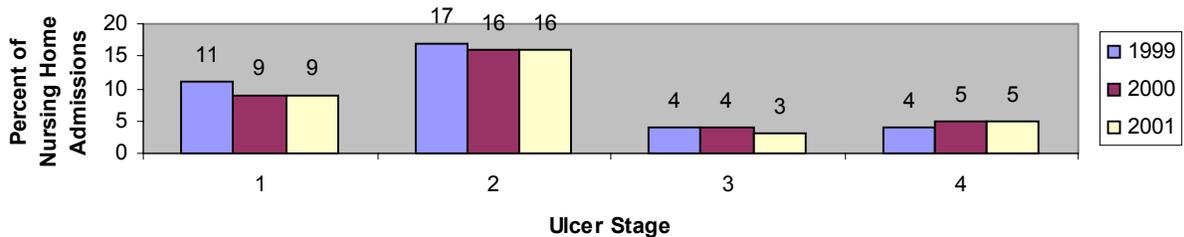
**Figure 127. At Least One Ulcer by Stage in Nursing Home Admissions by Year - Chronic: Arizona, 1999-2001**



**Figure 128. At Least One Ulcer by Stage in Nursing Home Admissions by Year - PAC: Arizona, 1999-2001**



**Figure 129. At Least One Ulcer by Stage in Nursing Home Admissions by Year - Chronic/PAC: Arizona, 1999-2001**



## Medications

### Chronic Care Residents

- ❑ At admission, almost all chronic care residents were taking at least one over-the-counter or prescription medication at admission. (Figure 130)
- ❑ Approximately two-thirds of chronic care residents were taking between 5 to 12 over-the-counter or prescription medications at admission; about 10 percent were taking more than 12 medications.
- ❑ Between 1999 and 2001, the percent of younger chronic care residents (under age 50) taking 5 to 8 medications decreased, while the percent of residents in this age group taking 13 to 16 medications increased during the same time period.
- ❑ At admission, American Indian chronic care residents were taking fewer medications than White, Hispanic, or Black residents.
- ❑ About 60 percent of chronic care residents had been prescribed a new medication in the last 90 days. (Figure 131)
- ❑ Between 1999 and 2001, the percent of younger chronic care residents who received a new medication in the last 90 days decreased, while the percent of older residents who received a new medication in the last 90 days increased.

### Post-Hospitalization Residents

- ❑ At admission, almost all post-hospitalization residents were taking at least one over-the-counter or prescription medication at admission. (Figure 132)
- ❑ More than two-thirds of post-hospitalization residents were taking between 5 to 12 over-the-counter or prescription medications at admission; almost 20 percent of these residents were taking more than 12 medications.
- ❑ More than 90 percent of post-hospitalization residents had been prescribed a new medication in the last 90 days. (Figure 131)

### Residents in Transition

- ❑ At admission, almost all residents in transition were taking at least one over-the-counter or prescription medication at admission. (Figure 133)
- ❑ More than two-thirds of residents in transition were taking between 5 to 12 over-the-counter or prescription medications at admission; about 14 percent were taking more than 12 medications.

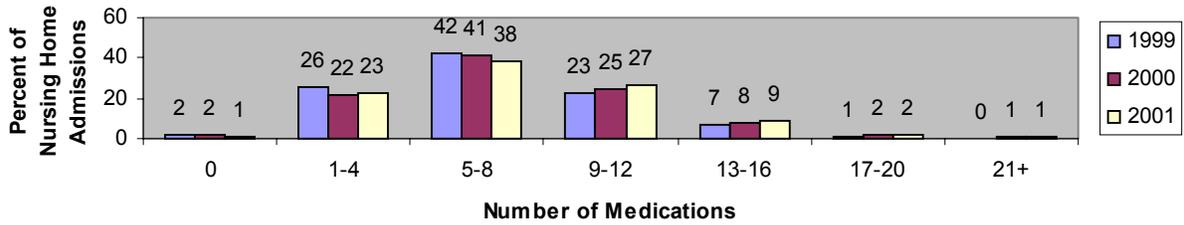
- About 85 percent of residents in transition had been prescribed a new medication in the last 90 days. (Figure 131)

### Comparison Among Groups

At admission, almost all nursing home residents were taking at least one over-the-counter or prescription medication. About two-thirds of residents in each group were taking between 5 to 12 medications. More post-hospitalization residents were taking 12 or more medications (20 percent) than residents in the transition (14 percent) or chronic care group (10 percent). Residents in the post-hospitalization and transition groups were more likely to have been prescribed a new medication within the last 90 days than the chronic care residents.

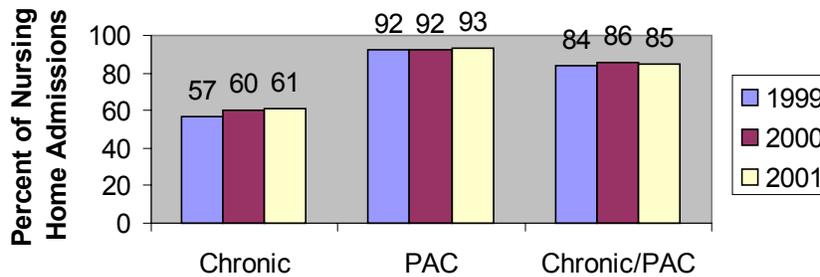


**Figure 130. Medication Usage Among Nursing Home Admissions by Year - Chronic: Arizona, 1999-2001**

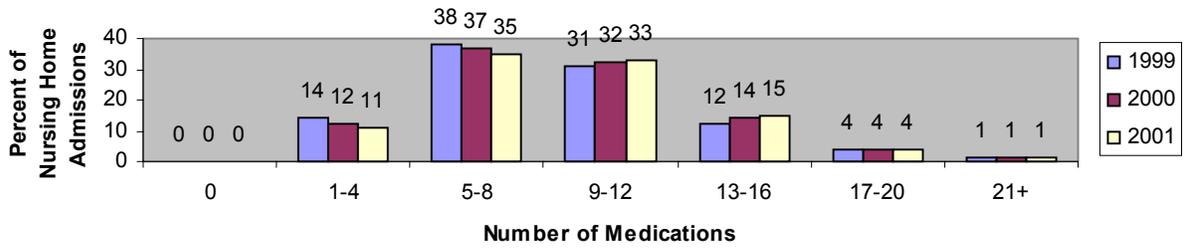


\* Medications include over-the-counter and prescription drugs received in the past seven days.

**Figure 131. Nursing Home Admissions Receiving a New Medication During the Past 90 Days by Admission Type and Year: Arizona, 1999-2001**

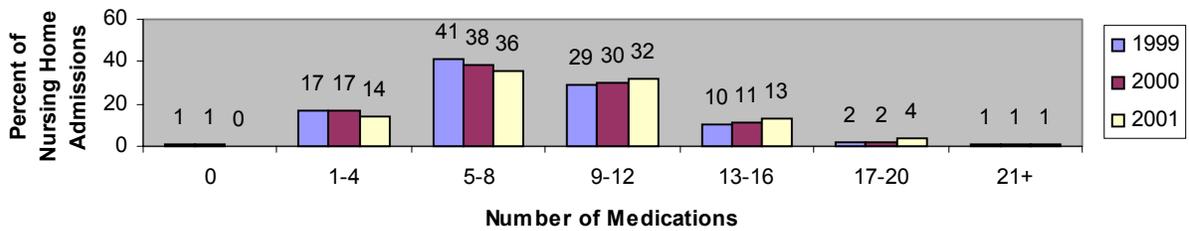


**Figure 132. Medication Usage Among Nursing Home Admissions by Year - PAC: Arizona, 1999-2001**



\* Medications include over-the-counter and prescription drugs received in the past seven days.

**Figure 133. Medication Usage Among Nursing Home Admissions by Year - Chronic/PAC: Arizona, 1999-2001**



\* Medications include over-the-counter and prescription drugs received in the past seven days.

## *Special Treatments and Procedures*

### Chronic Care Residents

#### Skills Training for Return to the Community

- ❑ At admission, only 4 percent of the chronic care residents received skills training for returning to the community in each of the three years. (Figure 134)
- ❑ At admission, 9 percent of the youngest chronic care residents (49 years or less) received skills training for returning to the community compared to 5 percent or less of the older age groups.
- ❑ There were no substantial differences in skills training at admission for chronic care residents between Hispanic and White residents, by prior county of residence, or by year.

#### Therapies

- ❑ At admission, a small percentage of the chronic care residents had received therapies in the past seven days: about 2 percent had received speech therapy, six percent had received occupational therapy, 11 percent had received physical therapy and only 1 percent had received respiratory therapy. (Figure 135-138)
- ❑ Younger adults were more likely to have received each of the therapies than the older age groups.

#### Nursing Rehabilitation and Restorative Care

- ❑ Approximately 5 percent of chronic care residents performed range of motion exercises for at least 15 minutes per day from 1-7 days in the last week.
- ❑ While few of the chronic care residents received training and skills practice, the greatest percentage received training and skills practice in walking skills (6 percent) followed by transfer skills (4 percent), dressing or grooming and bed mobility (3 percent)
- ❑ The percentage of chronic care residents who received training and skills practice decreased from 1999 to 2001.
- ❑ The percentage of residents over age 75 who received skills training in transferring, walking, and dressing and grooming decreased from 1999 to 2001.

## Post-Hospitalization Residents

### Skills Training for Return to the Community

- ❑ At admission, approximately 64 percent of the post-hospitalization residents received skills training for returning to the community. The percent of post-hospitalization residents receiving training increased from 60 percent in 2000 to 69 percent in 2001. (Figure 134)
- ❑ More women (66 percent) in the post-hospitalization admission group received skills training for returning to the community than men (60 percent).
- ❑ The number of women and men in the post-hospitalization group receiving skills training for returning to the community increased approximately 8 percent between 1999 and 2001.
- ❑ The percentage of post-hospitalization residents who received skills training increased with age. About 43 percent of adults aged 49 or less received skills training compared to 55 percent aged 50 to 64 and 64 percent in the older age groups.
- ❑ White (65 percent) and Hispanic (55 percent) post-hospitalization residents were more likely than other races/ethnic groups to receive skills training for returning to the community. Less than half (48 percent) of American Indian residents were given skills training while slightly more than half of the Asian (53 percent) and Black (51%) post-hospitalization residents received training.
- ❑ For all of the race/ethnic in the post-hospitalization group, there was an increase between 1999 and 2001 in the percentage of residents receiving skills training. The percent of increase ranged from 5 percent to 15 percent.
- ❑ Post-hospitalization residents from counties other than Maricopa and Pima Counties received more skills training for returning to the community. About 62 percent of post-hospitalization admissions from Maricopa County, 61 percent from Pima County, and 67 percent from the 13 remaining counties received skills training.
- ❑ For all counties of prior residence in the post-hospitalization admission group, there was an increase between 1999 and 2001 in the percentage of nursing home residents receiving skills training. The percent of increase ranged from 8 percent to 13 percent.

### Therapies

- ❑ At admission, 12 percent of post-hospitalization residents had received speech therapy and respiratory therapy in the past seven days, 65 percent had received occupational therapy, and 81 percent had received physical therapy. (Figures 139-142)
- ❑ For those receiving occupational or physical therapy in the past seven days, the largest group received therapy for 4 to 6 days.

- ❑ A higher percentage of women than men in the post hospitalization group received physical therapy and occupational therapy in the past seven days. A higher percentage of men received speech therapy.
- ❑ The percentage of post hospitalization residents receiving occupational therapy and physical therapy increased with age.
- ❑ The percentage of post-hospitalization residents receiving occupational therapy increased each year for all age groups.
- ❑ White residents were more likely receive occupational therapy for each of the three years. While the percentage of Black and Hispanic residents receiving occupational therapy increased between 1999 and 2001, the percentage of American Indians receiving occupational therapy remained stable.
- ❑ American Indian residents (68 percent) in the post-hospitalization group were less likely than Black (70 percent), Hispanic (75 percent) or White residents (82 percent) to have received physical therapy for at least 15 minutes per days for 1 to 7 days in the past week,
- ❑ Slightly more post-hospitalization residents in Pima County received speech, occupational, and physical therapy than residents in Maricopa County and the 13 remaining counties.

#### Nursing Rehabilitation and Restorative Care

- ❑ About 7 percent of post-hospitalization residents performed range of motion exercises at least 15 minutes per day from 1-7 days in the past week.
- ❑ The percent of post-hospitalization residents who performed range of motion exercises decreased from 11 percent in 1999 to 5 percent in 2001.
- ❑ The percent of post-hospitalization residents who performed range of motion exercises increased with age with the exception of residents 90 years and older who decreased slightly.
- ❑ A higher percentage of post-hospitalization residents from Maricopa County (10 percent) and the 13 non-urban counties (7 percent) performed range of motion exercises than residents from Pima County (1 percent).

#### Residents in Transition

##### Skills Training for Return to the Community

- ❑ Approximately one-third of the residents in transition received skills training for returning to the community. The percent of residents in this group receiving training increased from 28 percent in 1999 to 30 percent in 2000 to 37 percent in 2001. (Figure 134)

- ❑ At admission, more women (34 percent) in the transition group received skills training for returning to the community than men (28 percent). The percent of women being given skills training at admission increased from 31 percent in 1999 to 40 percent in 2001.
- ❑ The percentage of residents in transition who received skills training increased with age. About 21 percent of adults under age 65 received skills training compared to approximately 35 percent in the older age groups.
- ❑ White (34 percent) and Hispanic (26 percent) residents in transition were more likely than Black or American Indian residents to receive skills training for returning to the community. Twenty-one percent of Black residents and 15 percent of American Indian residents in transition group were given skills training.
- ❑ For White and Black residents in the transition group, there was an increase between 1999 and 2001 in the percent of residents receiving skills training. The number of White residents receiving training increased by 9 percent; the number of Black residents receiving training increased by 8 percent.
- ❑ Approximately 30 percent of residents in transition from Maricopa and Pima counties received training compared to 39 percent of admissions from the 13 remaining counties.
- ❑ For all counties of prior residence, there was an increase between 1999 and 2001 in the percentage of residents in transition receiving skills training. The percent of increase ranged from 8 percent to 11 percent.

### Therapies

- ❑ At admission, 44 percent of residents in transition had received occupational therapy in the past seven days, 57 percent had received physical therapy and 5 percent had received respiratory therapy. (Figures 143-146)
- ❑ For those receiving occupational or physical therapy in the past seven days, the largest group received therapy for 4 to 6 days.
- ❑ A higher percentage of women than men in the transition group received physical therapy and occupational therapy in the past seven days.
- ❑ The percentage of residents in the transition group receiving occupational therapy and physical therapy increased with age.
- ❑ The percentage of residents receiving occupational and physical therapy increased from 1999 to 2001 in all age groups except in the youngest group, residents 49 years of age or less.
- ❑ American Indian residents in the transition group were less likely than Black, Hispanic, or White residents to have received speech therapy, occupational therapy, or physical therapy for at least 15 minutes per days for 1 to 7 days in the past week

- ❑ The percent of American Indian residents receiving physical therapy decreased 12 percent between 1999 and 2001 while the percent of White and Black residents in the transition group receiving physical therapy increased 5 percent and 8 percent respectively in the same period.
- ❑ More residents in Pima County received speech and occupational therapy than residents in Maricopa County and the 13 remaining counties.
- ❑ The percent of residents in the transition group receiving occupational therapy in Pima County and Maricopa County increased between 1999 and 2001.
- ❑ About 62 percent of transition group residents from Pima County and 60 percent from the 13 non-urban counties received physical therapy for at least 15 minutes or more per day from 1-7 days in the past week. Only 42 percent of residents from Maricopa County received physical therapy during the last seven days.
- ❑ The percent of residents in the transition group receiving physical therapy in Pima County and the 13 non-urban counties increased between 1999 and 2001

#### Nursing Rehabilitation and Restorative Care

- ❑ Approximately 6 percent of residents in the transition group performed range of motion exercises for at least 15 minutes per day from 1-7 days in the past week.
- ❑ A higher percentage of residents from Maricopa County (7 percent) and the 13 non-urban counties (6 percent) performed range of motion exercises than residents from Pima County (2 percent).

#### Comparison Among Resident Groups

##### Skills Training for Return to the Community

At admission, about half of all nursing home residents received skills training for returning to the community. Residents in the post-hospitalization group, were substantially more likely to receive skills training (64 percent), followed by residents in the transition group (32 percent), and then, residents in the chronic care group (4 percent). In the chronic care group, younger adults are more likely to receive skills training. In contrast, the percent of individuals receiving skills training at admission increases with age in the post-hospitalization and transition groups. White and Hispanic residents in the post-hospitalization and transition groups were more likely to receive skills training than Black or American Indian residents. Fewer residents from Maricopa and Pima counties in the post-hospitalization and transition groups received skills training than in the 13 remaining Arizona counties.

## Therapies

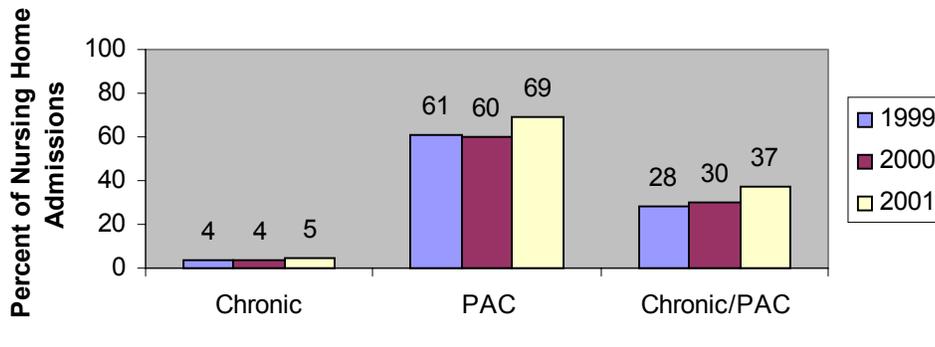
At admission, the majority of nursing home residents have received occupational and physical therapy in the past seven days. Most received these therapies four to six days in the past week for at least 15 minutes daily. Relatively few of the chronic care group received therapies; younger members were more likely to receive therapy in the past seven days. About half of the transition group received occupational and physical therapy in the past seven days. A substantially greater percentage of residents in the post-hospitalization group received physical therapy (81 percent) and occupational therapy (65 percent) at admission. In both the transition and post-hospitalization groups, women, White residents, older residents and those who had lived in Pima County prior to admission were most likely to receive therapies.

