Gender Differences in Health Care Expenditures, Resource Utilization, and Quality of Care

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ABSTRACT

BACKGROUND: Rising health care costs and quality of care concerns require a re-evaluation of various aspects of health care delivery. In order to properly manage costs, payers need to understand how different patient populations contribute to spending trends and where suboptimal quality of care is more prevalent, and, therefore, may drive cost trends.

OBJECTIVE: To demonstrate significant opportunities for improvement in the management of postmenopausal women by highlighting areas of imbalance between health care costs and quality of care.

SUMMARY: Women tend to use significantly more services and spend more health care dollars than men. The greatest disparity in health care spending between men and women has been noted in the population aged 45 to 64 years. In this age group, women's health issues primarily revolve around chronic conditions and menopausal symptoms. With the onset of menopause, the risk of cardiovascular disease (CVD), breast cancer, and osteoporosis increases significantly. However, substantial evidence indicates that there are broad gaps in the quality of care received by postmenopausal women. In some populations, breast cancer screening rates are almost 20% below the national target. Stratification of health plan performance with the National Committee for Quality Assurance/Health Care Effectiveness Data and Information Set (NCQA/HEDIS) measures related to CVD demonstrates gender-based gaps, even when there are no disparities in access to care. The widest gender gap in CVD management is observed with low-density lipoprotein (LDL) cholesterol control rates. In the management of postmenopausal women with a history of fractures, standards of care are met only 19% to 50% of the time. After the age of 45, the majority of women either do not receive any information about menopause from their physicians or they are unsatisfied with the menopause counseling that they do receive. These quality gaps should be considered in light of the high prevalence of chronic illness and costs attributed to these conditions and menopausal symptoms in women.

CONCLUSION: When reviewing strategies for reducing health care costs, managed care organizations (MCOs) should focus on the management of postmenopausal women. With the use of proper screening, preventive care, and therapeutic management in postmenopausal women, an MCO could potentially achieve downstream reduction in overall costs for this population.

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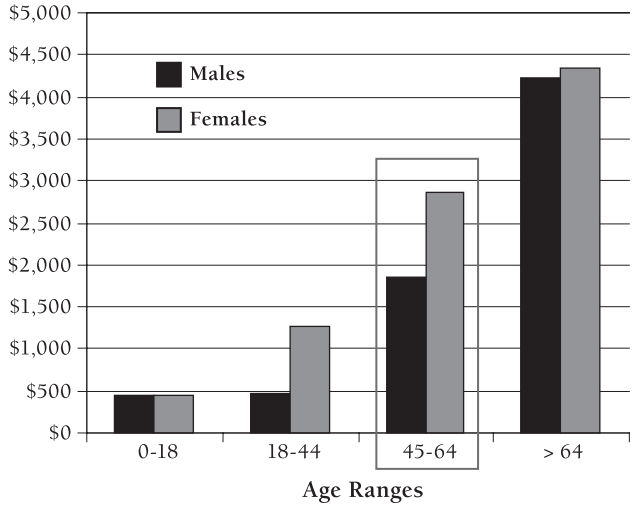
As government and private payers in the United States are trying to balance health care spending and quality, the battle is clearly not being won on either front. The Centers for Medicare and Medicaid Services[1] estimate that from 2000 to 2005 the annual health care spending has increased by an alarming 46.3%. In the next 5 years, health care expenditures are projected to rise by an additional 30.1%.[1] Employer concerns about spiraling health care costs and affordability have led to higher out-of-pocket costs for consumers. For instance, in 2007 while the average annual cost of single coverage was $4,479 and that of family coverage was $12,106, the estimated annual contribution per employee reached $2,000.[2,3] With the nation spending such a large amount of money on health care, it is remarkable that the United States continues to lag behind other countries in quality of care. In order to meet set rates for many basic benchmark measures, the United States would have to improve performance in the areas of health outcomes, quality, access, efficiency, and equity by 50%.[4] The conundrum of rising costs and suboptimal quality requires re-evaluation of various aspects of health care delivery. Payers need to understand how to improve both quality and efficiency in order to reduce costs. The data presented in this article highlight that the imbalance between costs and quality is especially disproportionate in women. Women use more health care resources and generate more costs than men. Yet, they are often receiving a suboptimal quality of care. The objective of this article is to show that there is significant opportunity for improvement in the management of women's health care issues, particularly menopausal women.

