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# **CSOF MEDICAL MONOGRAPHS**

**UTILIZATION OF HORMONE REPLACEMENT THERAPY  
IN A FAMILY CARE SETTING:**

**AN EVALUATION OF RESIDENT-PHYSICIAN PRESCRIBING PRACTICE  
FOR INDIGENT POSTMENOPAUSAL PATIENTS**

**Cynthia J. Lund, D.O.  
William J. Cairney, Ph.D.**



15 W. Cimarron  
P.O. Box 154  
Colorado Springs, CO 80901

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WILLIAM J. CAIRNEY, Ph.D.  
Director of Medical Education:  
Administration & Research

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13. ABSTRACT (Maximum 200 words)

**Background:** Hormone replacement therapy (HRT) is known to increase life expectancy and improve quality of life for postmenopausal women and to represent only modest risks.

**Methods:** The Family Medicine Center, an ambulatory care clinic, undertook a Continuous Quality Improvement (CQI) review project to assess the utilization of HRT in women over the age of 50 (total number of patients, 185) from July 1994 through July 1996. Reasons for non-utilization of HRT by both patient and physician are analyzed.

**Results:** The risks and benefits of HRT in this population were tabulated and reviewed and incorporated into an educational format for patient and physician use.

**Conclusions:** Information on HRT would be an effective subject for patient education material and should be conscientiously pursued as such by primary care physicians to provide informed decisions by women in the subject age group.

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## TABLE OF CONTENTS

<b>Section</b>	<b>Page</b>
ABSTRACT	1
INTRODUCTION	1
SUBJECTS AND METHODS	2
RESULTS	3
SUMMARY	5
REFERENCES	6

## TABLES

<b>Table No.</b>	
1. Rate of HRT utilization for all FMC subjects	3
2. Comparison of HRT utilization in the family practice setting and in a national study	3
3. Comparison of HRT utilization in the family practice setting based on age category in relationship to subjects with surgical vs. natural menopause	4
4. Comparison of HRT utilization in women greater than 65 years of age in the family practice setting and in the geriatric center with respect to surgical vs. natural menopause	4
5. Numbers of HRT users in Group I (50-65 yrs.), Group II (>65 yrs.), and in MSHC Group (65-70 yrs.), with reference to their specific risk factors for CHD and osteoporosis	5

# UTILIZATION OF HORMONE REPLACEMENT THERAPY IN A FAMILY CARE SETTING:

## AN EVALUATION OF RESIDENT-PHYSICIAN PRESCRIBING PRACTICE FOR INDIGENT POSTMENOPAUSAL PATIENTS

### ABSTRACT

#### Objectives:

This study assessed the utilization rate of hormone replacement therapy (HRT) in an indigent Patient population at an ambulatory family care center . The total subject group was divided into two age categories: Group I, those between the ages of 50 and 65, and Group II, those greater than age 65. Two previous studies on HRT utilization, one by Scott focusing mainly on geriatrics, and the other a large national statistics report, were used as a basis for comparison. Risk factors and known disease states of each subject group are identified and compared to the previous study by Scott, and HRT utilization or non-utilization were reported. Lastly, the reasons for non-utilization of HRT were reviewed.

#### Design:

A retrospective, descriptive study based on chart reviews.

#### Setting:

The Family Medicine Center (FMC) associated with the Colorado Springs Osteopathic Foundation is an ambulatory care setting, where family practice resident-physicians provide medical care for the indigent population of Colorado Springs, Colorado.

#### Subjects:

Women age 50 and older, who were seen at FMC between July, 1994, and July, 1996, were the subject group of this study. A total of 175 charts were reviewed; four were eliminated because of pre-or perimenopausal status. The remaining 171 charts were divided into two age-defined categories: Group I, those between the ages of 50 and 65 (65% of 171) and Group II, those age 66 above (35% of 171).