## Nursing Rehabilitation and Restorative Care

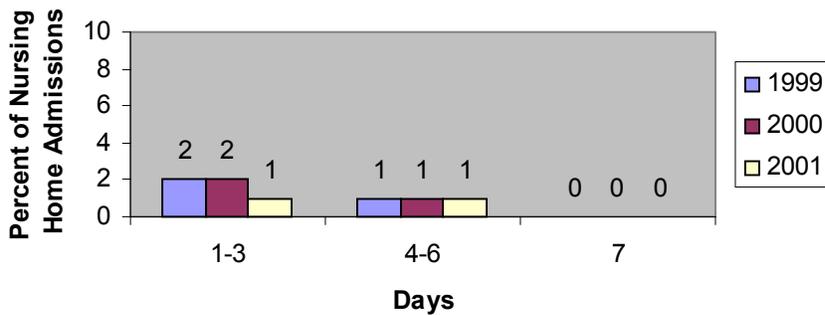
Few of the residents admitted to nursing homes performed range of motion exercises for at least 15 minutes per day in the last seven days. About the same percentage of residents in each of the three groups performed range of motion exercises.



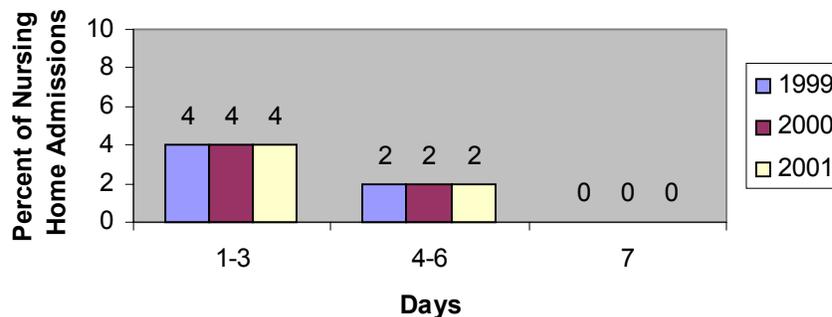
**Figure 134. Nursing Home Admissions Receiving Training for Return to Community by Admission Type and Year: Arizona, 1999-2001**



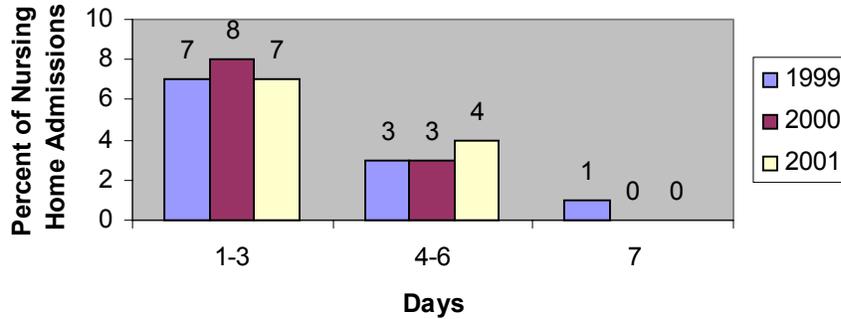
**Figure 135. Days of Speech Therapy Received in Nursing Home Admissions by Year - Chronic: Arizona, 1999-2001**



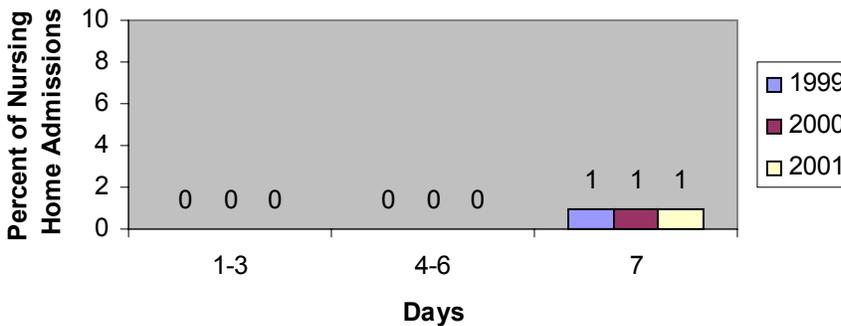
**Figure 136. Days of Occupational Therapy Received in Nursing Home Admissions by Year - Chronic: Arizona, 1999-2001**



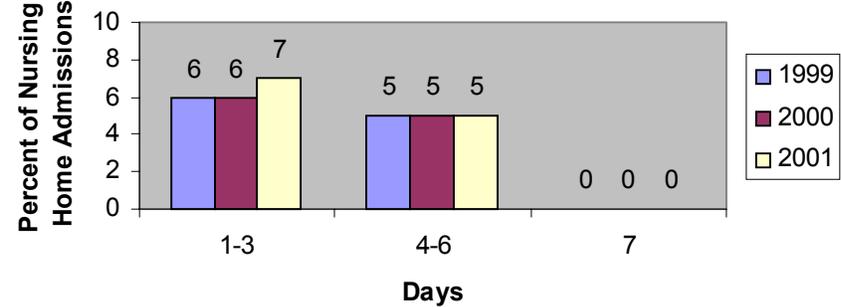
**Figure 137. Days of Physical Therapy Received in Nursing Home Admissions by Year - Chronic: Arizona, 1999-2001**



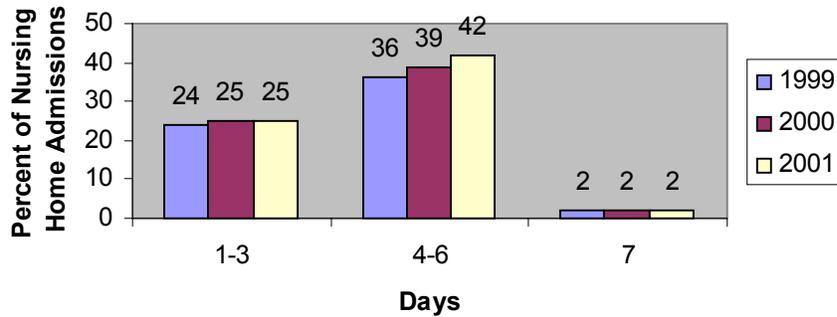
**Figure 138. Days of Respiratory Therapy Received in Nursing Home Admissions by Year - Chronic: Arizona, 1999-2001**



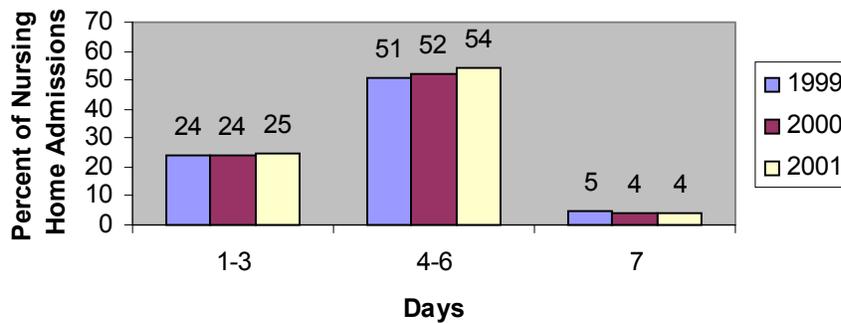
**Figure 139. Days of Speech Therapy Received in Nursing Home Admissions by Year - PAC: Arizona, 1999-2001**



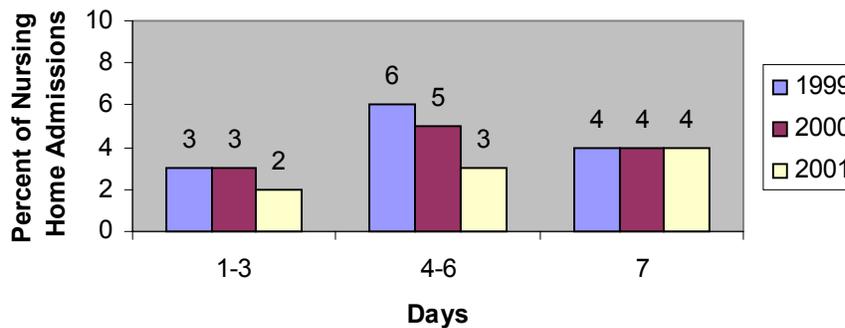
**Figure 140. Days of Occupational Therapy Received in Nursing Home Admissions by Year - PAC: Arizona, 1999-2001**



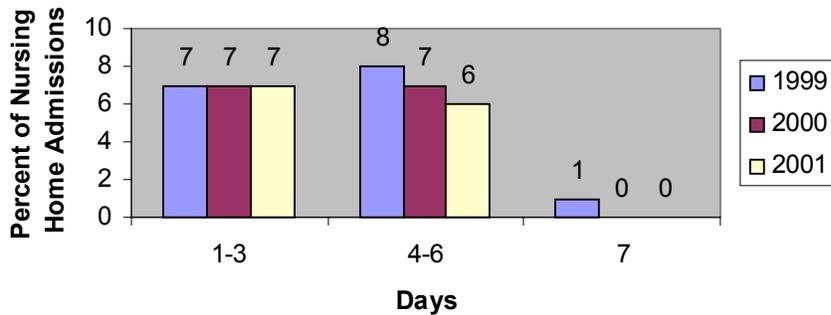
**Figure 141. Days of Physical Therapy Received in Nursing Home Admissions by Year - PAC: Arizona, 1999-2001**



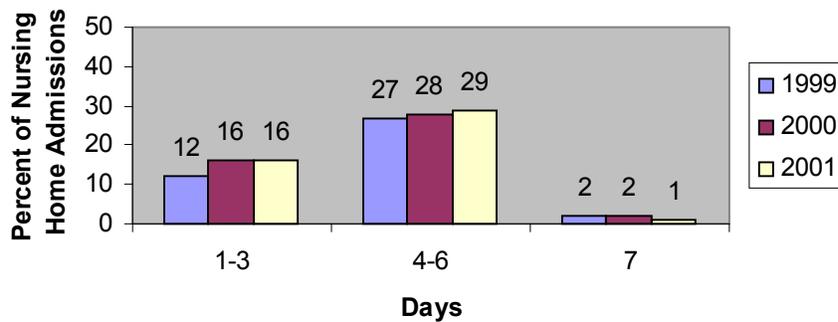
**Figure 142. Days of Respiratory Therapy Received in Nursing Home Admissions by Year - PAC: Arizona, 1999-2001**



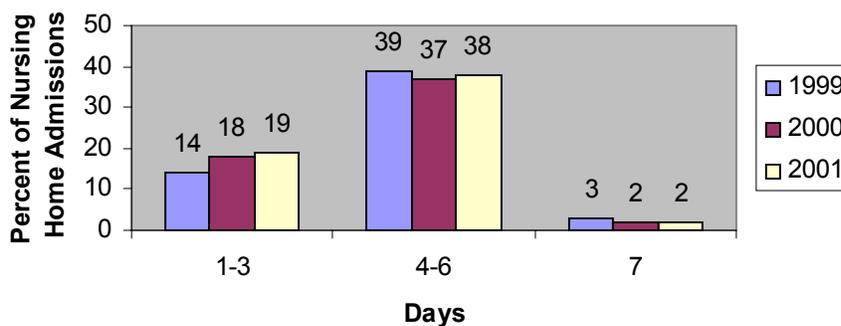
**Figure 143. Days of Speech Therapy Received in Nursing Home Admissions by Year - Chronic/PAC: Arizona, 1999-2001**



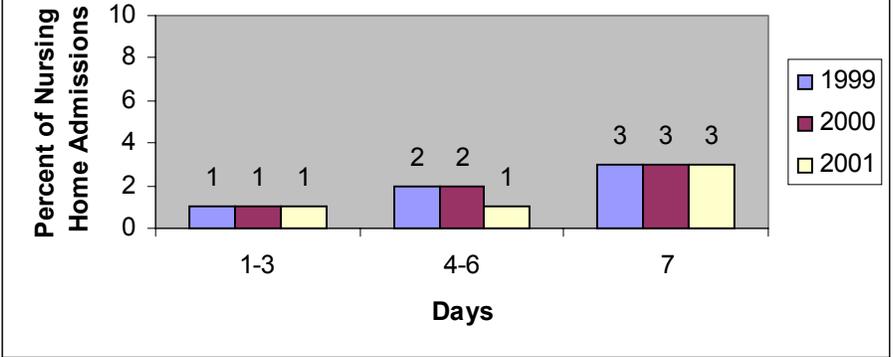
**Figure 144. Days of Occupational Therapy Received in Nursing Home Admissions by Year - Chronic/PAC: Arizona, 1999-2001**



**Figure 145. Days of Physical Therapy Received in Nursing Home Admissions by Year - Chronic/PAC: Arizona, 1999-2001**



**Figure 146. Days of Respiratory Therapy Received in Nursing Home Admissions by Year - Chronic/PAC: Arizona, 1999-2001**



## *Discharge Potential*

### Chronic Care Residents

- ❑ At admission, about 20 percent of chronic care residents expressed a preference to return to the community. (Figure 147)
- ❑ Preference to return to the community in chronic care residents decreased with age.
- ❑ The percent of younger (under age 50) and older (between ages 75 and 84) chronic care residents who preferred to return to the community decreased between 1999 and 2001.
- ❑ Only 12 percent of chronic care residents had a support person who was positive toward discharge to the community. (Figure 147)
- ❑ The percent of chronic care residents with a support person who was positive toward discharge to the community decreased with age.
- ❑ More than three-quarters of chronic care residents were expected to stay in the nursing home more than 90 days (Figure 148). Discharge status was uncertain for an additional 20 percent of these residents.
- ❑ The percent of chronic care residents who were expected to stay in the nursing home more than 90 days increased with age.
- ❑ The percent of Black chronic care residents expected to stay in the nursing home more than 90 days increased between 1999 and 2001, while the percent of American Indian residents expected to stay more than 90 days decreased in the same time period.
- ❑ Discharge status was more likely to be uncertain for American Indian chronic care residents at admission than White, Hispanic, or Black chronic care residents.

### Post-Hospitalization Residents

- ❑ At admission, about 86 percent of post-hospitalization residents expressed a preference to return to the community. (Figure 149)
- ❑ Preference to return to the community in post-hospitalization residents did not change with age, race, or prior county of residence.
- ❑ More than 80 percent of post-hospitalization residents had a support person who was positive toward discharge to the community. (Figure 149)
- ❑ The percent of post-hospitalization residents with a support person who was positive toward discharge to the community increased with age.

- ❑ More White and Hispanic post-hospitalization residents had a support person who was positive toward discharge to the community than American Indian and Black residents.
- ❑ About two-thirds of post-hospitalization residents were expected to be discharged within 90 days of admission to the nursing home. (Figure 150)

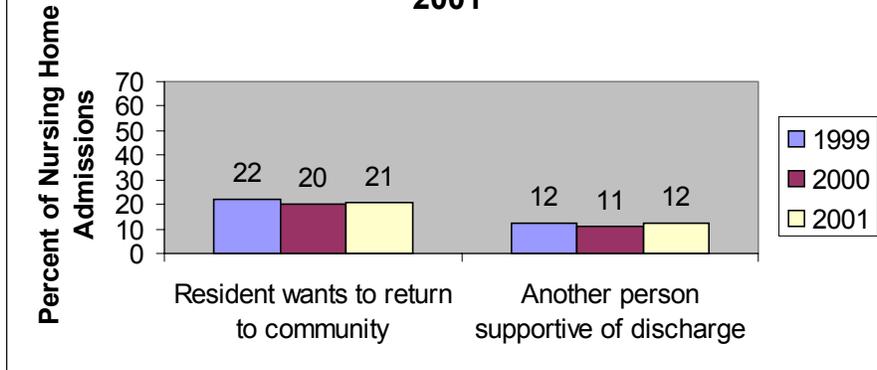
### Residents in Transition

- ❑ At admission, about 38 percent of residents in transition expressed a preference to return to the community. (Figure 151)
- ❑ Preference to return to the community for residents in transition decreased with age; however the percent of residents under the age of 75 who preferred to return to the community increased between 1999 and 2001.
- ❑ Preference to return to the community was greater in White and Hispanic residents in transition than American Indian or Black residents in transition.
- ❑ About one-third of residents in transition had a support person who was positive toward discharge to the community. (Figure 151)
- ❑ The percent of residents in transition with a support person who was positive toward discharge to the community decreased with age.
- ❑ More White and Hispanic residents in transition had a support person who was positive toward discharge to the community than American Indian and Black residents.
- ❑ About half of residents in transition were expected to stay in the nursing home more than 90 days. Discharge status was uncertain for another one-third of these residents. (Figure 152)

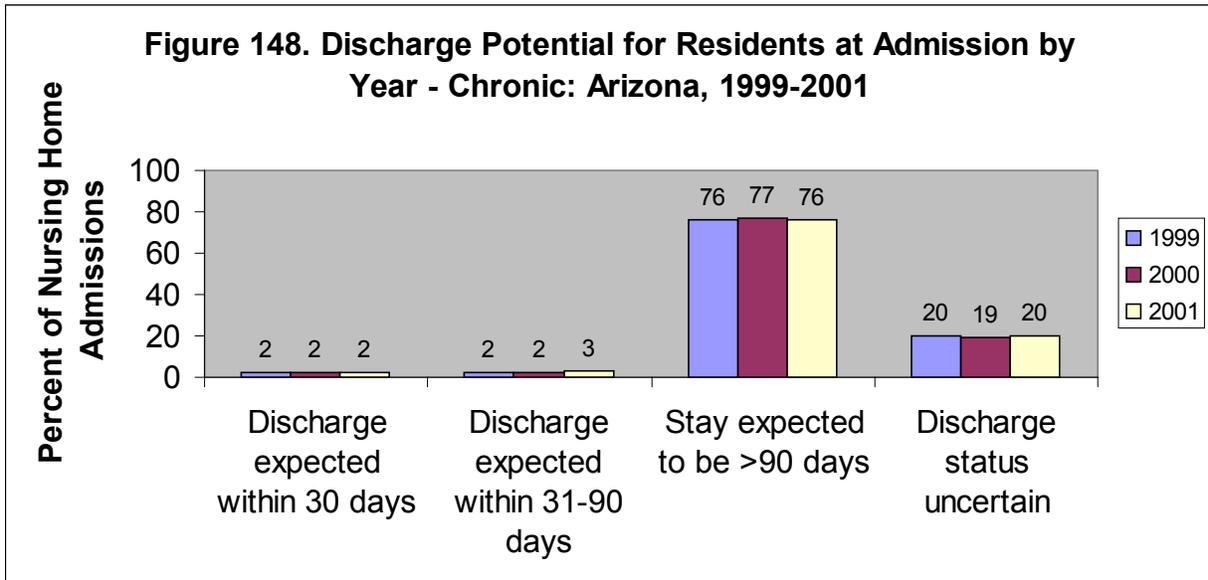
### Comparison Among Groups

Overall, almost three-quarters of nursing home residents expressed a preference for return to the community at admission. Most of the residents had a support person who was positive toward discharge to the community. Residents in the post-hospitalization group were substantially more likely to express a preference for return to the community (86 percent), followed by residents in the transition group (38 percent), and then residents in the chronic care group (20 percent). More residents in the post-hospitalization and transition groups had a support person who was positive toward discharge to the community than the chronic care group. Most of the residents in the post-hospitalization group were expected to be discharged from the nursing home within 90 days. In contrast, most of the chronic care residents and half of the residents in the transition group were expected to stay longer than 90 days.

