

Depressed Mood and Mental Health Among Elderly Medicare Managed Care Enrollees

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INTRODUCTION

Mental and physical health and functioning are intrinsically linked, and this relationship has distinct implications for the delivery of health care to elderly Medicare beneficiaries. Depressive symptoms are associated with an increased risk of physical decline, disability, and mortality (Covinsky et al., 1999; Oslin et al., 2000; and Penninx et al., 1998). The association between chronic illness and depression is well documented. Chronic conditions, such as myocardial infarction and stroke, are associated with a higher risk of depression (Whyte et al., 2004). Among patients with coronary artery disease, symptom burden and physical limitations are associated with a higher prevalence of depressive symptoms (Ruo et al., 2003). Among diabetics, instability of blood sugar levels is associated with fluctuations in mood and mental functioning. (Sommerfield, Deary, and Frier, 2004). Disability is also associated with an increased risk of depression. Thus, in order to optimize both physical and mental health outcomes, improved management of both physical and mental illness is essential.

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Although improved management of depression in clinical practice improves physical functioning (Callahan et al., 2005), the quality of care for depression in Medicare managed care has been shown to be suboptimal (Virnig et al., 2004). Furthermore, there are racial disparities in both the prevalence of depressive disorders and in the quality of depression care (Strothers et al., 2005). The quality of care for mental illness and depression has been found to be poorer for minority managed care enrollees than for White enrollees (Virnig et al., 2004). Additionally, the higher prevalence of depression among Hispanics and Black enrollees can be attributed to their higher burden of chronic illness and worse access to care (Dunlop et al., 2003).

Using data from the Medicare Health Outcomes Survey (HOS), we profile the mental health status of Medicare beneficiaries enrolled in managed care by examining the association between two measures of mental health: depressed mood and the mental component summary (MCS) score of the RAND® 36-Item Health Survey (RAND® SF-36¹) and sociodemographic characteristics, comorbidity, and disability. The HOS is designed to assess the physical functioning and mental well-being of Medicare managed care beneficiaries. Beginning in 1998 and continuing annually, a Medicare HOS baseline cohort is created from a random sample of 1,000 members from Medicare Advantage (MA) plans in

¹ The RAND® 36 Item Survey 1.0 was developed at RAND® as part of the Medical Outcomes Study and is used with permission.

the United States. In plans with fewer than 1,000 Medicare members the sample consists of the entire enrolled Medicare population that meets the inclusion criteria. The data collection protocol includes a combination of multiple mailings and telephone followup (over a period of approximately 4 months). The complete data collection protocol can be found in the Health Plan Employer Data and Information Set (HEDIS®) specifications (National Committee for Quality Assurance, 2000).

In these analyses, a completed survey was defined as having a calculable physical component summary (PCS), and MCS score at baseline, using the 1998 norm-based standard scoring algorithm (Ware and Kosinski, 2001; Ware and Sherbourne, 1992). Depressed mood was defined as an affirmative response to the following item: "In the past year have you felt depressed or sad much of the time?" The following figures are based on the responses of 274,687 community-dwelling individuals age 65 or over enrolled in Medicare managed care who participated and were self-respondents to the Cohorts II and III baseline surveys. Proxy respondents (individuals who completed the survey questionnaire for the beneficiary, or who assisted the beneficiary with completion of the questionnaire) were excluded. The sample is 57.2 percent female, with a mean age of 73.7 (standard deviation [SD], 6.0), and a mean MCS score of 52.7 (SD, 9.7).

Sociodemographic factors (older age, female sex, low income, lower levels of educational attainment, and Black, Hispanic, or Native American ethnicity), health status (number of physical chronic conditions), functional status (activities of daily living [ADLs] limitations), and insurance status (dually eligible²) are associated with a higher prevalence of depressed mood. While

females in general are more likely to report depressed mood than males, the prevalence of depressed mood among males age 85 or over increases and is nearly identical to that for females in that age group. One in five females with less than an eighth grade education, and close to one in five females with annual household incomes less than \$10,000, and Hispanic or Native American females report depressed mood. Among enrollees reporting four or more chronic conditions, 22 percent of females and 17 percent of males who report having a depressed mood, compared to 5 percent of females and 3 percent of males report no chronic conditions. Among enrollees reporting three or more ADL limitations, 30 percent of females and 26 percent of males report feeling depressed much of the time in the last year. Among dually eligible enrollees, 23 percent of males and 26 percent of females reported depressed mood compared to 8 percent of males and 12 percent of females who are not dually eligible (data not shown).