Resource Utilization and Spending Attributable to Women

Women's health contributes to the large proportion of resource utilization and costs. Reproductive health generates a sizeable expense at 16% of overall health plan costs, which is more than cardiovascular disease (CVD), diabetes, and asthma combined.[5] In general, women tend to use significantly more services and spend more health care dollars than men. Research spanning several decades shows that in comparison with men, women use more physician services, have more episodes of acute illness, require reproductive care, and need more long-term care over their longer life span.[6] An analysis of Express Scripts' integrated database of medical and pharmacy claims revealed that women contribute to 60% of medical spending and consume 59% of the prescription volume.[5] In addition, women represent the majority of Medicare beneficiaries. As the elderly population ages, the proportion of women increases to 70%.[7] Data from the Medical Expenditure Panel Survey (MEPS) between 1999 and 2001 showed that among privately insured seniors, women spent 17% more per person per year on prescription drugs than men ($1,178 vs. $1,009).[7] It was estimated that the overall prescription

spending in the study population attributable to women was $6.93 billion, whereas spending attributable to men was more than $1 billion less at $5.77 billion. In particular, analgesics, hormones, and psychotherapeutic agents use was found to be higher among women than among men. Earlier findings that women are significant contributors to total medical costs were recently confirmed by Woolhandler et al.[8] in an analysis of the 2003 MEPS data. In the adult population aged 18 to 64 years, the median spending was $847 for males and $1,844 for females. The investigators noted that the greatest disparity in health care spending between men and women was in the population aged 45 to 64 years (Figure 1). In this age group, the median annual per capita expenditures for women were approximately 50% greater than for men ($2,871 vs. $1,849).[8]

FIGURE 1 Median Per Capita Annual Expenditures in 2006 (by Age and Gender)



Source: Woolhandler and Himmelstein.[8]

A Closer Look at Women's Health Issues

Notable gaps in understanding the quality of care received by women attracted national attention more than 15 years ago when the *Journal of the American Medical Association* dedicated an entire issue to women's health. The issue's editorial, written by the current director of the Agency for Health Care Research and Quality (AHRQ), metaphorically referred to women's health as "a patchwork quilt with gaps."[9] Since then, considerable progress has been made in prioritizing women's health. This area has been incorporated into the national policy agenda, and it has become integrated into the mainstream scientific research.[10-12]

Today, clinicians, payers, and health policy experts recognize that women's health extends far beyond the issues of reproductive health and prenatal care. As women approach their mid- to late-forties, the relevance of reproductive health declines, and the importance of general medical conditions, which become more common with increasing age and/or onset of menopause, increases. On average, women enter menopause at age 51.[13] At this time in their lives, the risk of chronic conditions increases substantially. At age 50, women have a 39% risk for developing CVD over the course of their remaining lifetime.[14] The probability of being diagnosed with breast cancer, the most commonly diagnosed cancer in women, increases by almost 40% for those aged 40 to 69 years.[15,16] CVD and cancer are presently the leading causes of mortality in women; these chronic conditions account for 63% of women's deaths in the United States.[15] The risk for developing osteoporosis also increases after menopause. In fact, postmenopausal women comprise the predominant majority of the osteoporotic population.[17] The lifetime risk of fracture after age 50 is 39.7% for Caucasian women, which is 3 times greater than the rate for Caucasian men (13.1%).[18] Finally, menopause itself is associated with symptoms that can significantly diminish a woman's quality of life.[19] The vasomotor symptoms (VMS) of menopause, such as hot flashes, affect more than 75% of women who are aged greater than 50 years.[19]

Considering the disproportionate impact of chronic conditions and menopausal symptoms, it is important to understand the level of focus and quality of care dedicated to these unique health issues in older women.

Disparities and Gaps in the Quality of Care Received by Women

In the past several years, national health care quality and disparities have been closely followed by the AHRQ on an annual basis.[20,21] Key findings demonstrate that significant care gaps still remain. Although 32 of the 42 core quality measures have improved in the past year, the average rate of improvement across all measures remains slow at 3% per year.[20] Care in the hospital setting and management of acute illnesses are improving at a faster rate than preventive care and management of chronic conditions.[20] Furthermore, disparities in quality of care are pervasive, especially for racial and ethnic minorities, people of lower socioeconomic status, and those residing in some geographic regions.[21] Differences in quality of care also have been demonstrated between women and men.[15,21,22] In 2004, the AHRQ reported that compared with men, women received better care for 18% of the measures, worse care for 22% of the measures, and the same level of care for 59% of the measures.[22] When examining specific therapeutic areas, women tend to receive better preventive care for CVD and cancer than men.[22] However, women are less likely to receive colorectal cancer screening.[21] Men tend to receive better treatment for end-stage renal disease and heart disease than women.[22] Racial and ethnic differences in quality of care also exist within the female population.[22] In 2006, the AHRQ found that for services unique to women, African-Americans and Hispanics receive poorer quality of care than Caucasians for 75% of the performance measures.[21]