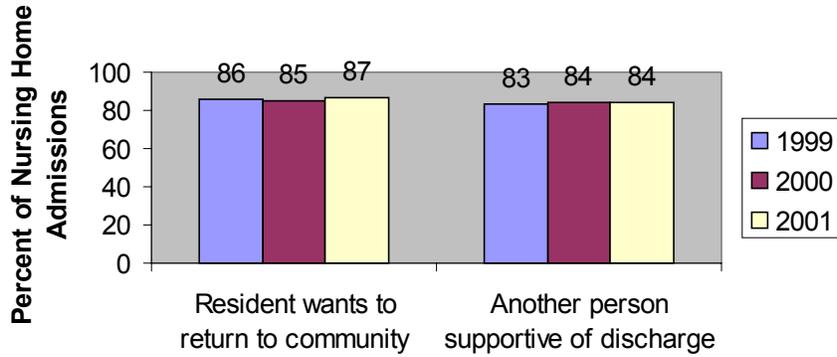
**Figure 147. Preference and Support for Return to Community in Nursing Home Admissions by Year - Chronic: Arizona, 1999-2001**



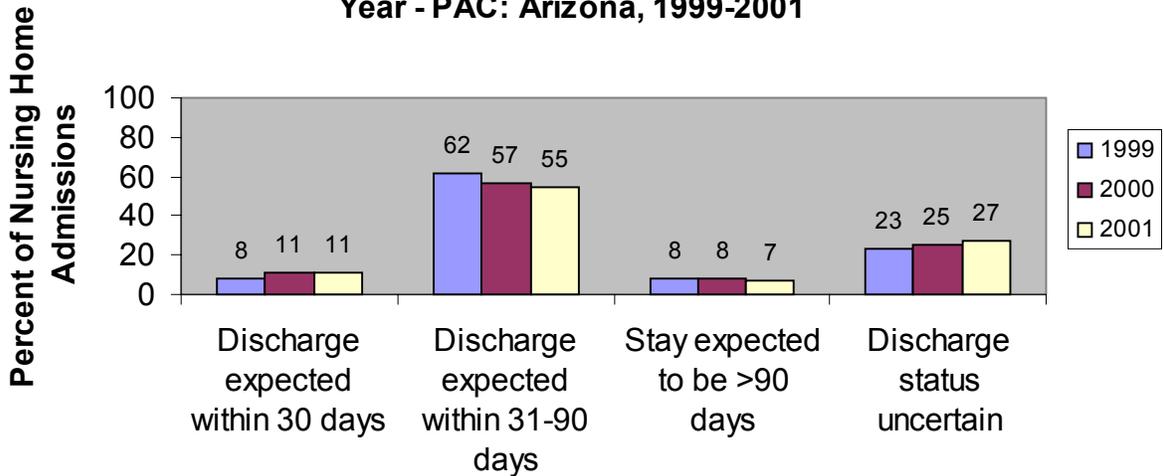
**Figure 148. Discharge Potential for Residents at Admission by Year - Chronic: Arizona, 1999-2001**



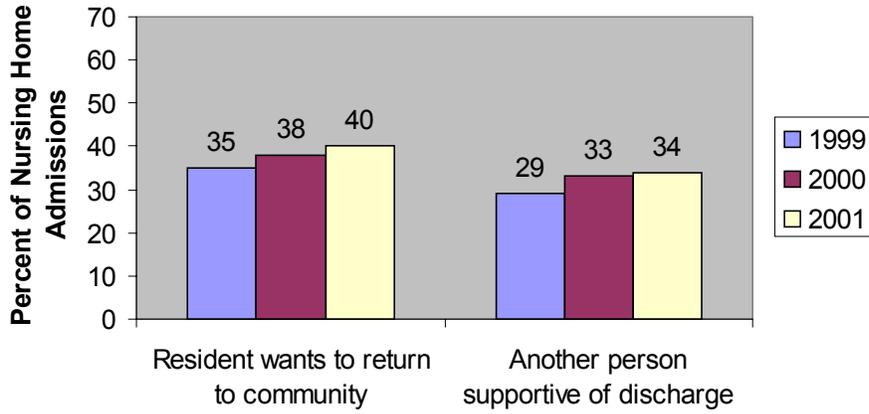
**Figure 149. Preference and Support for Return to Community in Nursing Home Admissions by Year - PAC: Arizona, 1999-2001**



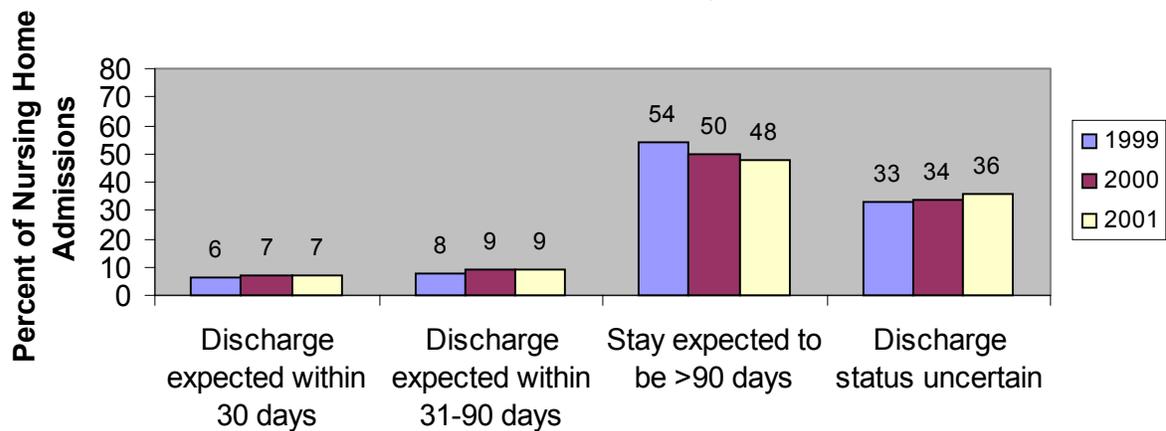
**Figure 150. Discharge Potential for Residents at Admission by Year - PAC: Arizona, 1999-2001**



**Figure 151. Preference and Support for Return to Community in Nursing Home Admissions by Year - Chronic/PAC: Arizona, 1999-2001**



**Figure 152. Discharge Potential for Residents at Admission by Year - Chronic/PAC: Arizona, 1999-2001**



### III.B. Resident Groups On One Day of the Year

On one day of the year, a majority of residents (73 percent) were in the chronic care group, followed by the resident in transition or chronic/post-acute group (13 percent) and then the post-hospitalization or post-acute group (12 percent). It was not possible to categorize approximately 2 percent of individuals in the nursing homes in 1999, 2000, and 2001.

Table 4. Number of Residents by Resident Category and Year: Arizona, 1999-2001

	1999	2000	2001
Post-Acute	1,504	1,524	1,562
Chronic/Post-Acute	1,662	1,653	1,717
Chronic	9,973	9,549	9,297
Undetermined	306	258	228
<b>Total</b>	<b>13,445</b>	<b>12,984</b>	<b>12,804</b>

On July 1 of each year, individuals in the post-hospitalization or post-acute group were younger. They were less likely to have one or more indicators of a depressed, sad, or anxious mood. Individuals in the post-hospitalization group were less independent in activities of daily living than individuals in the chronic care or transition groups. They reported more pain and were likely to be on a greater number of medications at admission. Residents in the post-hospitalization group had more falls in the previous 30 days and had a higher rate of at least one Stage 2 skin ulcer than residents in the other groups.

Individuals in the chronic care group, in contrast to the post-hospitalization and transition groups, were older, had more problems with short-term and long-term memory. They had greater rates of bowel and bladder incontinence and they were more likely to engage in wandering behavior and physically or verbally abusive behavior. Residents in the chronic care group on July 1 were more likely to be independent in activities of daily living and at the same time, more residents in this group required extensive or total assistance with daily functions than residents in the post-hospitalization and transition groups.



## *Demographic Profile*

### Chronic Care Residents

- ❑ Approximately 70 percent of chronic care residents in nursing homes on July 1 were female. (Figure 153)
- ❑ About one in 10 chronic care residents were under the age of 65; almost half were 85 years of age or older. (Figure 154)
- ❑ The majority of chronic care residents (81 percent) were White; 9 percent of chronic care residents were Hispanic, 3 percent were American Indian/Alaskan Natives, and 3 percent were Black. (Figure 155)
- ❑ About 40 percent of chronic care residents in nursing homes lived in Maricopa County prior to admission, 10 percent lived in Pima County; about 16 percent of chronic care residents lived in the non-metropolitan areas, and almost one-third lived out of state or their county of prior residence was unknown. (Figure 156)

### Post-hospitalization Residents

- ❑ About 60 percent of post-hospitalization residents were female. (Figure 153)
- ❑ Almost one-fifth of post-hospitalization residents were under the age of 65; approximately one-quarter were 85 years of age or older. (Figure 157)
- ❑ The majority of post-hospitalization residents on July 1 were White; 9 percent were Hispanic, 3 percent were American Indian/Alaskan Natives, and 3 percent were Black. (Figure 158)
- ❑ Half of post-hospitalization residents in nursing homes lived in Maricopa County prior to admission; about 15 percent lived in Pima County, another 21 percent lived in the non-metropolitan areas, and about 12 percent lived out of state or their county of prior residence was unknown. (Figure 159)

### Residents in Transition

- ❑ Almost two-thirds residents in transition group on July 1 were female. (Figure 153)
- ❑ Approximately 15 percent of the residents in transition were under the age of 65; about one-third were 85 years of age or older. (Figure 160)
- ❑ Approximately 80 percent of residents in transition were White; 10 percent of residents in transition were Hispanic; 5 percent were American Indian, and 4 percent were Black. (Figure 161)

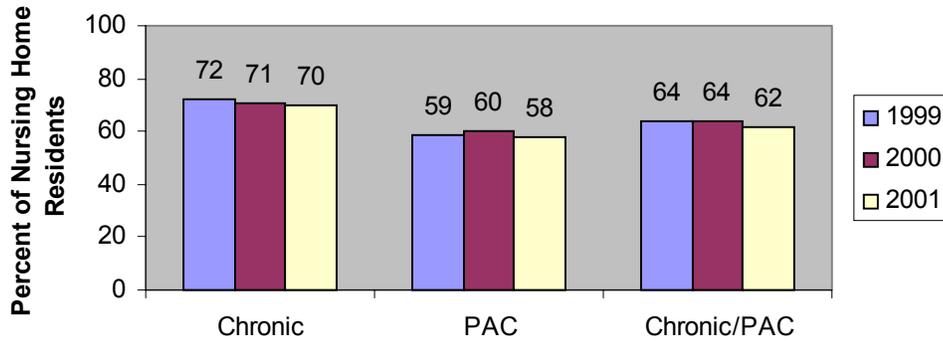
- Almost half of the residents in transition group in nursing homes lived in Maricopa County prior to admission, about 13 percent lived in Pima County, about one-quarter lived in the non-metropolitan areas, and about 15 percent lived out of state or their county of prior residence was unknown. (Figure 162)

### Comparison Among Groups

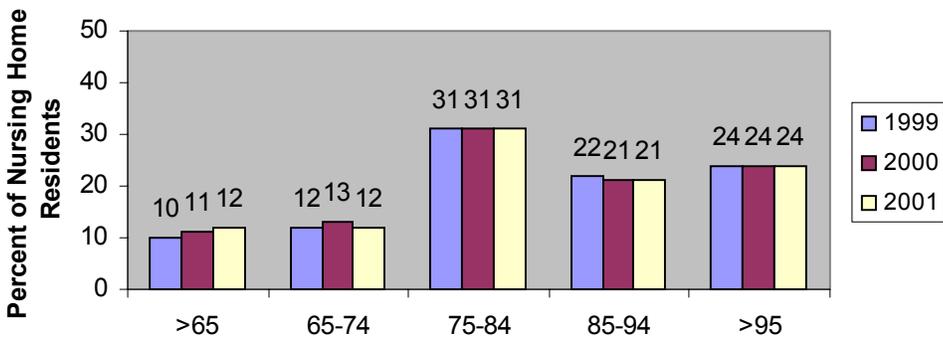
On one day of the year, July 1, the majority of nursing home residents were women. This finding was consistent across the three resident groups with the greatest percent of women in the chronic care group. The post-hospitalization group had the largest percent of residents under age 65 (almost 20 percent), followed by transition group (15 percent), and then, the chronic care group (11 percent). The chronic care group had the greatest number of residents 85 years or older. Most nursing home residents on July 1 of each year were White. About 10 percent of residents in each of the groups were Hispanic with low percentages of American Indian and Black residents. Within each resident group, the majority of individuals whose previous residence was known lived in Maricopa County prior to admission, followed by residents who had lived in the non-metropolitan areas outside of Maricopa or Pima County.



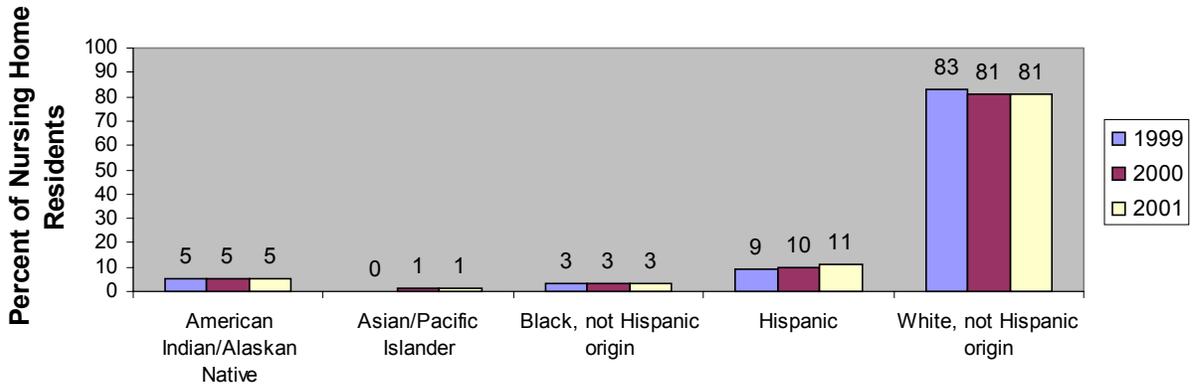
**Figure 153. Females in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



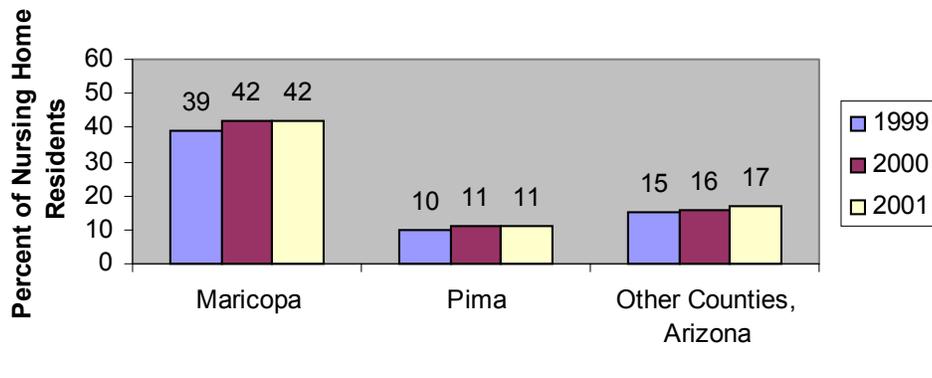
**Figure 154. Nursing Home Residents by Age and Year - Chronic: Arizona, 1999-2001**