Mean MCS scores among elderly Medicare enrollees are somewhat higher than those for the general U.S. population. However, MCS scores vary by demographic characteristics, health and functional status, and insurance status. Mean MCS scores are lowest among enrollees reporting low income, low levels of educational attainment, four or more chronic conditions, or three or more ADL limitations, as well as the dually eligible enrollees. For example, respondents reporting three or more ADL limitations have mean MCS scores that are 10 points or one full SD lower than respondents reporting no ADL limitations. Patterns of association for MCS scores differ somewhat from those for depressed mood for some population subgroups because factors other than depression contribute to mental health, and because there may be differences in report-

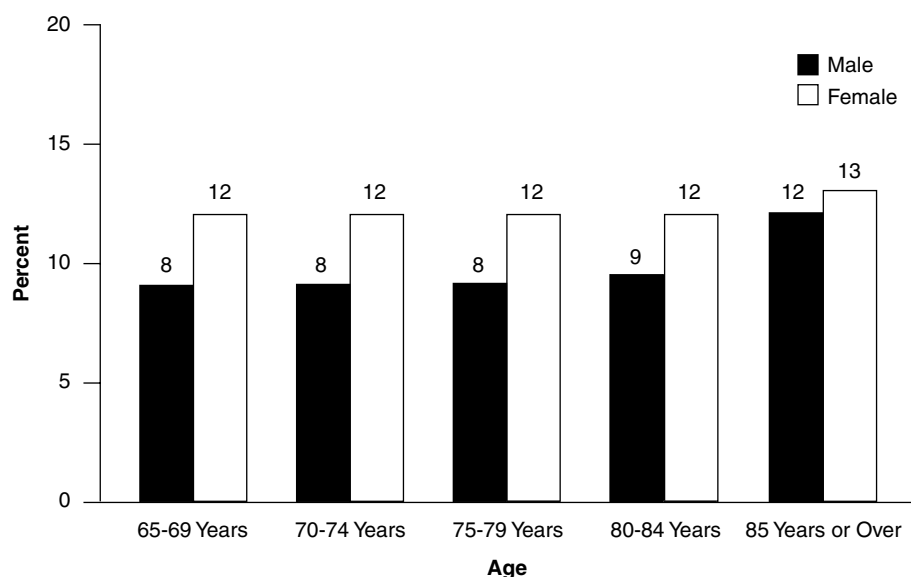
² Dually eligible individuals are eligible for both Medicare and Medicaid.

ing of depressed mood by different population subgroups. For example, females may be more willing to report depressed mood than males. While females report a higher prevalence of depressed mood than males, differences in MCS scores by sex are small. Likewise, while Black, Hispanic, and Native American respondents are more likely to report depressed mood than White and Asian respondents, there are only small differences in mean MCS scores associated with race and ethnicity.

There is a growing evidence base for interventions to improve the quality of depression care in general medical practice. Specific interventions have been shown to result in improved physical and

mental health outcomes, and to reduce racial and ethnic disparities in outcomes of care (Miranda et al., 2003; Wells et al., 2004). Our findings illustrate the potential benefit that may be derived from identifying and treating high-risk enrollees for depression. Further research is needed on the impact of improved management of other mental health conditions on physical and mental functioning, as well as the impact of improved management of chronic conditions and associated symptoms on mental functioning. Effective models are needed to better integrate mental health and medical services for elderly Medicare beneficiaries, as well as evaluation of the cost effectiveness of these strategies.