TABLE Gender Stratification of Health Plan Performance (HEDIS 2005) for Select Measures Related to Cardiovascular Disease

HEDIS Measure	Performance Rate 2005	
	Women	Men
Beta-blocker treatment after myocardial infarction	94.7%	97.0%[a]
LDL cholesterol screening after cardiac event	76.8%	79.9%[a]
LDL cholesterol control (<100 mg per dL) after cardiac event	45.3%	55.0%[a]
Blood pressure control (≤ 140/90 mm Hg)	70.8%[a]	68.6%

[a] *P < 0.05*

HEDIS = Health Care Effectiveness Data and Information Set; LDL = low-density lipoprotein

Source: Chou et al.[32]

Analysis of published literature, along with the data generated by the National Committee for Quality Assurance (NCQA) and the AHRQ reveal that disparities and quality gaps are particularly associated with conditions that are linked with the onset of menopause. The evidence described below highlight the shortcomings in the management and/or prevention of breast cancer, CVD, osteoporosis, and menopausal symptoms in women.

Breast Cancer. According to the AHRQ, the national mammography rate in 2003 nearly reached the target of 70% set by the Healthy People 2010 initiative.[23] However, this threshold was not attained in many subpopulations, including the elderly, the poor, and non-Caucasians.[21,24] Similarly, health plan performance in breast cancer screening in 2006 was considerably higher among commercial and Medicare populations than among the Medicaid population (69% vs. 49%).[25] Suboptimal quality of breast cancer care is also evident from the lack of improvement in the late-stage diagnosis rate and the mortality rate that remains above the goal set for 2010.[23]

CVD. CVD care for women is not receiving sufficient prominence in the U.S. health care system.[12] The available data on a number of measures used to assess the quality of CVD care consistently show that there are substantial gender differences. In the acute care setting, women with myocardial infarction are less likely than men to receive diagnostic or therapeutic procedures, drug therapy, and cardiac rehabilitation.[26-29] These findings are especially alarming considering that myocardial infarction is associated with a greater risk of mortality in women.[14,21] In the outpatient setting, gender disparities are also highly prevalent; for instance in comparison with men, women receive less counseling on diet and exercise.[21] Appropriate cholesterol screening and management is also significantly less common among women than men.[30]

Stratification of health plan performance with the National Committee for Quality Assurance/Healthcare Effectiveness Data and Information Set (NCQA/HEDIS) measures related to CVD support findings of gender-based gaps, even when there are no disparities in access to care.[31,32] In 2003, Bird et al. analyzed gender differences in performance with 6 HEDIS measures related to CVD for a sample of 2.3 million lives covered by 19 commercial and Medicare health plans.[31] Overall, they found small to moderate differences between male and female cohorts. In addition, the extent of disparities in performance varied considerably between different health plans.[31] In 2007, Chou et al. reported the results of a similar analysis that was based on a larger national sample representing 31 health plans.[32] The investigators found that women were less likely to receive treatment and screening recommended after an acute cardiac event (Table). The greatest difference between women and men was observed in the percentage of people with a history of CVD who had low-density lipoprotein (LDL) cholesterol < 100 mg per dL (46.6% vs. 55.1%). Interestingly, women had better blood pressure control rates than men.

Osteoporosis. In the management of postmenopausal women with a history of fractures, physicians tend to adhere to clinical guidelines less than 50% of the time.[33] Moreover, between 1998 and 2001, no improvement has been noted. A HEDIS measure of osteoporosis management in Medicare plans found that only 19% of women aged 67 and older who had a fracture received a bone mineral density test or prescription for a drug to prevent or treat osteoporosis in the 6-month period following the fracture in 2004.[34] In addition, age and racial disparities are prevalent among women in this therapeutic area. Older women are less likely to receive osteoporosis treatment than younger women, even though aging increases the risk of fractures.[35] Screening and treatment rates are also lower among postmenopausal African-American women than Caucasian women.[36] New evidence regarding the quality of osteoporosis management is expected from the Physician Reporting Quality Initiative, a voluntary quality reporting program that has 4 osteoporosis-related measures.[37]