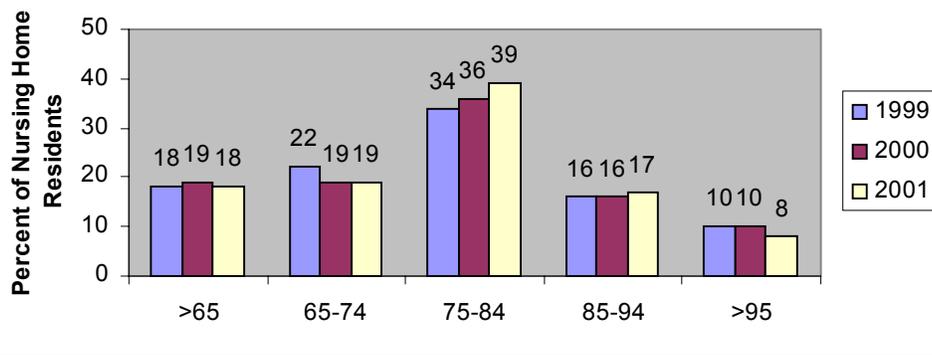
**Figure 155. Nursing Home Residents by Race and Year - Chronic: Arizona, 1999-2001**



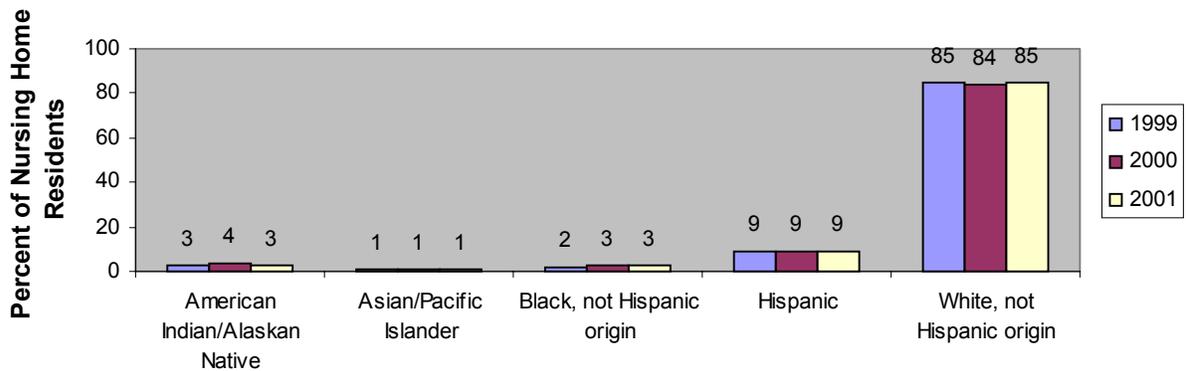
**Figure 156. Nursing Home Residents by County of Residence Prior to Admission and Year - Chronic: Arizona, 1999-2001**



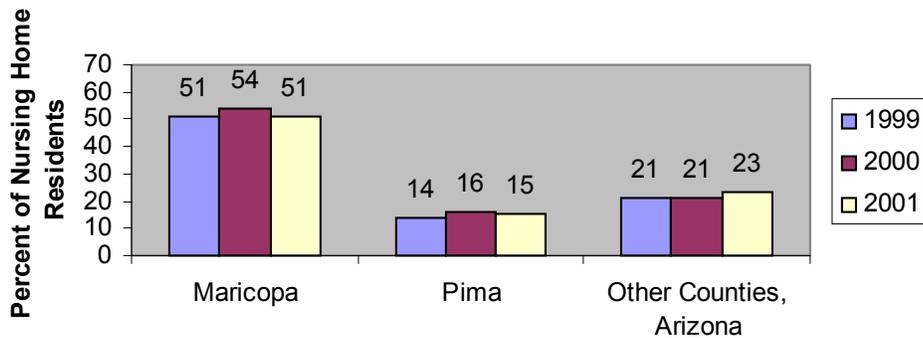
**Figure 157. Nursing Home Residents by Age and Year - PAC: Arizona, 1999-2001**



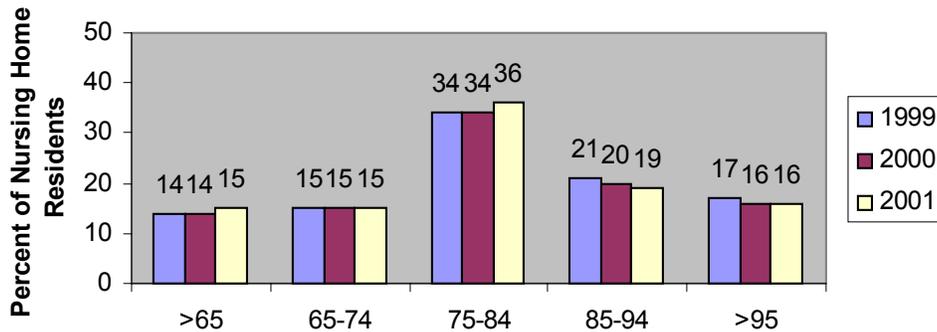
**Figure 158. Nursing Home Residents by Race and Year - PAC: Arizona, 1999-2001**



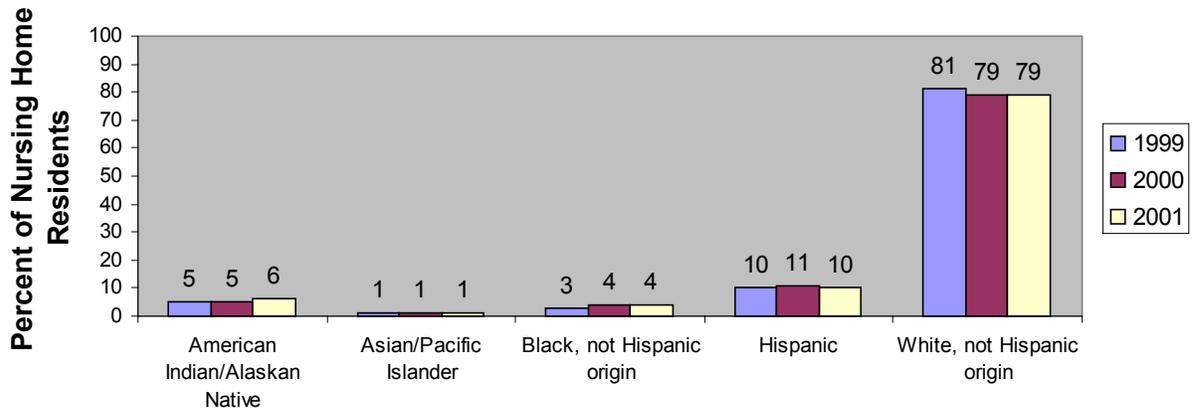
**Figure 159. Nursing Home Residents by County of Residence Prior to Admission and Year - PAC: Arizona, 1999-2001**



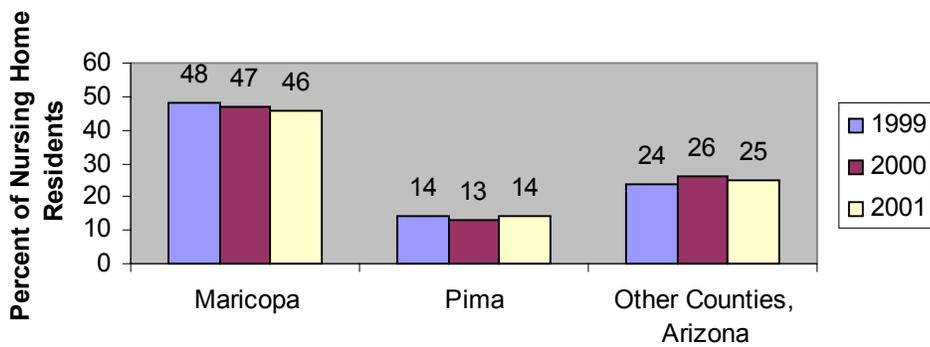
**Figure 160. Nursing Home Residents by Age Group and Year - Chronic/PAC: Arizona, 1999-2001**



**Figure 161. Nursing Home Residents by Race and Year - Chronic/PAC: Arizona, 1999-2001**



**Figure 162. Nursing Home Residents by County of Residence Prior to Admission and Year - Chronic/PAC: Arizona, 1999-2001**



## *Cognitive Patterns*

### Chronic Care Residents

- ❑ Three-quarters of chronic care residents in nursing homes on July 1 had short-term memory problems. (Figure 163)
- ❑ More than 60 percent of chronic care residents had long-term memory problems. (Figure 164)
- ❑ The percentage of chronic care residents with short-term and long-term memory problems and impaired decision-making increased with age.
- ❑ More than half of chronic care residents had some impairment in cognitive skills for daily decision-making; about one-quarter had severely impaired skills for daily decision-making. (Figure 165)
- ❑ Fewer men in the chronic care group had short-term and long-term memory problems than women; women were more likely to have severely impaired cognitive skills for daily decision-making.
- ❑ Fewer American Indian chronic care residents had short-term and long-term memory problems and impaired cognitive skills for daily decision-making than Black, Hispanic, or White residents.
- ❑ More chronic care residents from Pima County had long-term memory problems and impaired cognitive skills for daily decision-making, than residents from Maricopa County or the 13 other counties.

### Post Hospitalization Residents

- ❑ On July 1 of each year, about 40 percent of post-hospitalization residents had short-term memory problems. (Figure 163)
- ❑ About one-quarter of post-hospitalization residents had long-term memory problems. (Figure 164)
- ❑ The percentage of post-hospitalization residents with short-term and long-term memory problems and impaired decision-making increased with age.
- ❑ Fewer men in the post-hospitalization group had short-term and long-term memory problems than women.
- ❑ Fewer American Indian post-hospitalization residents had short-term and long-term memory problems than Black, Hispanic, or White residents.

- ❑ About 40 percent of post-hospitalization residents had some impairment in cognitive skills for daily decision-making; about 9 percent had severely impaired skills for daily decision-making. (Figure 166)
- ❑ More post-hospitalization residents from Pima County had long-term memory problems and impaired cognitive skills for daily decision-making than residents from Maricopa County or the 13 other counties.

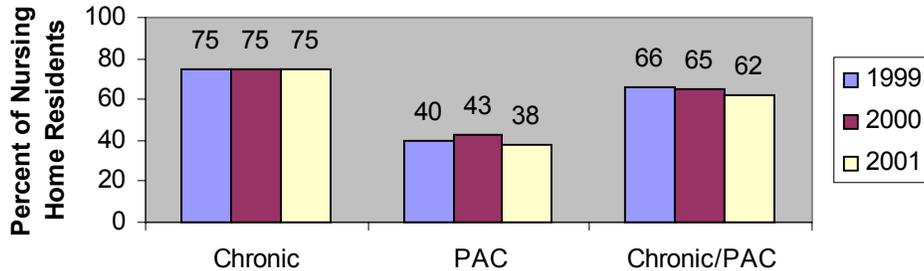
### Residents in Transition

- ❑ On July 1 of each year, about two-thirds of residents in transition had short-term memory problems. (Figure 163)
- ❑ Approximately half of residents in transition had long-term memory problems; the percent of these residents with long-term memory problems decreased from 52 percent in 1999 to 45 percent in 2001. (Figure 164)
- ❑ Fewer men in the transition group had short-term memory problems.
- ❑ The percentage of residents in transition with short-term and long-term memory problems and impaired decision-making increased with age.
- ❑ Fewer American Indian residents in transition had short-term memory problems.
- ❑ A little over half of residents in transition had some impairment in cognitive skills for daily decision-making; about one-fifth had severely impaired skills for daily decision with this number decreasing between 1999 and 2001. (Figure 167)

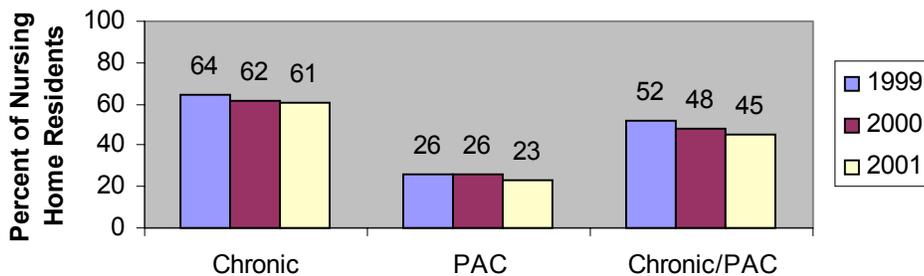
### Comparison Among Groups

Overall, about 70 percent of residents in nursing homes on July 1 had short-term memory problems and approximately 56 percent had long-term memory problems. Fewer than one-quarter of residents were independent in cognitive skills for daily decision-making. Chronic care and transitional residents are substantially more likely to have short-term and long-term memory problems and severe impairment in cognitive skills for daily decision-making than post-hospitalization residents.

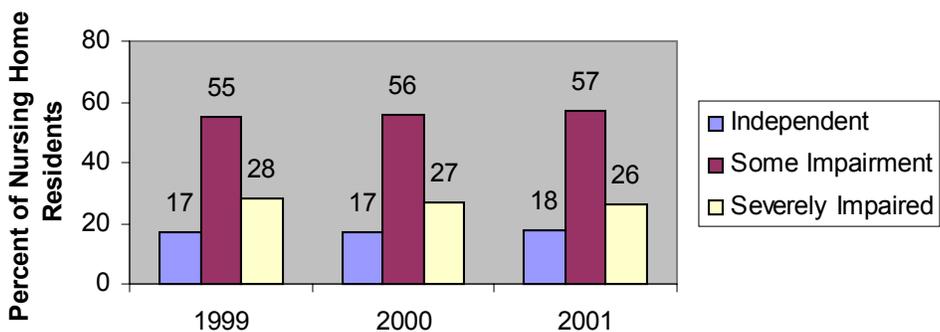
**Figure 163. Short Term Memory Problem in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



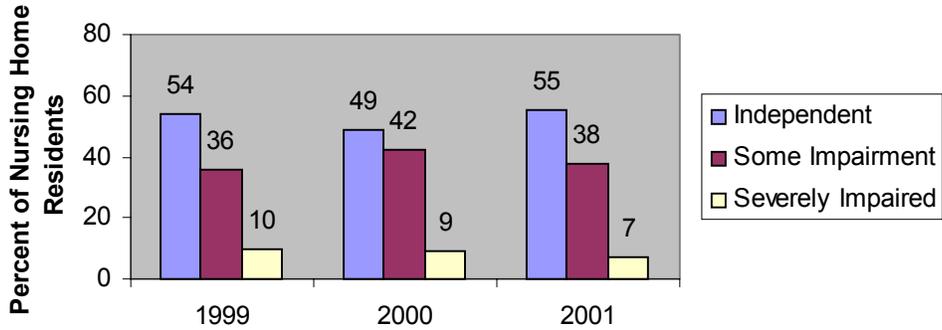
**Figure 164. Long Term Memory Problem in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



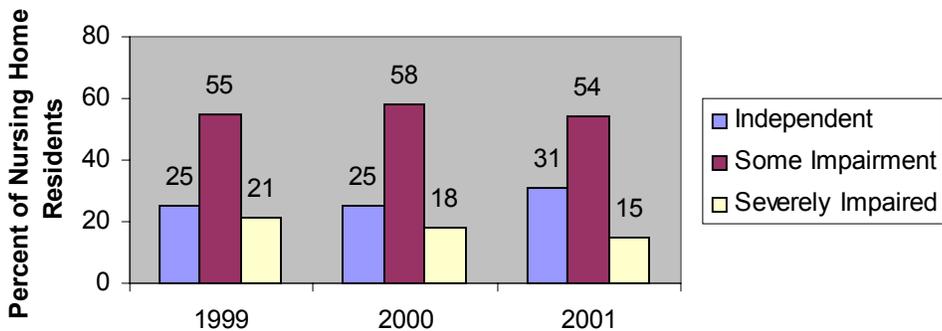
**Figure 165. Cognitive Skills for Daily Decision Making in Nursing Home Residents by Year - Chronic: Arizona, 1999-2001**



**Figure 166. Cognitive Skills for Daily Decision Making in Nursing Home Residents by Year - PAC: Arizona, 1999-2001**



**Figure 167. Cognitive Skills for Daily Decision Making in Nursing Home Residents by Year - Chronic/PAC: Arizona, 1999-2001**



## *Communication and Hearing Patterns*

### Chronic Care Residents

- ❑ Approximately half of chronic care residents in nursing homes on July 1 had some difficulty making themselves understood. (Figure 168)
- ❑ More than half of chronic care residents had some difficulty understanding others. (Figure 169)
- ❑ Among chronic care residents in nursing homes on July 1, American Indian residents are more likely to make themselves understood and understand others than Black, Hispanic, or White residents.

### Post Hospitalization Residents

- ❑ Less than one-quarter of post-hospitalization residents in nursing homes on July 1 had some difficulty making themselves understood. (Figure 168)
- ❑ The percentage of residents in the post-hospitalization group who had difficulty making themselves understood increased with age.
- ❑ Approximately one-quarter of post-hospitalization residents had some difficulty understanding others. (Figure 169)
- ❑ American Indian residents were more likely to make themselves understood than Black, Hispanic, or White residents.

### Residents in Transition

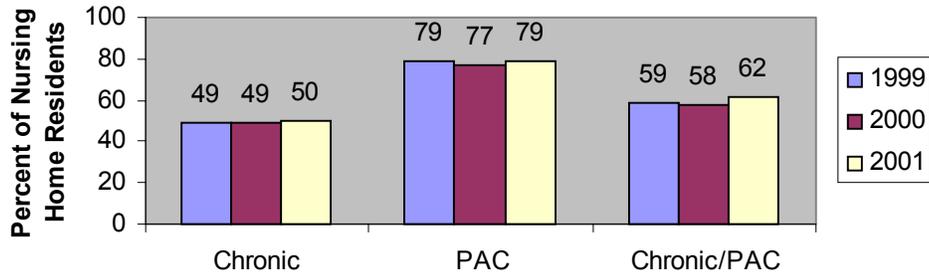
- ❑ About 40 percent of residents in the transition group had some difficulty making themselves understood. (Figure 168)
- ❑ About half of the transition group residents in nursing homes on July 1 had some difficulty understanding others. (Figure 169)
- ❑ The percent of transition residents who had difficulty making themselves understood and understanding others increased with age.
- ❑ White residents were more likely to make themselves understood than Hispanic, Black, or American Indian residents.