Figure 1
Percent of Beneficiaries Reporting Depressed Mood, by Age and Sex: 1999-2000

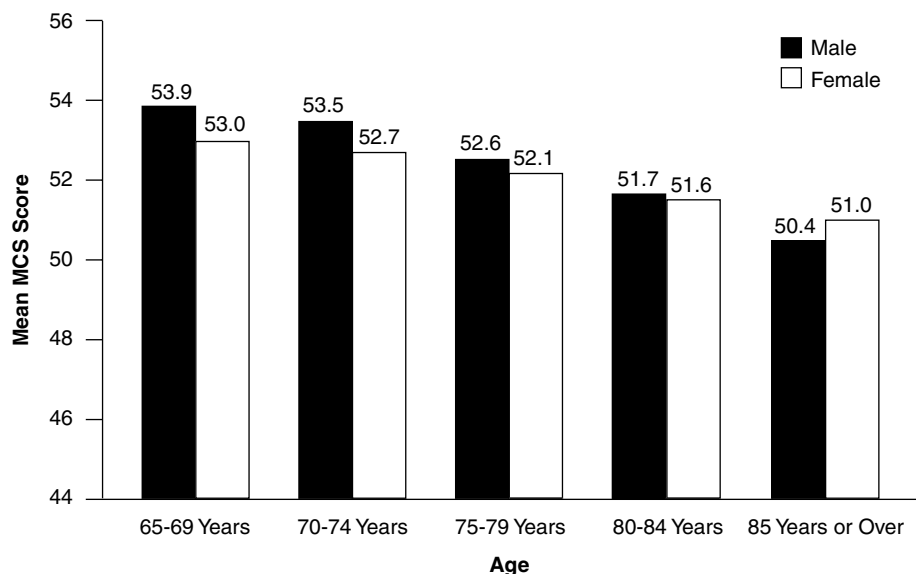


NOTE: N=274,687.

SOURCE: Centers for Medicare & Medicaid Services: Data from the Medicare Health Outcomes Survey, Cohorts II and III, 1999-2000.

- Among managed care enrollees age 65-84, females are more likely to report depressed mood than males.
- One of eight female enrollees age 65 or over reports feeling depressed much of the time in the last year.
- The proportion of males reporting depressed mood increases among enrollees age 85 or over, and nears the proportion of females in that age group who report depressed mood (12 versus 13 percent).

Figure 2
Mean Mental Component Summary (MCS) Scores, by Age and Sex: 1999-2000

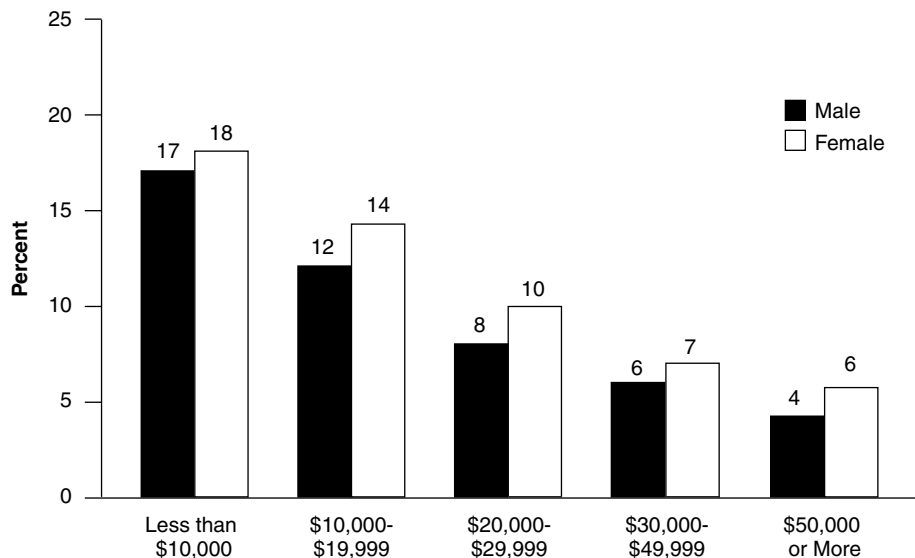


NOTE: N=274,687.