#### Main outcome measures:

Current use or non-use of HRT were recorded for the total group of 171 subjects and for the aged-defined categories, Group I and II. HRT utilization between those subjects with surgical verses natural menopause was also tabulated. Each subject's past medical history was reviewed for the presence of coronary heart disease and for risk factors such a diabetes, tobacco use, hypertension, obesity, and hyperlipidemia. Osteoporosis and thyroid hormone replacement were also documented. Reasons and contraindications for non-utilization of HRT such as breast cancer, thromboembolic disease, liver disease, or subject's refusal for any other reason were recorded.

#### Results:

The overall HRT utilization rate was 57% in an indigent family care setting. Younger patients are more likely to receive HRT than older patients, and surgical postmenopausal patients are more likely to use HRT than are natural menopausal patients.

#### Conclusion:

Hormone replacements therapy is important in the prevention of coronary heart disease and osteoporosis in postmenopausal women. With the current rate of utilization at 57% in the family practice setting, there is still a substantial number of patients who are not receiving hormone replacement therapy but who already have coronary disease or osteoporosis or have significant risk factors.

### INTRODUCTION

More and more scientific evidence supports the use of hormone replacement therapy for disease prevention, in particular, coronary heart disease and osteoporosis for postmenopausal women. Coronary heart disease is a major cause of mortality and morbidity in postmenopausal women; in fact, it is the number one cause of death in women over the age of 65, quadruple that of breast cancer.

Current studies have shown that estrogen replacement therapy, with or without progesterone replacement, lowers LDL and total cholesterol levels and postincreases HDL levels. In animal studies,

estrogen has been shown to retard atherogenesis, decrease cholesterol deposition in vascular walls, and increase coronary blood flow and the synthesis of vascular wall cyclo-oxygenase<sup>2,7</sup>.

The other major benefit of hormone replacement therapy is in the maintenance and protection of bone mass. Estrogen replacement therapy has been shown to reduce the incidence of osteoporosis-related bone fractures by 40-50%. Estrogen therapy in women with pre-existing osteoporosis may increase bone mass by 5% with long-term use<sup>2</sup>.

It has been reported that 1.3 million new fractures secondary to osteoporosis occur annually, two thirds occurring in women. Costs for associated acute and long-term care are astronomical in dollars (greater than \$10 billion annually; however, costs are estimated to increase to \$30 to 60 billion by the year 2020) and in quality of life for these patients. Even with the advent of several new medications approved for treatment of osteoporosis, estrogen remains the most effective therapeutic measure yet available<sup>4</sup>.

The other beneficial effects of estrogen replacement therapy include preservation of bladder function and enhancement of psychosexual functioning. Estrogen therapy commonly relieves the symptoms of atrophic urethritis and vaginitis, improves stress incontinence, and diminishes vasomotor disturbances such as "hot flashes". Studies of postmenopausal women on hormone replacement therapy have shown improved psychological functioning, and decreased incidence of depression and of Alzheimer's disease.<sup>1,4</sup>

Two major risk factors are thought to be associated with hormone replacement therapy: breast cancer and endometrial cancer. The risk of endometrial cancer is markedly reduced or even possibly non-existent with the addition of progesterone (either cyclic or continuous dosing), annual examinations, and appropriate evaluation of unexplained vaginal bleeding<sup>2</sup>. Although breast cancer occurrence rates in women on HRT have been found to be higher than in the general population, it is speculated that these patients are more compliant with annual screening exams, mammograms, and self-breast exams<sup>7</sup>.

Hence, the purpose of this study was to assess the rate of HRT utilization in all postmenopausal women in an ambulatory, indigent, family practice setting. The results of this study will be compared to another similar study done on only geriatric women (greater than age 65) as well as to a national HRT study. The cardiovascular and osteoporosis risk factors of this subject population were examined, as well as reasons for non-utilization of HRT.