### Comparison Among Groups

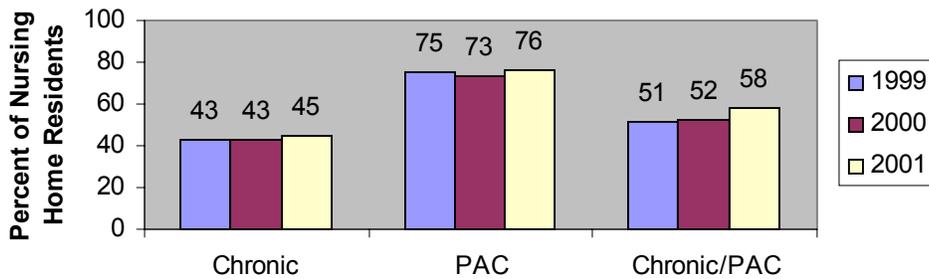
Overall, about half of residents in nursing homes on July 1 are able to make themselves understood and understand others. Chronic care residents on July 1 had the highest rates of individuals with difficulty making themselves understood and understanding others followed by residents in the transition group, and then by residents in the post-hospitalization group.



**Figure 168. Always Makes Self Understood in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



**Figure 169. Always Understands Others in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



## *Mood and Behavior Patterns*

### Chronic Care Residents

- ❑ About 40 percent of chronic care residents in nursing homes on July 1 had one or more indicators of a depressed, sad, or anxious mood. For more than half of these individuals the mood was easily altered by attempts to cheer up, console, or reassure the resident over the last 7 days. (Figure 170)
- ❑ About 16 percent of chronic care residents engaged in wandering behavior in the last 7 days; more than half of these residents engaged in wandering daily. (Figures 171, 172).
- ❑ Male chronic care residents were more likely to wander than female chronic care residents.
- ❑ Approximately 13 percent of chronic care residents in nursing homes on July 1 engaged in verbally abusive and 10 percent engaged in physically abusive behaviors; for most, these behaviors occurred less than daily. (Figure 173)
- ❑ Male chronic care residents were more likely to be verbally abusive than female chronic care residents; there was not an appreciable difference between male and female residents in the frequency of physically abusive behavior.
- ❑ About 17 percent of chronic care residents engaged in socially inappropriate or disruptive behaviors; for most, these behaviors occurred less than daily. (Figure 174)
- ❑ Almost one-quarter of chronic care residents resisted care, such as taking medications, assistance with activities of daily living, or eating. (Figure 175)

### Post-Hospitalization Residents

- ❑ About one-third of post-hospitalization residents in nursing homes on July 1 had one or more indicators of a depressed, sad, or anxious mood. For more than half of these individuals the mood was easily altered by attempts to cheer up, console, or reassure the resident over the last 7 days (Figure 176).
- ❑ Few post-hospitalization residents engaged in wandering behavior, physically or verbally abusive behaviors or socially inappropriate or disruptive behaviors (Figures 171, 177, 178, 179)
- ❑ About 12 percent of post-hospitalization residents resisted care, such as taking medications, assistance with activities of daily living, or eating. (Figure 180).

### Residents in Transition

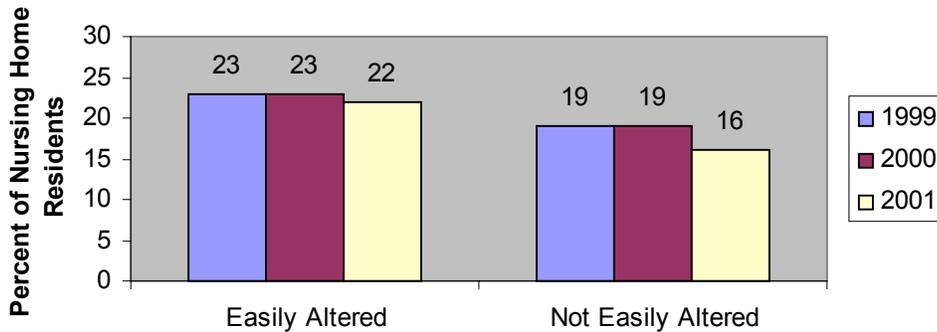
- ❑ About 40 percent of residents in transition had one or more indicators of a depressed, sad, or anxious mood. For more than half of these individuals the mood was easily altered by attempts to cheer up, console, or reassure the resident over the last 7 days (Figure 181).
- ❑ Between 1999 and 2001, the percent of residents in transition who had one or more indicators of a depressed, sad, or anxious mood decreased from 42 percent to 32 percent.
- ❑ About 10 percent of residents in transition engaged in wandering behavior; about half of these residents engaged in wandering less than daily and half engaged in wandering daily. (Figure 182)
- ❑ Approximately 8 percent of residents in transition in nursing homes on July 1 engaged in verbally abusive and 5 percent engaged in physically abusive behaviors; for most, these behaviors occurred less than daily. (Figure 183)
- ❑ About 9 percent of residents in transition engaged in socially inappropriate or disruptive behaviors; for most, these behaviors occurred less than daily. (Figure 184)
- ❑ Almost 15 percent of residents in transition resisted care, such as taking medications, assistance with activities of daily living, or eating. (Figure 185)

### Comparison Among Groups

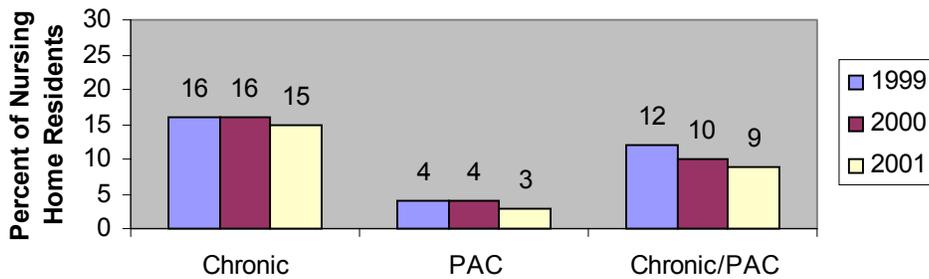
Overall, about 40 percent of residents in nursing homes on July 1 had one or more indicators of a depressed, sad, or anxious mood. Fewer post-hospitalization residents had one or more indicators of these moods than chronic residents or residents in transition. Sixteen percent of chronic care residents exhibited wandering behavior compared to 10 percent of residents in transition and 4 percent in post-hospitalization residents. More chronic care residents engaged in verbally or physically abusive behavior, or socially inappropriate or disruptive behavior than post-hospitalization residents or residents in transition. More chronic care residents resisted care than residents in transition or post-hospitalization residents.



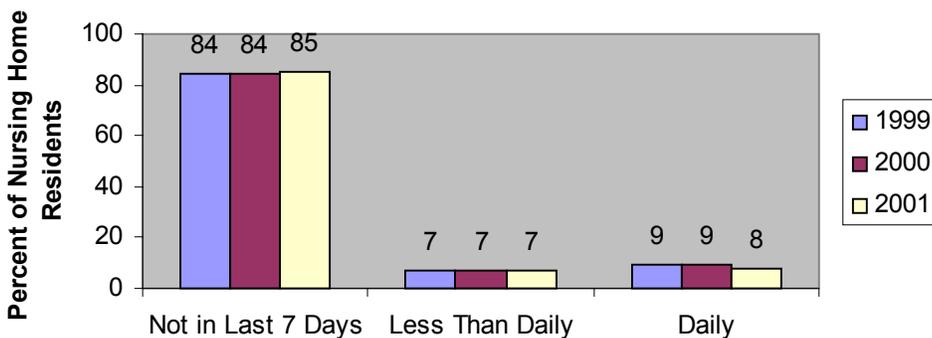
**Figure 170. Depressed, Sad, or Anxious Mood Present in Last 7 Days in Nursing Home Residents by Year - Chronic: Arizona, 1999-2001**



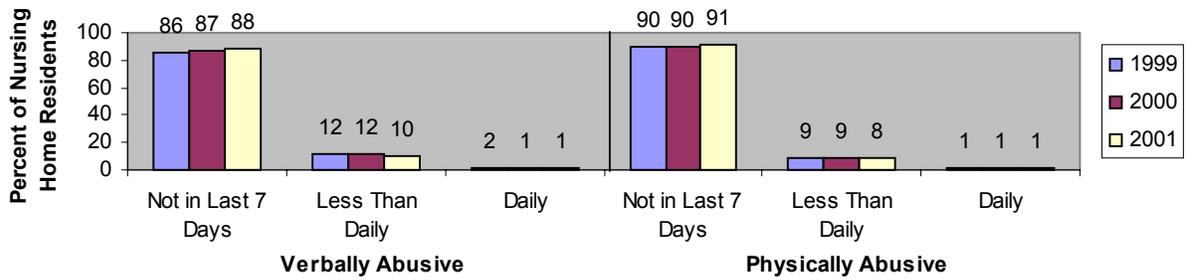
**Figure 171. Wandering in Past 7 Days in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



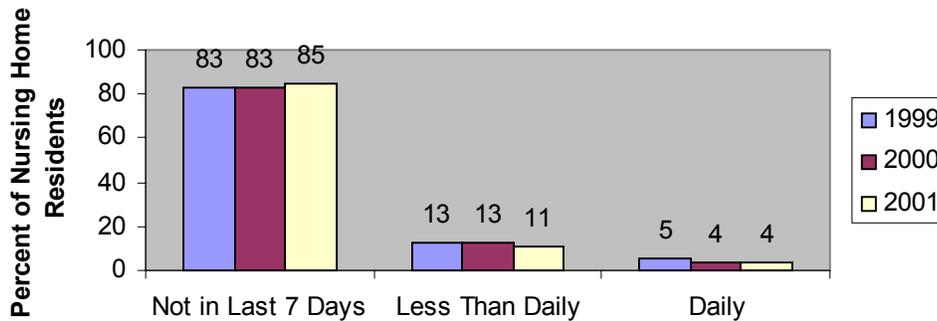
**Figure 172. Wandering in Nursing Home Residents by Year - Chronic: Arizona, 1999-2001**



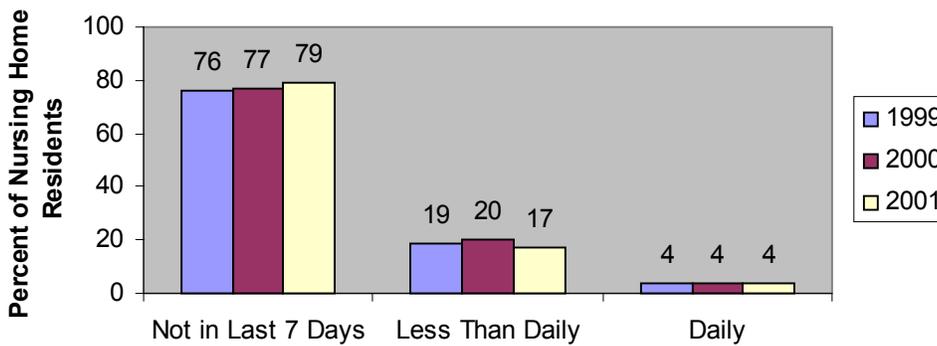
**Figure 173. Abusive Behaviors in Nursing Home Residents by Year - Chronic: Arizona, 1999-2001**



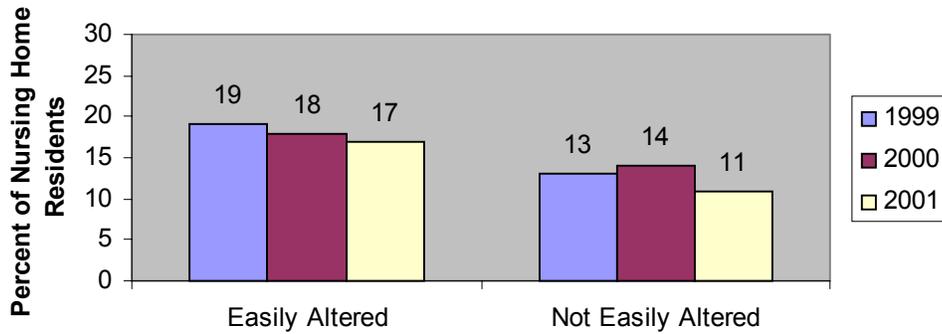
**Figure 174. Socially Inappropriate and Disruptive Behavioral Symptoms in Nursing Home Residents by Year - Chronic: Arizona, 1999-2001**



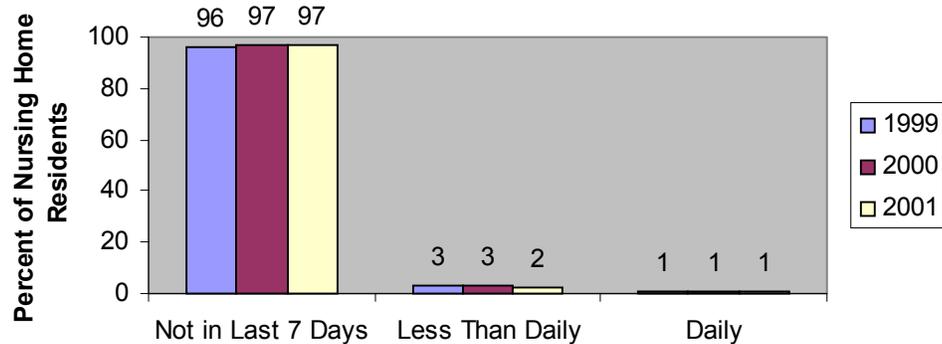
**Figure 175. Resisting Care in Nursing Home Residents by Year - Chronic: Arizona, 1999-2001**



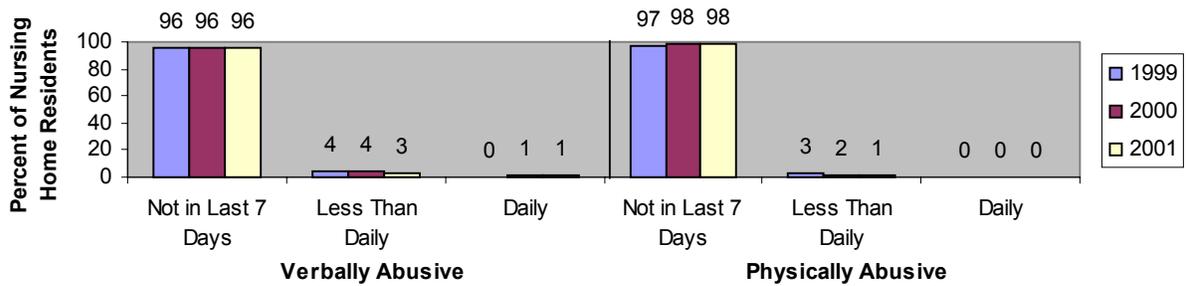
**Figure 176. Depressed, Sad, or Anxious Mood Present in Last 7 Days in Nursing Home Residents by Year - PAC: Arizona, 1999-2001**



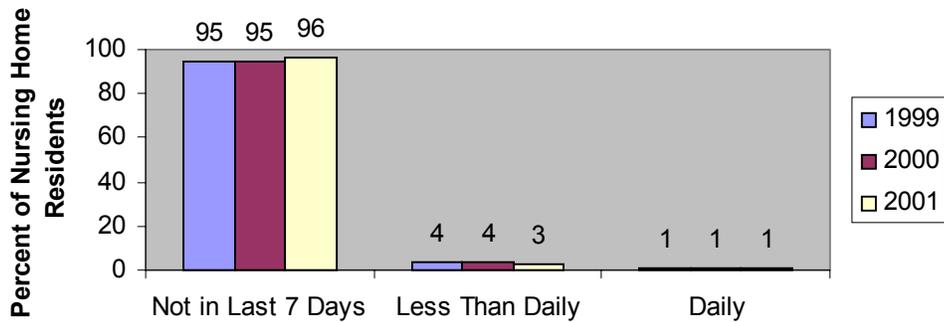
**Figure 177. Wandering in Nursing Home Residents by Year - PAC: Arizona, 1999-2001**



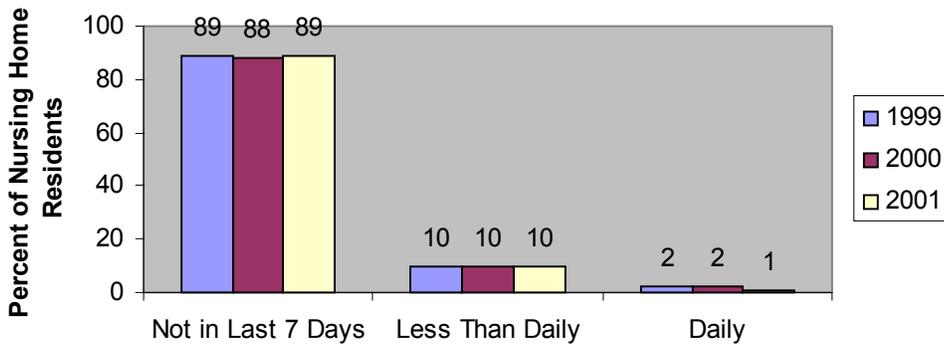
**Figure 178. Abusive Behaviors in Nursing Home Residents by Year - PAC: Arizona, 1999-2001**