SOURCE: Centers for Medicare & Medicaid Services: Data from the Medicare Health Outcomes Survey, Cohorts II and III, 1999-2000.

- In all age groups, elderly managed care enrollees have mean MCS scores that are higher than or equal to the mean MCS score of the general U.S. population (50).
- Mean MCS scores decline slightly with age. The difference in mean MCS scores between the youngest and oldest age groups is 3.5 points for males and 2 points for females.
- Although females between ages 65-84 are more likely to report depressed mood than males, differences in mean MCS scores between males and females are less than 1 point for all age groups.
- Males age 85 or over have the lowest mean MCS scores.

Figure 3
Percent of Beneficiaries Reporting Depressed Mood, by Annual Household Income and Sex:
1999-2000

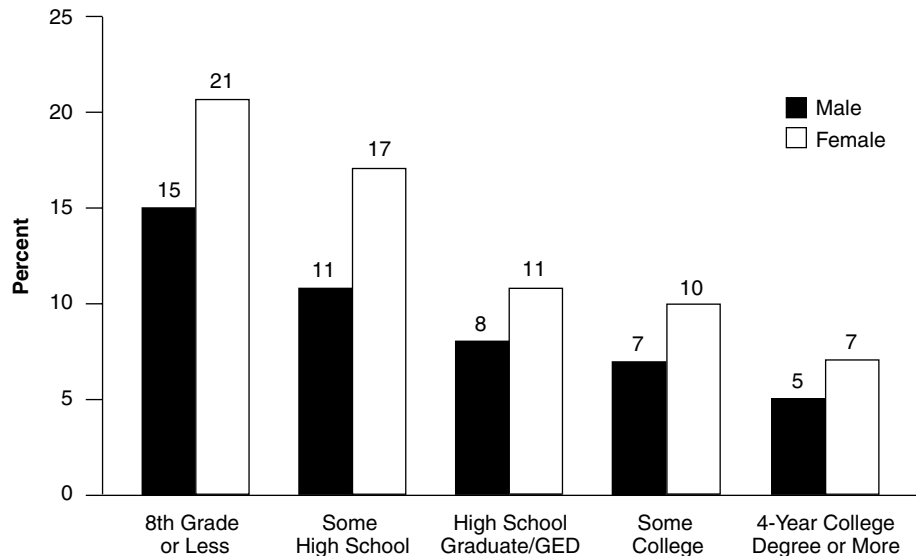


NOTE: N=274,687.

SOURCE: Centers for Medicare & Medicaid Services: Data from the Medicare Health Outcomes Survey, Cohorts II and III, 1999-2000.

- For each decrement in income category, a higher proportion of enrollees report being depressed much of the time in the last year, while for all income groups, females are slightly more likely to report depressed mood than males.
- Males in the lowest income category are four times more likely than males in the highest income category to report depressed mood (17 versus 4 percent).
- Females in the lowest income category are three times more likely than females in the highest income category to report depressed mood (18 versus 6 percent).
- Mean MCS scores for females range from 50.0 to 55.0 across income categories, and mean MCS scores for males range from 49.4 to 55.4 across income categories (data not shown).

Figure 4
Percent of Beneficiaries Reporting Depressed Mood, by Education and Sex: 1999-2000

