

Are Women Using Postmenopausal Estrogens? A Community Survey

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Abstract: Self-reported estrogen and progestin use in a California community was determined in 1986–87 from a telephone survey of postmenopausal women ($n = 954$) ages 50–65 years. Current use of hormones was reported by 32 percent; 26 percent took estrogens alone while 6 percent used estrogen + progestin. Comparisons pointed to significant social network and medical care utilization differences. Women who used estrogen therapy were younger, thinner, lived in smaller household units, and were less likely to be widowed. (*Am J Public Health* 1990; 80:1266–1268.)

Introduction

Postmenopausal estrogen use has fluctuated in the past three decades, based on changing perceptions of its associated risks and benefits.^{1–11} Currently, estrogens are advocated¹² because of their beneficial effect on serum lipids^{13–16} and their protective effect against osteoporosis^{10,11} and cardiovascular disease,^{17–22} although the risk of cancer with prolonged use remains a concern.^{3,8,9,23} Several studies have examined the effect of these changing perceptions on clinical practice.^{24–26} Physicians in the mid-1980s report prescribing postmenopausal estrogen to far more of their patients than in the 1970s, although they are prescribing lower doses with an added progestin.^{25,26}

We report postmenopausal hormone use in a defined community in 1986.

Methods

Between October 1986–April 1987, a random-digit dial telephone survey was completed of persons ages 50–65 years residing in Sunnyvale, California, a relatively affluent community located at the southern end of the San Francisco peninsula. Only one individual per household was interviewed, with decisions as to whom to interview made using a random allocation procedure. At least five calls were attempted to the household. The phone company estimates that over 97 percent of the households have telephones. The response rate among age-eligible women was over 72 percent.

Postmenopausal women were asked whether they were currently using any prescribed medications and to name the specific medications and dose by reading from the prescription labels. Hormone use was classified by major type of therapy: use of estrogens alone versus use of estrogens plus a progestin. Other questions, adapted from the 1985 National Health Interview Survey,²⁷ determined social and demographic characteristics, use of other medications and alcohol,

exercise and smoking behavior, a brief medical history, and perceptions of current health status. Body mass index (kg/m^2) was calculated from self-reported height and weight.

This report is based on 954 postmenopausal women between ages 50–65 years. Only 45 women were excluded because of missing information on menopausal status or medication use.

Bivariate contingency tables were constructed to assess association between use of estrogens and the interview questions. Multivariate analyses used the logistic model to assess independence of the variables. Adjusted odds ratios and their 95% confidence intervals for estrogen use were calculated from the logistic coefficients and their standard errors²⁸ and to test for statistical significance of age interaction terms.²⁹ The dependent variable was coded as use or nonuse of estrogen hormones. Age and body mass index were modeled as continuous variables. Number of members in the household was an ordinal variable coded 0–6+; other independent variables were coded as presence or absence of the history or event.

Results

In this population, 32.2 percent ($n = 307$) of the women reported current use of postmenopausal estrogens. Of the 307 users, 18 percent (5.9 percent of the total population) reported also taking a progestin. Use was highest in the younger women, with 40.6 percent of women ages 50–54 reporting use compared to 23.1 percent of women ages 60–65 years. The use of progestins also decreased with age, from 9.4 percent of women ages 50–54 years to 2.8 percent of women 60–65 years.

Eighty-three percent of the hormone users identified a specific medication, or a dose if the estrogen was a generic conjugated estrogen. Premarin was the predominately named estrogen (65 percent), followed by the generic conjugated equine estrogens (27 percent). Forty percent of conjugated estrogen users named the .625 mg dosage. Provera accounted for 63 percent of progestin use, with 46 percent of these users naming the 10 mg dose.

Self-reported demographic and health behavior characteristics are shown in Table 1. Users were thinner, reported more regular aerobic exercise, had fewer people living in their households, and were less likely to be a widow than were the nonusers.

There were no differences between users and nonusers in their history of high cholesterol, diabetes, or heart problems (Table 2). Users were less likely to have a history of high blood pressure or stroke, but more frequently reported being under the care of a physician for other medical conditions.

Table 3 shows the results of the multivariate analyses. Age of the woman, body mass index, number of individuals in the household, and widowhood remained independent correlates of postmenopausal hormone use. Other logistic regression models showed history of high blood pressure, aerobic exercise, and presence of other medical conditions were not independently related to the hormone use. In addition, no significant age interactions were demonstrated. Similar analyses were performed to compare estrogen-only use with estrogen + progestin use; age was the only variable independently related to estrogen + progestin use.

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TABLE 1—Descriptive Information on Sociodemographic and Health Behavior Variables for Users and Nonusers of Postmenopausal Hormones in the Sunnyvale Population, 1986

Characteristics	Postmenopausal Hormone	
	Users n = 307*	Nonusers n = 647*
Marital status		
% Married	59.6	59.8
% Widowed	9.1	14.9
% Currently employed	61.2 (304)	58.6 (642)
Education, mean \pm sd	13.7 \pm 2.6	13.6 \pm 2.8
Ethnicity: % White	91.9	88.4
Household size, mean number \pm sd	2.0 \pm 0.8 (295)	2.4 \pm 1.2 (628)
% Current smoker	24.6	26.7
% Aerobic exercisers	23.5 (302)	17.5 (642)
Body Mass Index, mean kg/m ² \pm sd	24.0 \pm 3.9 (306)	25.4 \pm 4.9 (631)
Alcohol use, mean drinks/2 weeks \pm sd	10.4 \pm 14.1 (240)	8.5 \pm 10.9 (428)

*Total number of users and nonusers, if number different then given in parentheses.