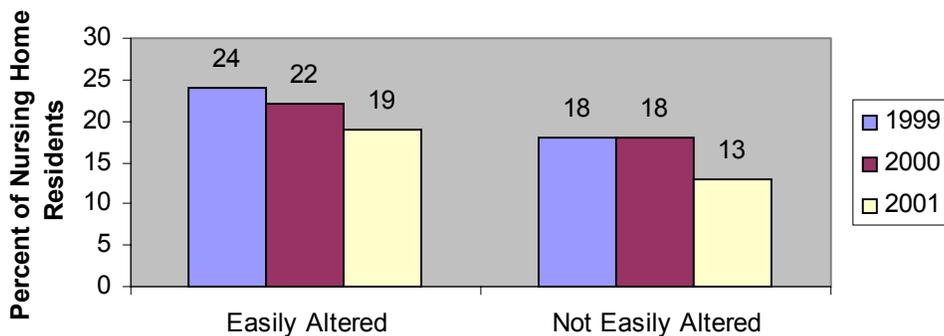
**Figure 179. Socially Inappropriate and Disruptive Behavioral Symptoms in Nursing Home Residents by Year - PAC: Arizona, 1999-2001**



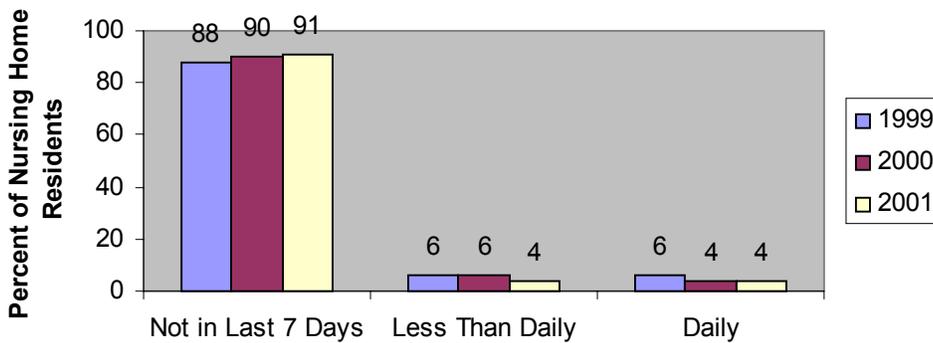
**Figure 180. Resisting Care in Nursing Home Residents by Year - PAC: Arizona, 1999-2001**



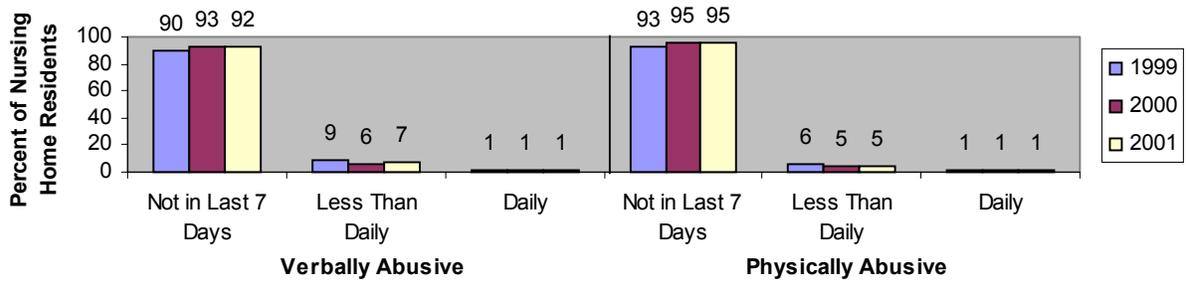
**Figure 181. Depressed, Sad, or Anxious Mood Present in Last 7 Days in Nursing Home Residents by Year - Chronic/PAC: Arizona, 1999-2001**



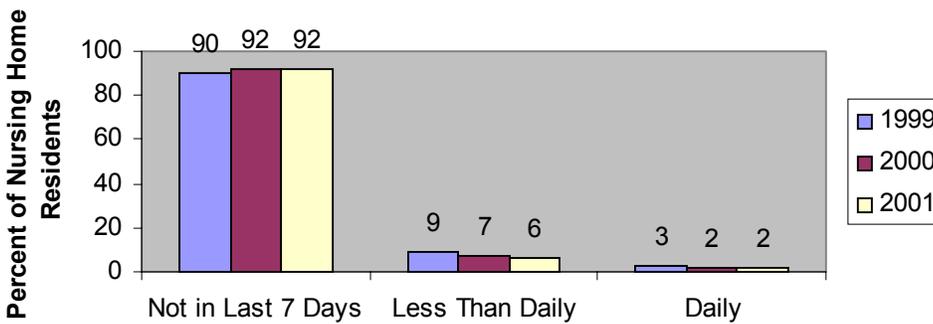
**Figure 182. Wandering in Nursing Home Residents by Year - Chronic/PAC: Arizona, 1999-2001**



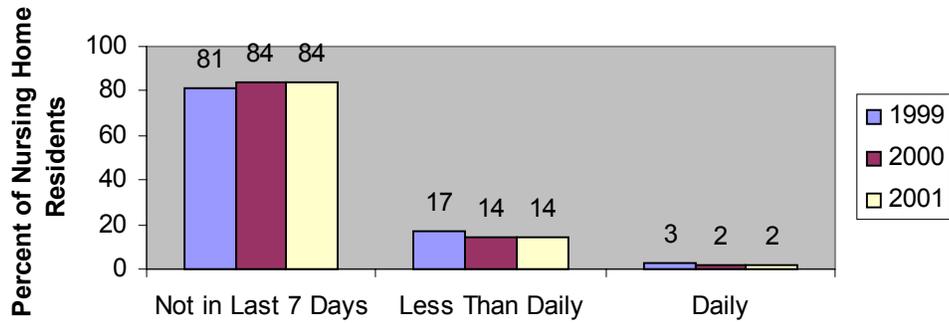
**Figure 183. Abusive Behaviors in Nursing Home Residents by Year - Chronic/PAC: Arizona, 1999-2001**



**Figure 184. Socially Inappropriate and Disruptive Behavioral Symptoms in Nursing Home Residents by Year - Chronic/PAC: Arizona, 1999-2001**



**Figure 185. Resisting Care in Nursing Home Residents by Year - Chronic/PAC: Arizona, 1999-2001**



## *Physical Functioning*

### Chronic Care Group

- ❑ About 40 percent of chronic care residents in nursing homes on July 1 were independent in bed mobility (i.e., moves, turns, positions self without help or oversight); about one-third required extensive or full assistance. (Figures 186, 187)
- ❑ About one-quarter of chronic care residents were independent in transfers; almost half required extensive or full assistance (Figures 186, 188)
- ❑ Ten percent of chronic care residents were independent in dressing; more than half required extensive or full assistance. (Figures 186, 189)
- ❑ Almost one-fifth of chronic care residents were independent in toilet use; more than half required extensive or full assistance (Figures 186,190)
- ❑ Only two percent of chronic care residents were independent in bathing; almost half required full assistance. (Figures 186, 191)
- ❑ In the chronic care group, more men were independent in bed mobility, transfers, dressing, toilet use, and bathing.
- ❑ In the chronic care group, fewer younger residents were independent in bed mobility and transfers; a greater number of younger residents were totally dependent in transfers, dressing, eating, toilet use, and bathing.
- ❑ The percent of chronic care residents requiring total assistance in dressing and bathing decreased 5 percent between 1999 and 2001.

### Post Hospitalization Group

- ❑ More than one-quarter of post-hospitalization residents in nursing homes on July 1 were independent in bed mobility (i.e., moves, turns, positions self without help or oversight); another 30 percent required extensive or full assistance (Figures 186, 187)
- ❑ About 14 percent of post-hospitalization residents were independent in transfers; over one-third required extensive or full assistance (Figures 186, 188)
- ❑ About 10 percent of post-hospitalization residents were independent in dressing; 40 percent required extensive or full assistance (Figures 186, 189)
- ❑ About 13 percent of post-hospitalization residents were independent in toilet use; more than one-third required extensive or full assistance (Figures 186, 190)

- ❑ Five percent of residents in this group were independent in bathing; about one of five required full assistance. (Figures 186, 191)
- ❑ The percent of post-hospitalization residents requiring extensive assistance in bed mobility, transfers, dressing and toilet use increased 6-8 percent between 1999 and 2001.
- ❑ More men were independent in bed mobility, transfers, dressing, toilet use, and bathing.
- ❑ The percent of residents coming from Maricopa and Pima County requiring extensive assistance in bed mobility, transfers, dressing, and toilet use increased between 1999 and 2001; the percent of residents from the 13 remaining counties requiring extensive assistance in transfers and toilet use increased during the same time.

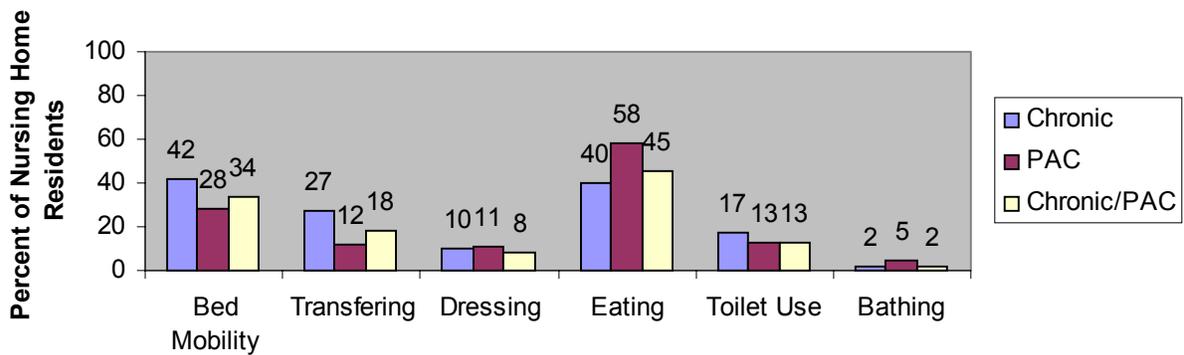
### Residents in Transition

- ❑ A little more than one-third of residents in transition in nursing homes on July 1 were independent in bed mobility (i.e., moves, turns, positions self without help or oversight); another one-third required extensive or full assistance (Figures 186, 187 )
- ❑ About one-fifth of residents in transition were independent in transfers; almost half required extensive or full assistance. (Figures 186, 188)
- ❑ Approximately 9 percent of these residents were independent in dressing; half required extensive or full assistance (Figures 186, 189)
- ❑ About 14 percent of residents in transition were independent in toilet use; more than half required extensive or full assistance (Figures 186, 190)
- ❑ Few residents in this group were independent in bathing; one-third required full assistance (Figures 186, 191)
- ❑ The percent of residents in transition who were independent in bed mobility, transfers, dressing, toilet use, and bathing decreased with age.
- ❑ The percent of residents coming from Pima County requiring extensive assistance in bed mobility, transfers, and dressing, increased between 1999 and 2001.

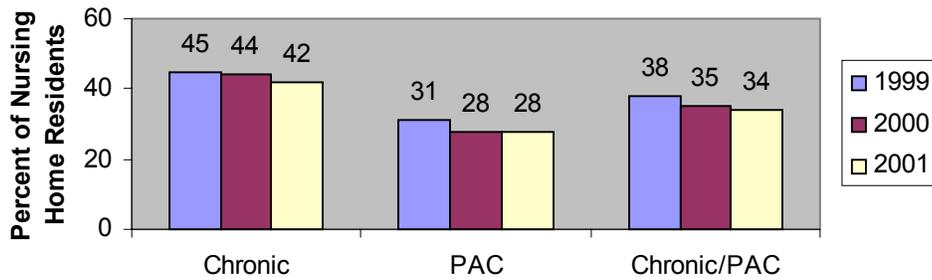
### Comparison Among Groups

Of residents in nursing homes on July 1 of each year, chronic care residents were more likely to be independent in activities of daily living, with the exception of dressing and bathing, than the post-hospitalization or transition residents. More chronic care residents and residents in transition required extensive or total assistance in activities of daily living than post-hospitalization residents. In general, men tended to be more independent in activities of daily living than women. Younger residents in the chronic care group were more likely to require extensive or total assistance with activities of daily living than older chronic care residents.

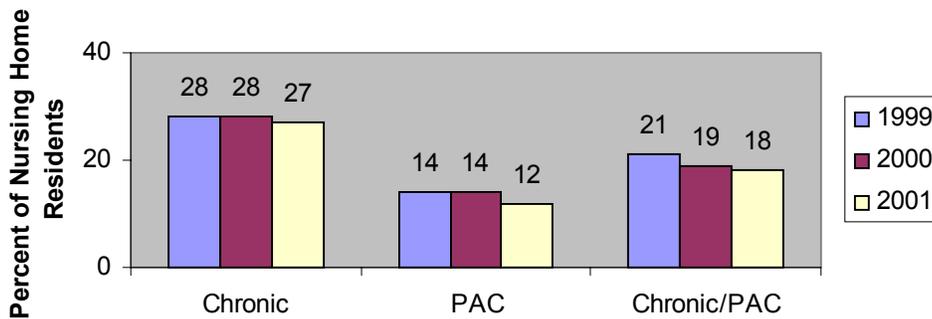
**Figure 186. Independent in Physical Functioning by Patient Type and Year: Arizona, 2001**



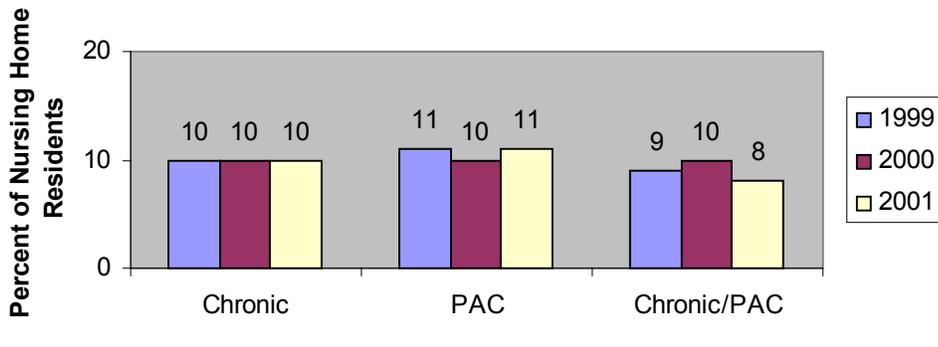
**Figure 187. Independence in Bed Mobility in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



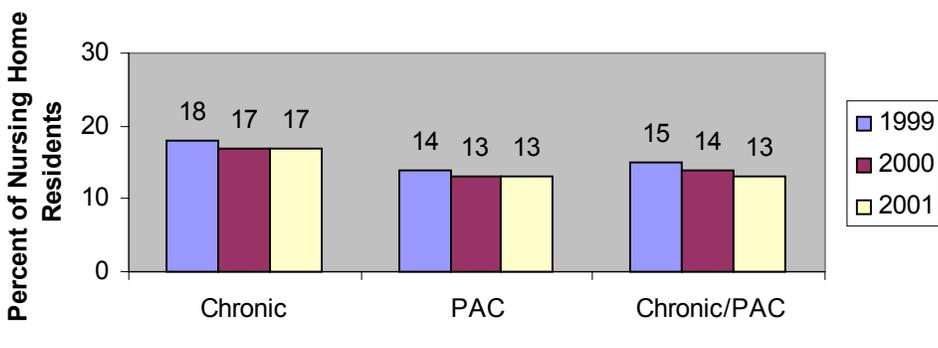
**Figure 188. Independence in Transfer in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



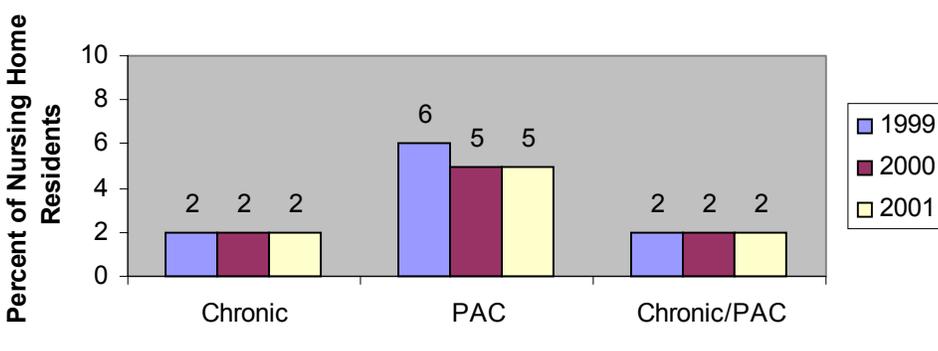
**Figure 189. Independence in Dressing in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



**Figure 190. Independence in Toilet Use in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



**Figure 191. Independence in Bathing in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



## *Continence*

### Chronic Care Residents

- ❑ A little more than one-third of chronic care residents in nursing homes on July 1 were continent of bowel movement, with appliance or continence program, if employed.
- ❑ About half were frequently incontinent of bowel movement or incontinent all or most of the time. (Figure 192)
- ❑ About one-quarter of chronic care residents were continent of bladder function, with appliance or continence program, if employed
- ❑ More than half of chronic care residents were incontinent of bladder function daily or multiple times daily. (Figure 193)
- ❑ Women had a higher percentage of bladder incontinence than men in this group.
- ❑ The percent of residents who were continent of bladder function decreased with age until 75 years and then became stable.
- ❑ The percent of chronic care residents on any scheduled toileting plan increased from 24 percent in 1999 to 36 percent in 2000 and 2001. (Figure 194)
- ❑ The increase in the percent of chronic care residents on any scheduled toileting plan was greater in older chronic care residents than younger residents, greater in White and Black residents than in Hispanic or American Indian residents, and greater in residents from Pima and Maricopa Counties than the other counties.
- ❑ Five percent of chronic care residents had an indwelling catheter. (Figure 195)
- ❑ Men in the chronic care group were more than twice as likely to have an indwelling catheter (9 percent) compared to women in this group (4 percent)
- ❑ Chronic care residents under age 65 were twice as likely to have an indwelling catheter compared to residents over age 65.