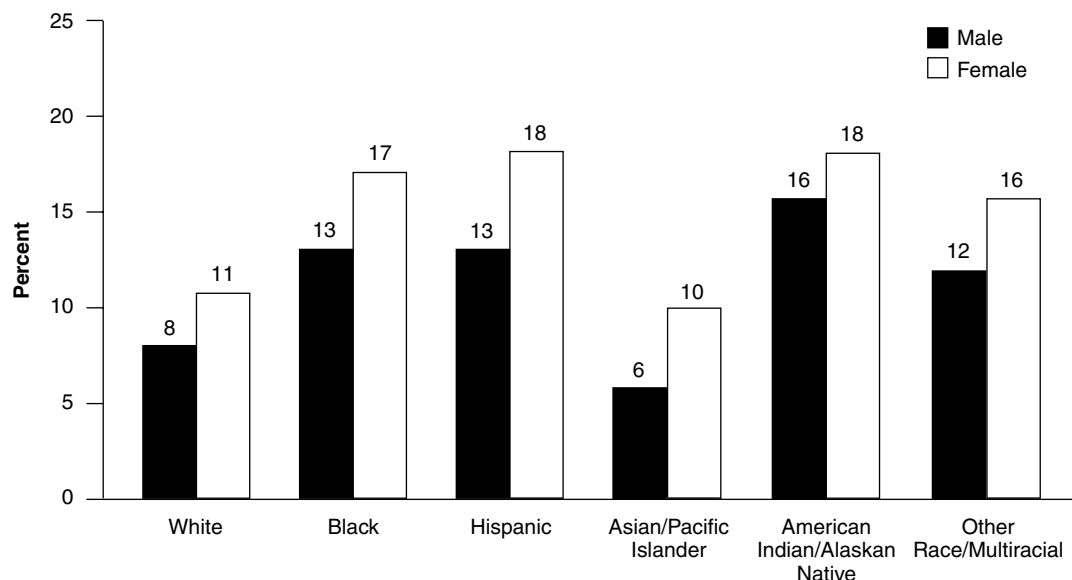


NOTE: N=274,687. GED is general equivalency diploma.

SOURCE: Centers for Medicare & Medicaid Services: Data from the Medicare Health Outcomes Survey, Cohorts II and III, 1999-2000.

- The percent of enrollees reporting depressed mood decreases markedly with higher levels of educational attainment.
- Females are more likely to report depressed mood than males with equivalent levels of educational attainment. However, a similar gradient is seen for both males and females across all levels of education.
- Males and females with less than an eighth grade education are three times more likely to report depressed mood than males and females who have graduated from college.
- Mean MCS scores also increase with higher levels of educational attainment (data not shown).

Figure 5
Percent of Beneficiaries Reporting Depressed Mood, by Race/Ethnicity and Sex: 1999-2000

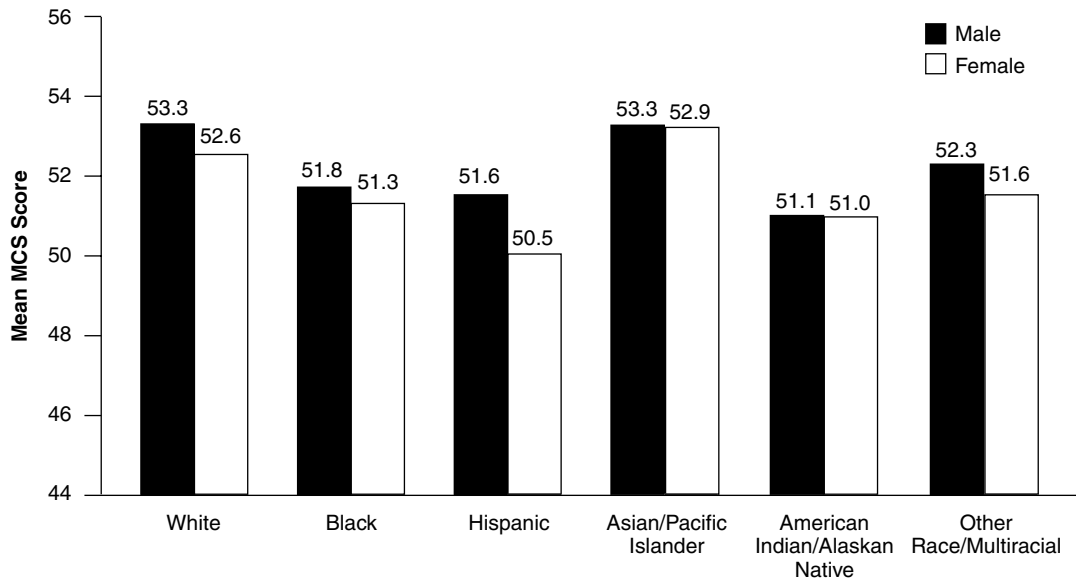


NOTE: N=274,687.