Menopause. Despite the high prevalence of menopausal symptoms, counseling in this area has been found to be largely inadequate. After the age of 45, the majority of women either do not receive any information about menopause from their physicians, or they are unsatisfied with the menopause counseling that they do receive.[38] Even before the release of the Women's Health Initiative (WHI) study on the benefits and risks associated with hormonal therapy, only 38% of women aged 50 years or older reported being counseled by their physician about hormone replacement therapy.[39] In 2000, the NCQA Management of Menopause (MoM) survey was used to evaluate the exposure, breadth, and personalization of menopause counseling provided to women aged 47 to 55 years.[40] The results displayed significant deficits in most aspects of menopause counseling (Figure 2). The overall composite score was 56.8 out of a possible 100. The average woman surveyed received approximately half of the recommended information about treatment options (i.e., breadth) and unique characteristics that may affect her experience (i.e., personalization). In addition, when

counseling was provided, only 33% of the surveyed population felt that they received very high quality menopause information. Considering the confusion among providers and patients created by the findings of the WHI study,[41,42] it is likely that the extent and quality of menopause counseling continued to diminish. Unfortunately, the MoM survey was discontinued in 2002, and the managed care community has no nationally recognized standardized means to assess the current state of menopause counseling.[43]

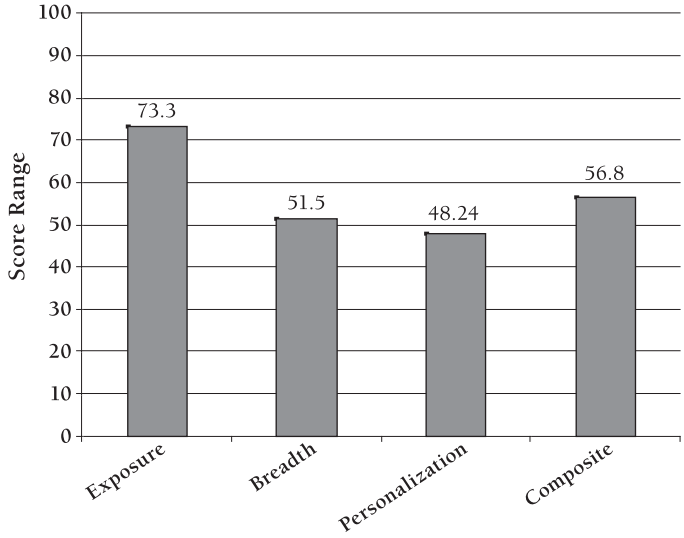
Economic Burden of Chronic Conditions in Postmenopausal Women

As women generate significantly more health care costs than men during the time of menopause and their care might be suboptimal, it is also worthwhile to evaluate how CVD, breast cancer, osteoporosis, and menopausal symptoms affect resource utilization and costs. Costs associated with the management of chronic conditions in employed women aged 50 to 64 years were recently estimated by Sasser et al.[44] The investigators noted that in comparison with the random sample, cohorts of women with CVD, breast cancer, or osteoporosis used more medical services and missed more days of work. Average annual direct costs were significantly higher for women treated for osteoporosis ($6,259), breast cancer ($13,925), and CVD ($12,055) than the cost reported for the random sample ($2,951). Significant increases in indirect costs were also observed with these conditions. Aggregate estimates showed that in 2002, U.S. employers spent approximately $6 billion in overall direct medical spending associated with these conditions. In another analysis, it was determined that the cost of treatment of VMS is approximately $681-$848 per patient per year.[45] Given the high prevalence of these symptoms, the aggregate costs could also be significant. These estimates indicate that women with chronic conditions and menopausal symptoms require close management to ensure efficient and effective use of resources.

Conclusion

In search of strategies for reducing health care costs, U.S. health care payers should focus on the management of postmenopausal women. This population represents a great opportunity for balancing cost and quality of care. Between their late forties and early sixties, women tend to spend 50% more than men on health care. With the onset of menopause, the prevalence and impact of costly conditions increases substantially among women. However, management of CVD, breast cancer, osteoporosis, and menopause in women is often not meeting measurable standards of care. MCOs should focus on this population to ensure efficient and effective use of resources. Proper screening, preventive care, and therapeutic management in postmenopausal women could potentially lead to downstream reduction in overall costs. The following articles will provide a clinical update on the management of postmenopausal women. In addition, management of VMS will be presented as an opportunity for emphasizing overall standards of care in this segment.

FIGURE 2 Management of Menopause Survey Scores Reported in 2000



Source: NCQA 2001 for reporting year 2000.[40]

DISCLOSURES

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