### Post Hospitalization Residents

- ❑ Two-thirds of post-hospitalization residents in nursing homes on July 1 were continent of bowel movement, with appliance or continence program, if employed.
- ❑ About 22 percent were frequently incontinent of bowel movement or incontinent all or most of the time. (Figure 192)

- ❑ Approximately two-thirds of post-hospitalization residents were continent of bladder function, with appliance or continence program, if employed.
- ❑ About one in five were incontinent of bladder function daily or multiple times daily. (Figure 193)
- ❑ Both bladder and bowel control decreased with age in post-hospitalization residents.
- ❑ The percent of post-hospitalization residents on any scheduled toileting plan increased from 11 percent in 1999 to 16 percent in 2000 and 20 percent in 2001. (Figure 194)
- ❑ The increase in the percent of post-hospitalization residents on any scheduled toileting plan was greater in residents from Maricopa County than Pima County and the 13 other counties.
- ❑ About one-quarter of these residents had an indwelling catheter. (Figure 195).

### Residents in Transition

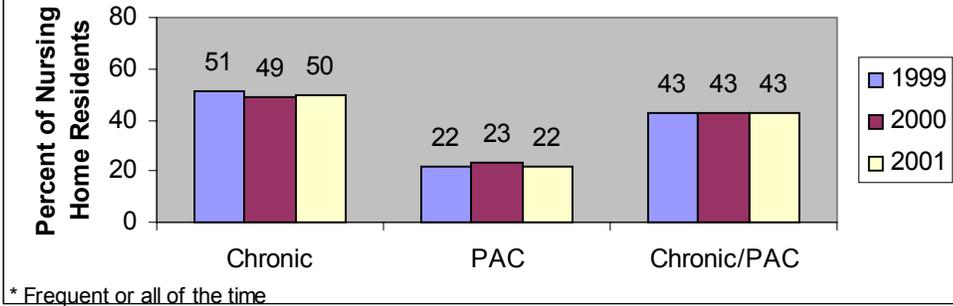
- ❑ About 42 percent of residents in transition in nursing homes on July 1 were continent of bowel movement, with appliance or continence program, if employed.
- ❑ Forty-three percent were frequently incontinent of bowel movement or incontinent all or most of the time. (Figure 192)
- ❑ Almost half of these residents were continent of bladder function, with appliance or continence program, if employed.
- ❑ About 40 percent were incontinent of bladder function daily or multiple times daily. (Figure 193)
- ❑ Women were more likely to have bladder incontinence than men.
- ❑ In residents in transition, bladder and bowel control decreased with age.
- ❑ The percent of residents in transition on any scheduled toileting plan increased from 19 percent in 1999 to 30 percent in 2000 and 2001. (Figure 194)
- ❑ The increase in the percent of residents in transition on any scheduled toileting plan was greater in residents from Maricopa County than Pima County and the 13 other counties.
- ❑ About 16 percent of residents in transition had an indwelling catheter. (Figure 195)
- ❑ The percent of residents in transition with an indwelling catheter decreased with age.

### Comparison Among Groups

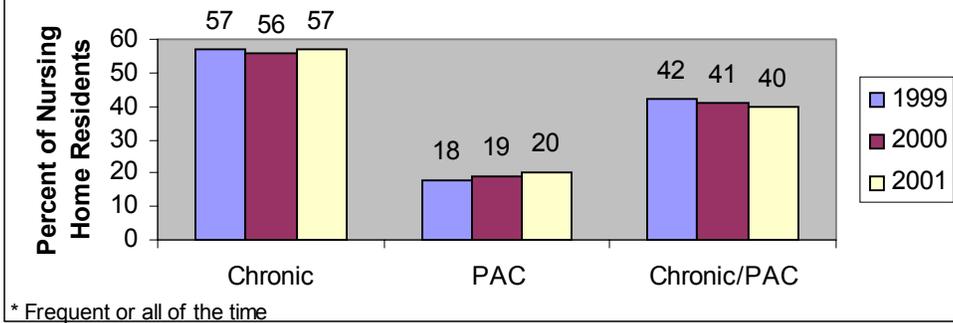
Overall, less than half of nursing home residents on July 1 were continent of bowel and bladder function, with appliance or continence programs, if employed. Chronic care residents had the highest percentage of bladder and bowel incontinence followed by transition residents and then post-hospitalization residents. Residents in the chronic care and transition groups had twice the rate of bladder and bowel incontinence in the post-hospitalization group. The percent of residents on any scheduled toileting plan increased for all groups between 1999 and 2001. Post-hospitalization residents were most likely to have an indwelling catheter. The percent of residents in the post-hospitalization and transition groups with an indwelling catheter was more than three times that of the chronic care group.



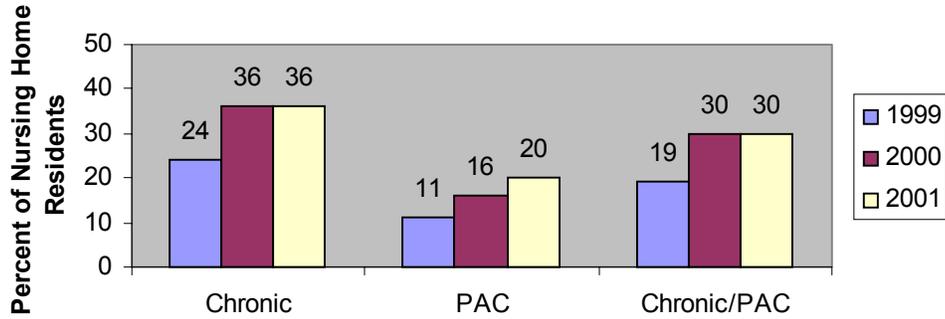
**Figure 192. Bowel Incontinence\* in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



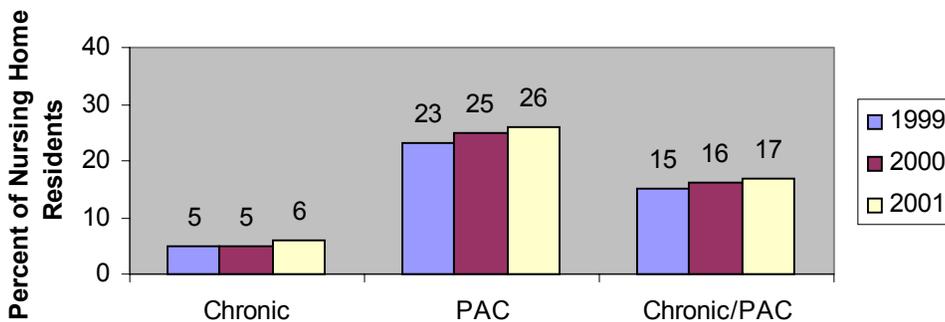
**Figure 193. Bladder Incontinence\* in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



**Figure 194. Any Scheduled Toileting Plan in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



**Figure 195. Indwelling Catheter in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



## *Health Conditions: Pain Symptoms and Accidents*

### Chronic Care Residents

- ❑ About two-thirds of chronic care residents in nursing homes on July 1 did not complain of pain or show evidence of pain.
- ❑ Almost one in five chronic care residents complained or showed evidence of pain daily. (Figure 196)
- ❑ Women in the chronic care group were more likely to complain or show evidence of pain and report more daily pain than men.
- ❑ Of chronic care residents who complained or showed evidence of pain, approximately 40 percent reported mild pain, half reported moderate pain, and 6 percent reported times when the pain was horrible or excruciating. (Figure 197)
- ❑ About 13 percent of chronic care residents fell in the past 30 days; one quarter fell in the past 31 to 180 days. (Figures 198, 199)

### Post Hospitalization Residents

- ❑ About one-third of post-hospitalization residents in nursing homes on July 1 did not complain of pain or show evidence of pain.
- ❑ About 41 percent of post-hospitalization residents complained or showed evidence of pain daily. (Figure 196)
- ❑ Women in the post-hospitalization group were more likely to complain or show evidence of pain and report more daily pain than men.
- ❑ Reports of pain in the post-hospitalization group decreased with age
- ❑ Of post-hospitalization residents who complained or showed evidence of pain, approximately one-fifth reported mild pain, 62 percent reported moderate pain, and 18 percent reported times when the pain was horrible or excruciating. (Figure 197)
- ❑ About one-third of post-hospitalization residents fell in the past 30 days; 12 percent fell in the past 31 to 180 days. (Figures 198, 199)
- ❑ Women in the post-hospitalization group had a higher rate of falls than men.
- ❑ Older residents in the post-hospitalization group had a higher rate of falls than younger residents.

### Residents in Transition

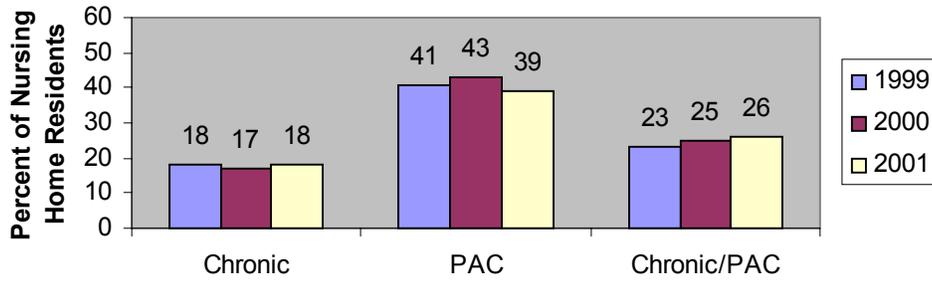
- ❑ About half of residents in transition did not complain of pain or show evidence of pain.
- ❑ Women in the transition group were more likely to complain of pain than men.
- ❑ About one-quarter of these residents complained or showed evidence of pain daily. (Figure 196)
- ❑ The percent of younger residents (under age 65) who complained or showed evidence of daily pain increased more between 1999 and 2001 than residents in the older age groups.
- ❑ Of residents in transition who complained or showed evidence of pain, a little more than one-quarter reported mild pain, about 60 percent reported moderate pain, and 12 percent reported times when the pain was horrible or excruciating. (Figure 197)
- ❑ About one-quarter of residents in transition fell in the past 30 days; 28 percent fell in the past 31 to 180 days. (Figures 198, 199)
- ❑ Older residents in the transition group had a higher rate of falls than younger residents.

### Comparison Among Groups

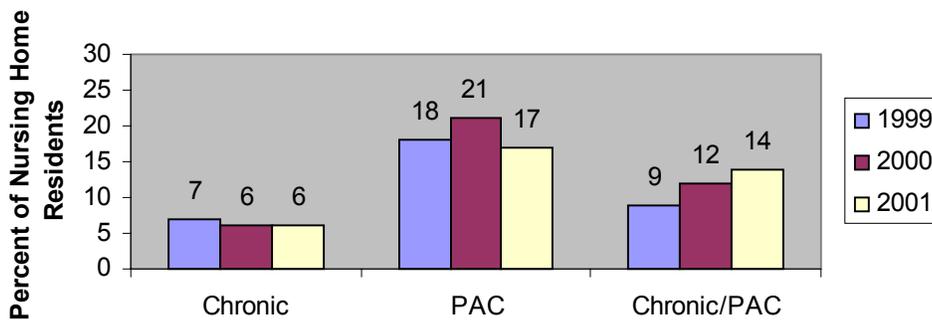
On July 1, about 40 percent of nursing home residents complained or showed evidence of pain. A majority of individuals with pain had moderate pain. A substantial number (10 percent) reported that their pain was horrible or excruciating at times. About 70 percent of post-hospitalization residents complained or showed evidence of pain compared to half of residents in transition and 35 percent of chronic care residents. Post hospitalization residents had a substantially higher rate of daily pain and reported more times with horrible and excruciating pain than the other groups. Almost one of five post-hospitalization residents complained or showed evidence of times of horrible or excruciating pain at admission compared to 12 percent of residents in the transition group and 6 percent of residents in the chronic care group.

On July 1 of each year, about one-fifth of nursing home residents fell in the past 30 days. The post-hospitalization and transition resident groups had greater percentages of residents with falls in the past 30 days than the chronic care group. In contrast, the transition group and chronic care groups had higher rates of falls in the past 31 to 180 days than the post-hospitalization group.

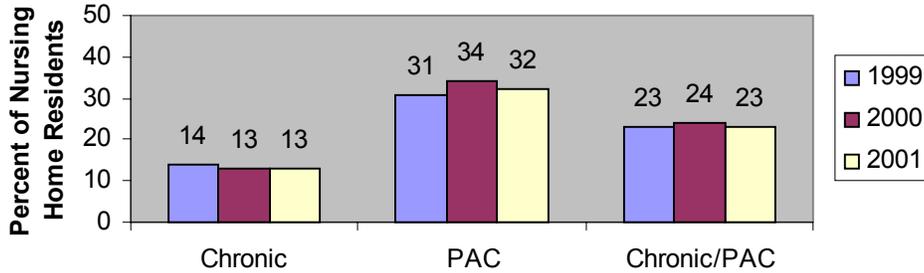
**Figure 196. Daily Pain in Past 7 Days in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



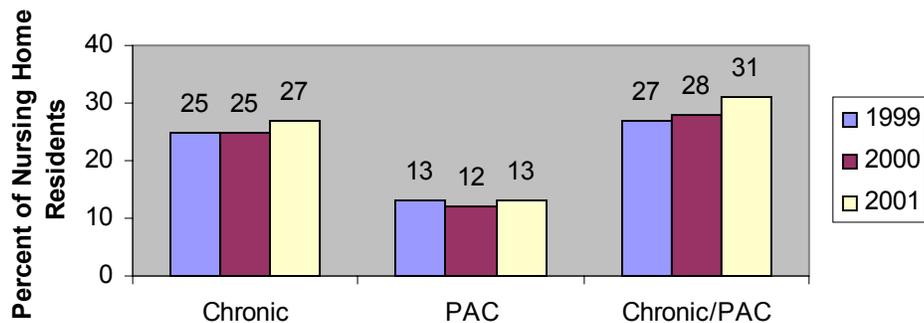
**Figure 197. Intensity of Pain (Horrible or Excruciating) in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



**Figure 198. Falls in Past 30 Days in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



**Figure 199. Falls in Past 31-180 Days in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



## *Oral and Nutritional Status*

### Chronic Care Residents

- ❑ About 8 percent of chronic care residents in nursing homes on July 1 had 5 percent or more weight loss in the last 30 days or 10 percent or more weight loss in the last 180 days. (Figure 200)
- ❑ Four percent of chronic care residents had a feeding tube. (Figure 201)
- ❑ The percent of chronic care residents with a feeding tube decreased with age; residents under 50 years of age had the greatest percent with a feeding tube, however the percent of residents in this age group with a feeding tube decreased from 22 percent in 1999 to 16 percent in 2001.
- ❑ Black chronic care residents were most likely to have a feeding tube (11 percent), followed by Hispanic residents (6 percent), American Indian residents (5 percent) and White residents (3 percent).

### Post Hospitalization Residents

- ❑ Approximately 17 percent of post-hospitalization residents in nursing homes on July 1 had 5 percent or more weight loss in the last 30 days or 10 percent or more weight loss in the last 180 days; the percent of post-hospitalization residents with weight loss decreased from 20 percent in 1999 to 14 percent in 2001. (Figure 200)
- ❑ More male post-hospitalization residents had lost weight than female residents; the percent of women with weight loss decreased from 19 percent in 1999 to 11 percent in 2001.
- ❑ For most age groups, the percent of post-hospitalization residents with weight loss decreased from 1999 to 2001.
- ❑ About 8 percent of post-hospitalization residents had a feeding tube. (Figure 201)
- ❑ The percent of post-hospitalization residents with a feeding tube decreased with age; residents under 50 years of age had the greatest percent with a feeding tube.
- ❑ About 12 percent of Hispanic post-hospitalization residents had a feeding tube compared with 7 percent of White residents. The number of post-hospitalization residents in the other ethnic groups was too small to report.

### Residents in Transition

- ❑ Approximately 15 percent of residents in transition in nursing homes on July 1 had 5 percent or more weight loss in the last 30 days or 10 percent or more weight loss in the last 180 days. (Figure 200).

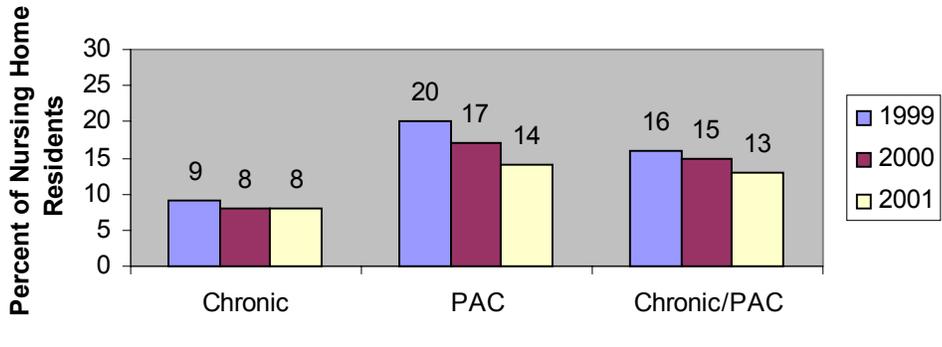
- ❑ Nine percent of residents in this group had a feeding tube. (Figure 201)
- ❑ A higher percentage of men in the transition group (13 percent) had a feeding tube than women (7 percent).
- ❑ The percent of transition group residents with a feeding tube decreased with age; residents under 50 years of age had the greatest percent with a feeding tube and the number of residents this age with a feeding tube increased from 21 percent in 1999 to 27 percent in 2001.