SOURCE: Centers for Medicare & Medicaid Services: Data from the Medicare Health Outcomes Survey, Cohorts II and III, 1999-2000.

- Among all racial and ethnic groups, females are more likely to report depressed mood than males.
- Black, Hispanic, and American Indian/Alaska Native females are most likely to report depressed mood.
- Black, Hispanic, and American Indian/Alaska Native males are more likely to report depressed mood than White and Asian males.

Figure 6
Mean Mental Component Summary (MCS) Scores, by Race/Ethnicity and Sex: 1999-2000

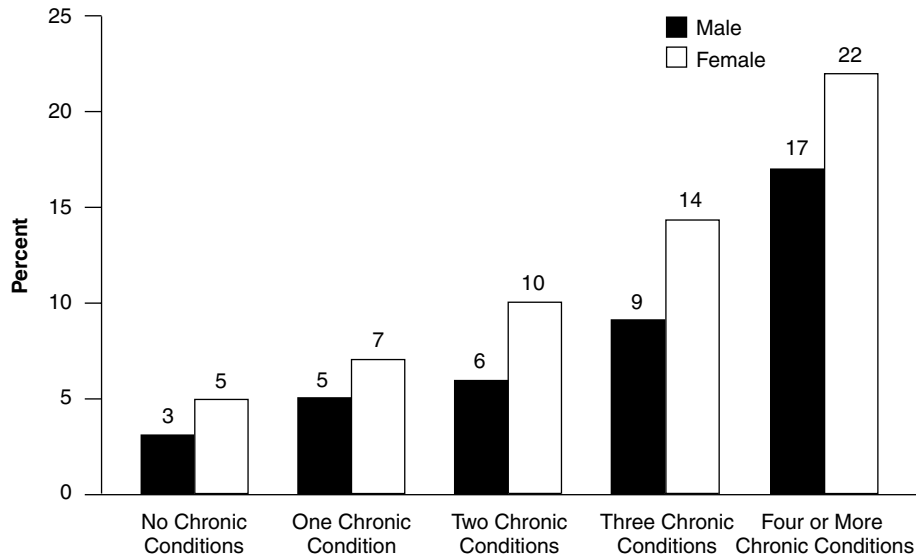


NOTE: N=274,687.

SOURCE: Centers for Medicare & Medicaid Services: Data from the Medicare Health Outcomes Survey, Cohorts II and III, 1999-2000.

- Mean MCS scores for males and females of all racial/ethnic groups are higher than the mean MCS score of the general U.S. population (50).
- Although there are differences in mean MCS scores by race and ethnicity, these differences are very small and do not exceed 2 points on the MCS scale.
- Within racial/ethnic groups, mean MCS scores for males and females are similar.

Figure 7
Percent of Beneficiaries Reporting Depressed Mood, by Number of Chronic Conditions and Sex: 1999-2000

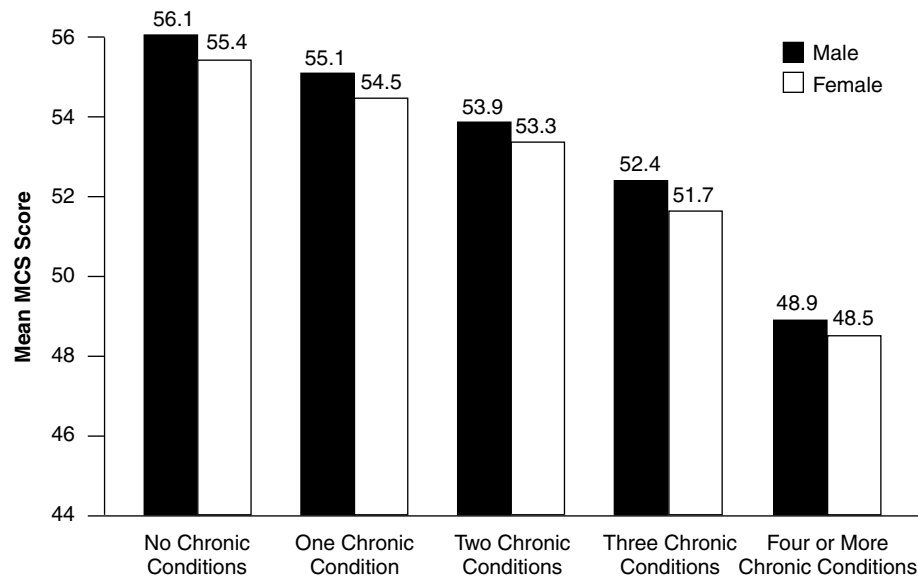


NOTE: N=274,687.