TABLE 2—Self-reported Medical Conditions of Users and Nonusers of Postmenopausal Hormones

Characteristics	Postmenopausal Hormone			
	Users		Nonusers	
	%	N	%	N
History of high blood pressure	28.0	(304)	37.2	(645)
History of stroke	00.3	(307)	3.1	(646)
History of high cholesterol	21.8	(294)	20.6	(622)
History of diabetes	3.2	(285)	5.5	(599)
History of heart problems	6.2	(307)	6.2	(638)
Other medical conditions	23.7	(304)	18.1	(643)
Hospitalizations in past year, mean \pm sd	0.2 \pm 0.5	(298)	0.2 \pm 0.6	(630)
Perceived health rating* mean \pm sd	1.8 \pm 0.7	(307)	1.9 \pm 0.8	(646)

*Health rated as Excellent (1), Good (2), Fair (3), Poor (4).

TABLE 3—Adjusted Relative Odds for Postmenopausal Estrogen Use by Behavioral, Sociodemographic and Reported Medical Conditions

Characteristic	Adjusted* Odds Ratio	(95% CI)
Age trend per year	.92	(.89, .95)
Body mass index trend (kg/m ²)	.93	(.90, .97)
Household size trend (no./household)	.66	(.55, .78)
Widowed	.49	(.30, .82)

*Adjusted using a logistic regression model that included the variables listed on this table, n = 294 users and 612 nonusers.

Discussion

This 1986 community survey shows self-reported current use of PMH (32 percent) is less than expected when compared to recent physician surveys indicating 75–95 percent of gynecologists would prescribe estrogen therapy to most of their patients^{25,26} and to estimates from pharmaceutical marketing surveys of 43 percent use among women living in the western part of the United States.⁷ The use rate is similar to a recent

report from another California community.³⁰ The use of progestin combined with the estrogen is also less than expected and less than previously reported,³⁰ with 18 percent of the users reporting a progestin component.

While response bias, i.e., women not knowing or remembering what medications they are currently taking, could have contributed to the low postmenopausal hormone use, it is unlikely to be the major explanation of these discrepancies. Over 80 percent of the estrogen users were able to name their specific medication and dose. Since hysterectomy status was not ascertained in this survey, it is impossible to know what percent of women with an intact uterus were using unopposed estrogens. However, this limitation would not have contributed to an underestimate of total use. A high hysterectomy rate in Sunnyvale could explain the lower use of progestins than seen in the Rancho Bernardo study.³⁰

The taking of PMH by women is the outcome of several factors, notably: local physician prescribing practices, medical care utilization patterns, drug side-effects, and social network or information sources of the women. Differences between women who use and do not use estrogens can, therefore, be due to underlying social or behavioral differences as well as to actual drug effects.

As in other surveys,^{31,32} the youngest women, who were most likely to be recently menopausal, had the highest current estrogen and progestin use. This pattern probably reflects the effort to control menopausal symptoms as well as to decrease bone density loss. Younger women reached menopause at a time physicians were increasing their postmenopausal hormone prescribing.

The findings of thinner women more likely to use hormones was also shown in the earlier surveys.^{31,32} This difference may reflect increased menopausal symptoms in thinner women due to their decreased endogenous estrogen levels, or more prescribing by physicians because of increased risk of osteoporosis in thinner women.

Women who were widowed were less likely to be on estrogen therapy than women who were currently married, but women who used hormones had fewer people living in their households. These findings may reflect basic social network differences between users and nonusers: e.g. nonusers may be major caretakers of other family members and less likely to have the time or inclination to care for themselves; a recent study of persons over age 65 reported that people who live with others go to doctors less often.³³

In summary, this survey shows a discrepancy between published physician enthusiasm for PMH and low reported use by women. Comparisons between users and nonusers reflect differences in physician prescribing patterns, social networks, and health care utilization patterns.

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Estimating the Mortality Cost of AIDS: Do Estimates of Earnings Differ?

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Abstract: The future earnings of male Texans dying of AIDS in 1987 were estimated using: national earnings profiles; earnings derived from occupations listed on death certificates; and earnings reported by persons with AIDS who responded to a survey. Mortality cost estimates using the two sources of actual earnings differed by a modest amount in comparison to the estimate using national earnings profiles. (*Am J Public Health* 1990; 80:1268-1270.)

Introduction

Because of the relative youthfulness of persons with acquired immunodeficiency syndrome (AIDS), the cost to society from the loss of earnings of those who die prematurely is an important concern in measuring the impact of the

disease. Two published studies have attempted to determine this cost using the foregone earnings approach. Hardy and coworkers estimated the present value of the foregone earnings of the first 10,000 AIDS cases at \$4.6 billion, over three times their estimate of total hospital expenditures (approximately \$1.4 billion) for these cases.¹ Scitovsky and Rice estimated the current value of foregone earnings associated with AIDS deaths in 1986 at \$6 billion, approximately six times their estimate of personal medical care costs (\$1.0 billion).²

These estimates may be criticized because of the absence of actual earnings data in estimating the present value of future earnings lost. The foregone earnings method uses national cross-sectional profiles of earnings and labor force participation rates by age and sex.³ It is simply assumed that a person with AIDS has the same employment and earnings pattern as other Americans in his or her age and sex cohort.

This paper examines this assumption by comparing estimates of the foregone earnings of males who died of AIDS in Texas in 1987 using national earnings profiles and two sources of actual earnings.

Methods

To derive the first estimate, we followed the standard practice of multiplying the present values of lifetime earnings

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