### Comparison Among Resident Groups

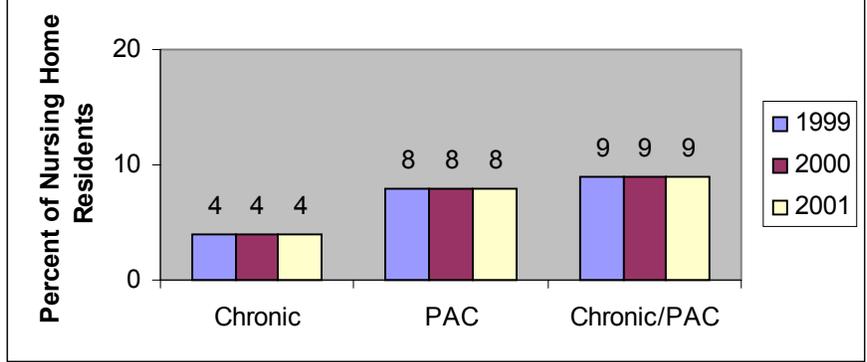
About 1 in 10 residents in nursing homes on July 1 had lost weight in prior months. More residents in the post-hospitalization and transition groups had lost weight than residents in the chronic care group. About 5 percent of residents had a feeding tube. Residents in the transition and post-hospitalization groups had more than twice the percentage of residents with a feeding tube. Younger residents were more likely to have a feeding tube in all groups.



**Figure 200. Weight Loss in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



**Figure 201. Feeding Tube as a Nutritional Approach in Nursing Home Residents by Patient Type and Year: Arizona, 1999-2001**



## *Skin Condition*

### Chronic Care Residents

- ❑ Chronic care residents in nursing homes on July 1 were more likely to have Stage 2 ulcers than Stage 1, 3, or 4 ulcers. (Figure 202)
- ❑ Two percent of chronic care residents had at least one Stage 1 ulcer; 5 percent had at least one Stage 2 ulcer; and 1 percent had at least one Stage 3 or 4 ulcer. (Figure 202)

### Post Hospitalization Residents

- ❑ Post hospitalization residents in nursing homes on July 1 were more likely to have Stage 2 ulcers than Stage 1, 3, or 4 ulcers. (Figure 203)
- ❑ About 10 percent of post-hospitalization residents had at least one Stage 1 ulcer; about 14 percent had at least one Stage 2 ulcer; 3 percent had at least one Stage 3 ulcer, and 5 percent had at least one Stage 4 ulcer. (Figure 203)
- ❑ The percent of post-hospitalization residents with at least one Stage I ulcer increased from 2 percent in the age group 49 years or less to 15 percent in the age group 90 years or older.
- ❑ White post-hospitalization residents were more likely to have at least one Stage 1 ulcer (10 percent) than Black residents (8 percent), Hispanic residents (5 percent), or American Indian residents (2 percent)
- ❑ Black post-hospitalization residents were more likely to have at least one Stage 2, Stage 3, or Stage 4 ulcer than Hispanic, White, or American Indian residents; the percent of Black residents with at least one Stage 2, Stage 3, or Stage 4 ulcer decreased from 1999 to 2001.

### Residents in Transition

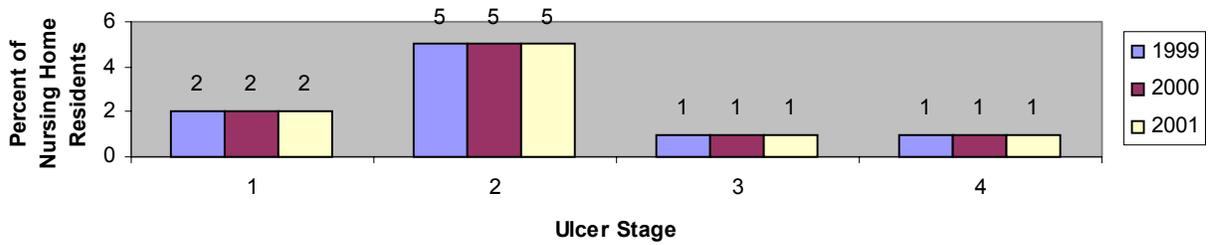
- ❑ Residents in transition in nursing homes on July 1 were more likely to have Stage 2 ulcers than Stage 1, 3, or 4 ulcers. (Figure 204)
- ❑ About 5 percent of residents in transition had at least one Stage 1 ulcer, 12 percent had at least one Stage 2 ulcer; 3 percent had at least one Stage 3 ulcer; and 4 percent had at least one Stage 4 ulcer. (Figure 204)
- ❑ The percent of residents in transition under the age of 50 years with at least one Stage 2, Stage 3, or Stage 4 ulcer increased between 1999 and 2001.
- ❑ American Indian residents in transition were more likely to have at least one Stage 2 or Stage 4 ulcer than Hispanic, White, or Black residents.

### Comparison Among Groups

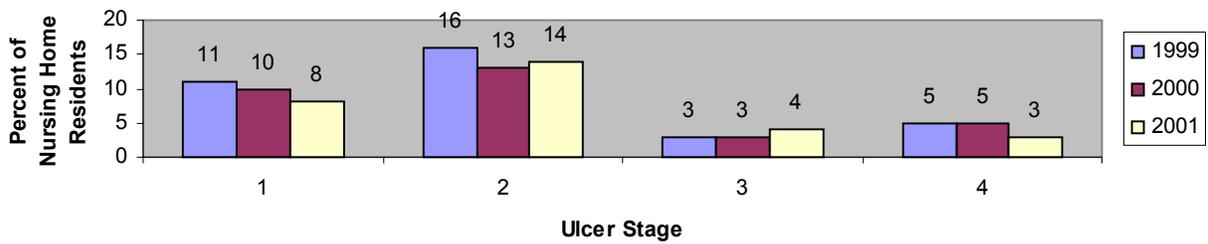
More residents in each group had at least one Stage 2 ulcer than residents with at least one Stage 1, 3, or 4 ulcers. The percent of residents in nursing homes on July 1 with at least one Stage 2 ulcer was greatest in the post-hospitalization group (14 percent), followed by the transition group (12 percent) and the chronic care group (5 percent). Overall, the chronic care group had the lowest percentage of residents with at least one ulcer of any stage. There were variations among ethnic groups in the rate of skin ulcers. In many cases, sample size within age and ethnic groups were too small to report.



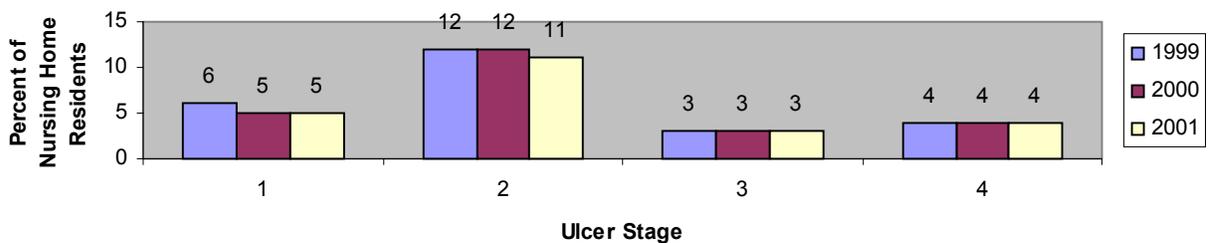
**Figure 202. At Least One Ulcer by Stage in Nursing Home Residents by Year - Chronic: Arizona, 1999-2001**



**Figure 203. At Least One Ulcer by Stage in Nursing Home Residents by Year - PAC: Arizona, 1999-2001**



**Figure 204. At Least One Ulcer by Stage in Nursing Home Residents by Year - Chronic/PAC: Arizona, 1999-2001**



## Medications

### Chronic Care Residents

- ❑ Almost all chronic care residents in nursing homes on July 1 were taking at least one over-the-counter or prescription medication at admission. (Figure 205)
- ❑ Approximately two-thirds of chronic care residents were taking between 5 to 12 over-the-counter or prescription medications; about 11 percent were taking more than 12 medications.
- ❑ The percent of chronic care residents taking 1 to 4 medications decreased between 1999 and 2001; the percent of chronic care residents taking 9 to 12 medications increased during this same time.
- ❑ Between 1999 and 2001, the percent of chronic care residents 65 years and older taking 1 to 4 medications decreased, while the percent of residents 65 to 74 years taking 9 to 12 medications increased during this time.
- ❑ Between 1999 and 2001, the percent of younger chronic care residents (under age 50) taking 5 to 8 medications decreased, while the percent of residents in this age group taking 9 to 12 medications increased.
- ❑ American Indian chronic care residents in nursing homes on July 1 were taking fewer medications than White, Hispanic, or Black residents.

### Post-Hospitalization Residents

- ❑ All post-hospitalization residents in nursing homes on July 1 were taking at least one over-the-counter or prescription medication. (Figure 206)
- ❑ More than two-thirds of post-hospitalization residents were taking between 5 to 12 over-the-counter or prescription medications; almost 20 percent of these residents were taking more than 12 medications.
- ❑ The percent of post-hospitalization residents taking 1 to 4 or 5 to 8 medications was greatest in the youngest (less than 50 years) and oldest (90 years and over) groups; between these age groups, the percent of residents taking 1 to 4 or 5 to 8 medications increased with age.
- ❑ The percent of post-hospitalization residents taking 9 to 12 medications was lowest in the youngest (less than 50 years) and oldest (90 years and over) groups.

### Residents in Transition

- ❑ Almost all residents in transition in nursing homes on July 1 were taking at least one over-the-counter or prescription medication. (Figure 207)

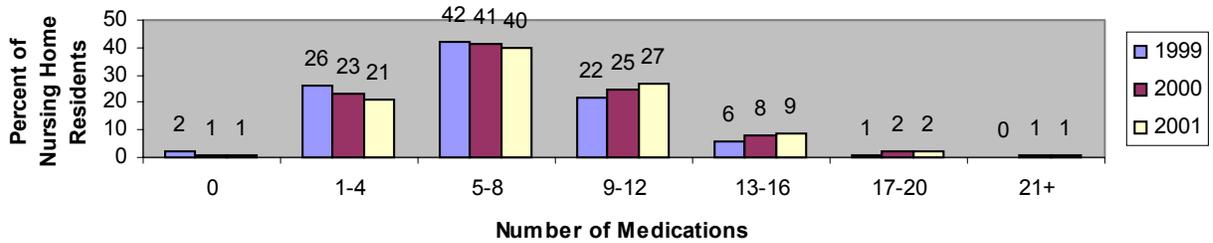
- ❑ More than two-thirds of residents in transition were taking between 5 to 12 over-the-counter or prescription medications; about 13 percent were taking more than 12 medications.
- ❑ The percent of residents in transition taking 9 to 12 medications was lowest in the youngest (less than 50 years) and oldest (90 years and over) groups.
- ❑ The percent of residents in transition on 13 to 16 medications decreased with age.
- ❑ The percent of Hispanic and Black residents in transition taking 8 or less medications decreased between 1999 and 2001, while the percent of these residents taking 9 or more medications increased.

### Comparison Among Groups

Almost all residents in nursing homes on July 1 were taking at least one over-the-counter or prescription medication. About two-thirds of residents in each group were taking 5 to 12 medications. More post-hospitalization residents were taking 12 or more medications (20 percent) than residents in the transition (13 percent) or chronic care group (11 percent). In general, the percent of residents on 1 to 4 medications has been decreasing while the percent of residents on 5 or more medications has been increasing. This varies by age and ethnic groups.

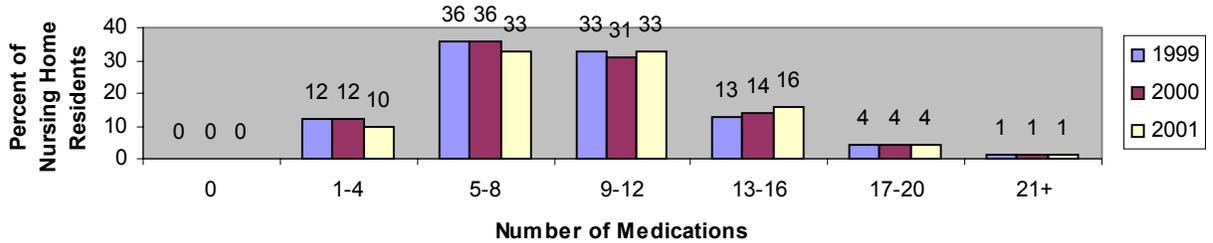


**Figure 205. Medication Usage Among Nursing Home Residents by Year - Chronic: Arizona, 1999-2001**



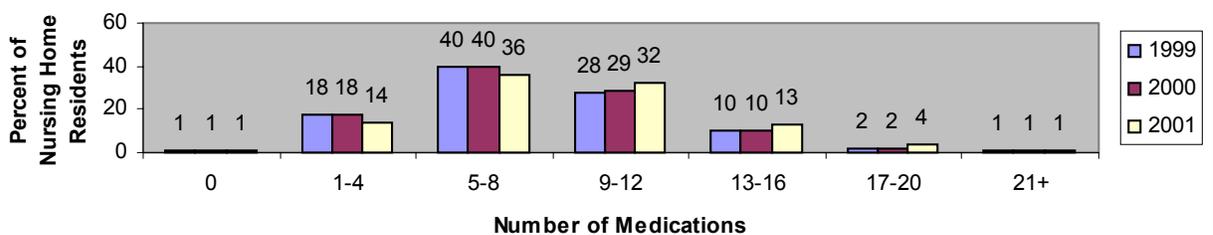
\* Medications include over-the-counter and prescription drugs received in the past seven days.

**Figure 206. Medication Usage Among Nursing Home Residents by Year - PAC: Arizona, 1999-2001**



\* Medications include over-the-counter and prescription drugs received in the past seven days.

**Figure 207. Medication Usage Among Nursing Home Residents by Year - Chronic/PAC: Arizona, 1999-2001**



\* Medications include over-the-counter and prescription drugs received in the past seven days.

## Technical Appendix

### Admission Profile

The Admission Profile describes key demographic, cognitive, psychosocial, physical, and functional indicators from the initial assessment of each resident entering the nursing home during 1999, 2000, and 2001. For nursing home residents with more than one initial assessment during a year, only the initial assessment with the latest MDS completion data was used.

For the admission profile, three types of admission assessments were used:

- ❑ OBRA (Omnibus Reconciliation Act) Admission Assessments required for all nursing home residents in Medicare certified facilities.
- ❑ Medicare PPS (Prospective Payment System) 5-day Assessments required for nursing home stays for which Medicare reimbursement is sought.
- ❑ Medicare PPS 14-day Assessments required for nursing home stays for which Medicare reimbursement is sought.

In order to categorize residents into the three subgroups used in the Profiling Report, the following decision rules were used:

Chronic Care Residents: (1) The admission assessment was an OBRA Admission in which the resident was not admitted from the hospital and not a PPS 5-day or 14-day Assessment and (2) a quarterly or annual assessment occurred within 136 days of the admission assessment.

Post-Hospitalization Residents or Post-acute residents: (1) The admission assessment is an OBRA Admission from the hospital or a PPS assessment (5-day or 14-day) and (2) no quarterly or annual assessment occurred within 136 days of the admission assessment.

Residents in Transition or Chronic/Post-Acute Residents: (1) The admission assessment is an OBRA admission from a hospital or PPS assessment (5-day or 14-day) and (2) a quarterly or annual assessment occurred within 136 days of admission.

The rationale for using a 136-day window for categorizing residents was based on the time requirement for completing quarterly assessments with a brief amount of time built in for possible delays in submission of MDS data. (Quarterly assessments are completed at 92 days after nursing home admission and submitted within 30 days of completion. Two weeks were added to provide a flexible window).

### Cross-sectional Profile

The cross-sectional profile describes the characteristics of individuals residing in the nursing home on July 1 of each year. In comparison to the admission profile, which describes residents upon their entry into the nursing home, the cross-sectional profile provides a snapshot of all residents in the nursing home at one point in time. The cross-sectional profile was drawn from the MDS assessment completed closest to July 1 of each year.

Creating the database for the cross-sectional profile was done in three steps. In Step 1, all residents in a nursing home on July 1 were identified. In Step 2, the closest assessment to July 1 was identified for each resident. Finally, in Step 3, residents were categorized in one of the three resident groups using the same decision rules noted above.

**Step 1: Identifying Patients in a nursing home on July 1**

Before determining if an individual was a resident on July 1, each person was classified into one of six groups. Since separate classifications are done for each year, a person may be in different groups during 1999, 2000 and 2001. The six groups are described below:

1. *A person had an assessment completed on July 1:* All of these people were included as residents on July 1, even if they were discharged on July 1.
2. *A person had one or more assessments completed after July 1, but none before July 1:* People in this group whose first assessment after July 1 is close to July 1 were considered patients on that date. The criteria for classifying an assessment as close to July 1 varied with the type of assessment.

<u>Assessment Type</u>	<u>Date of Entry or Reentry</u>
Initial	Before July 1 and no more than 14 days before the effective date.
Discharge	Before July 1 and no more than 14 days before the effective date.
Quarterly	Before July 1 and no more than 136 days before the effective date.

If a person’s first assessment after July 1 met any of the above three cases, then they were included as a resident on July 1.

3. *A person had one or more assessments completed before July 1, but none after July 1:* Although some people within this group were patients on July 1, we were unable to identify them as such. A possible scenario is where the patient was discharged after July 1, but the last assessment was before July 1, since no discharge form was completed. All patients within this group were excluded from cross-sectional analysis.
4. *A person had assessments completed prior to and after July 1, and the prior assessment was a discharge form:* If the date of entry or reentry in the subsequent assessment was prior to July 1, but after the effective date of the previous discharge form, then the person was included as a resident on July 1.
5. *A person had assessments prior to and after July 1, the prior and subsequent assessments closest to July 1 were more than 136 days apart, and the prior assessment was not a discharge form:* Decision rules were defined for each combination of prior and subsequent assessments.

6. *A person has assessments prior to and after July 1, the prior and subsequent assessments closest to July 1 were within 136 days of each other, and the prior assessment was not a discharge*

### **Step 2: Identify the Closest Assessment to July 1 for Each Resident**

The closest assessment to July 1 was selected for each resident. If the prior and subsequent assessments closest to July 1 were the same number of days from July 1, the subsequent assessment was used.

### **Step 3: Categorizing Residents within Subgroups**

Residents were categorized in one of the three resident groups using the same decision rules as in the Admission Profile.