SOURCE: Centers for Medicare & Medicaid Services: Data from the Medicare Health Outcomes Survey, Cohorts II and III, 1999-2000.

- The proportion of enrollees reporting depressed mood increases markedly with increased numbers of reported physical chronic conditions.
- Among enrollees with equivalent numbers of chronic conditions, females are more likely than males to report depressed mood.
- Among enrollees reporting four or more chronic conditions, 22 percent of females and 17 percent of males report having a depressed mood.
- Among enrollees reporting no chronic conditions, 5 percent of females and 3 percent of males report having a depressed mood.

Figure 8
Mean Mental Component Summary (MCS) Scores, by Number of Chronic Conditions and Sex: 1999-2000

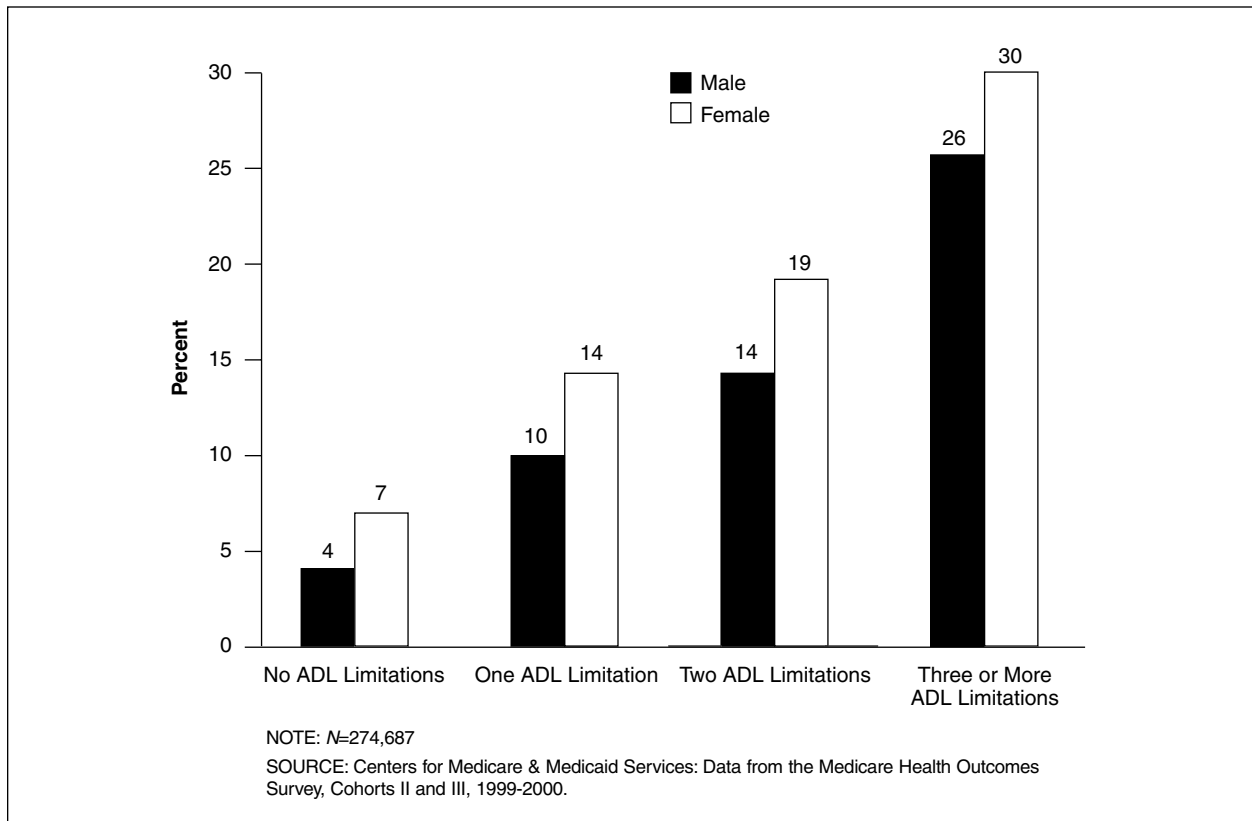


NOTE: N=274,687.

SOURCE: Centers for Medicare & Medicaid Services: Data from the Medicare Health Outcomes Survey, Cohorts II and III, 1999-2000.

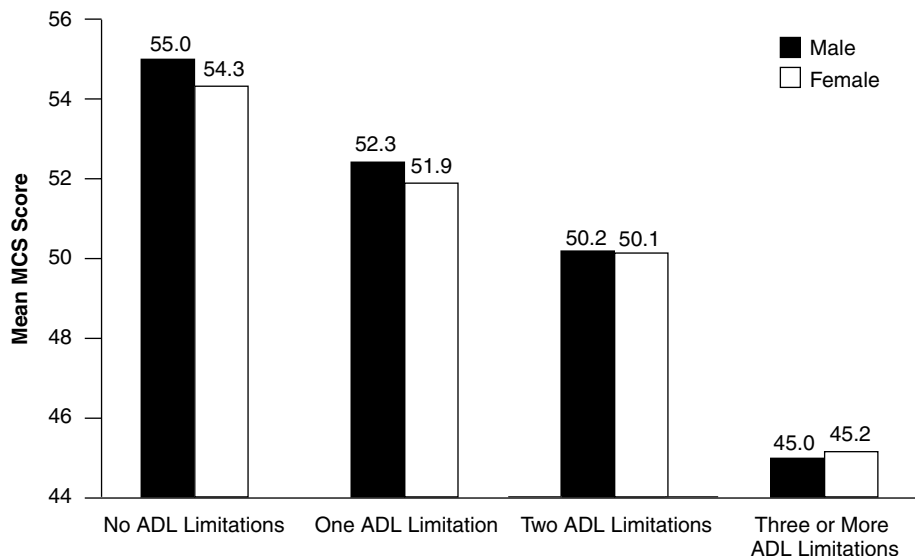
- Mean MCS scores for both males and females decrease with increased numbers of reported chronic physical conditions.
- Among enrollees with equivalent numbers of chronic conditions males and females have similar mean MCS scores.
- Mean MCS scores for males and females with up to three chronic conditions are higher than those for the general U.S. population.
- Males and females reporting four or more chronic conditions have mean MCS scores that are 7.2 and 6.9 points lower, respectively, than males and females reporting no chronic conditions.

Figure 9
Percent of Beneficiaries Reporting Depressed Mood, by Number of Reported Limitations in Activities of Daily Living (ADLs) and Sex: 1999-2000



- The proportion of enrollees reporting depressed mood increases markedly with increased numbers of reported limitations in ADLs.
- Females are more likely than males to report depressed mood across all levels of ADL limitation.
- Among enrollees reporting three or more ADL limitations, 30 percent of females and 26 percent of males report feeling depressed much of the time in the last year.

Figure 10
Mean Mental Component Summary (MCS) Scores, by Number of Reported Limitations in Activities of Daily Living (ADLs) and Sex: 1999-2000



NOTE: N=274,687.

SOURCE: Centers for Medicare & Medicaid Services: Data from the Medicare Health Outcomes Survey, Cohorts II and III, 1999-2000.

- Mean MCS scores for both sexes decrease markedly with increased numbers of reported limitations in ADLs.
- Mean MCS scores for males and females are similar for equivalent levels of ADL limitation.
- Respondents reporting three or more ADL limitations have mean MCS scores that are 10 points or one full standard deviation lower than respondents reporting no ADL limitations.

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