## **SUBJECTS AND METHODS**

The Family Medicine Center (FMC) at Colorado Springs Osteopathic Foundation is staffed by family practice second and third year resident-physicians and supervised by board-certified family practitioners. All physicians are osteopaths and numbers of female and male physicians have been grossly equal. In this study, 175 charts of all postmenopausal women at FMC in a two-year period between July 1994, and July 1996, were reviewed. In comparison to a previous HRT utilization study by Scott which dealt with strictly geriatric patients (greater than 65)<sup>5</sup>, this study focused on a mixed-age group (ages 50-92). The total FMC subject group was then divided into two age-defined categories for specific comparison to previous statistics on HRT utilization. One hundred seventy-one out of 175 charts of patients between the ages of 50-92 were reviewed, eliminating four who were not postmenopausal. All others were included regardless of health status as it was felt that this would be truly representative of the variety found in a family practice setting. Each subject's chart was reviewed for current HRT, previous HRT, or no use of HRT at all. Reasons for discontinuance or non-treatment were documented. Pertinent past medical history, including coronary heart disease (CHD), hypertension, tobacco use, obesity, hypercholesterolemia, diabetes, thyroid hormone replacement, and osteoporosis were recorded. Reasons for HRT, discontinuance as well as for nontreatment were investigated by chart review. These included subjects' personal reasons as well as medical contraindications such as breast cancer, thromboembolic disease and active hepatic disease. For the purpose of this study, subjects were considered "non-users" if there was no evidence of HRT prescribed or documentation of the subjects' refusal, or, discontinuance by a patient for any reason. The various reasons for non-utilization of HRT will be discussed at the conclusion of this paper.

## RESULTS

Table 1 presents the results of the FMC chart review. The rates of HRT utilization of the number of total menopausal subjects were divided into two age-defined groups. The data indicate that HRT utilization is greater in the younger subjects, Group I, than in the older subjects, Group II (60% vs 50%). The younger subjects also account for a greater percentage of FMC postmenopausal patients (65% of the total 171 subjects). By inference, it is speculated that when Group I patients reach age 65 and above that they may continue HRT and increase the rate of utilization of HRT in Group II.

	<u>FMC</u> Total Subjects	<u>Group I</u> Ages 50-65	<u>Group II</u> Over 65
	171	109 (65%)	62 (35%)
Users	97 (57%)	66 (60%)	31 (50%)
Nonusers	74 (43%)	43 (40%)	31 (50%)

Table 1. Rate of HRT utilization for all FMC subjects, 171, was 57%; divided into the two age-defined groups, Group I (50-65yrs.) had a 60% rate of HRT utilization while Group II (66 & above) had a 50% rate of HRT utilization.

In comparison to the data from the Atherosclerosis Risk in Communities Study (ARCS)<sup>6</sup>, a greater percentage of all postmenopausal patients were HRT users at the FMC; those surgical postmenopausal subjects: 74% at FMC vs. 46% in ARCS; and those natural postmenopausal subjects: 45% in FMC vs. 13% in ARCS (Table 2). These results may be skewed because of the date of each study; FMC, 1994-96 vs. ARCS, 1993. This difference may also be interpreted as a change in physician prescribing practices.

	<u>FMC</u>	<u>ARCS</u>
Total post-Menopausal subjects	171	4149
Surgical	70 (41%)	1066 (26%)
HRT users	52 (74%)	488 (46%)
Non-users	18 (26%)	578 (64%)
Natural	110 (59%)	3083 (74%)
HRT users	45 (45%)	392 (74%)
Non-users	56 (55%)	2686 (87%)

Table 2. Comparison of HRT utilization in the Family Practice Setting (FMC) and in a national study (ARCS).

The data in Table 3 show a significant difference in HRT utilization between the two age categories (50-65 years and those greater than 65 years), especially surgical postmenopausal subjects. Younger subjects in Group I had a rate of 80% HRT utilization vs. 64% in Group II, subjects aged greater than 65. In natural postmenopausal subjects, the difference between the two age categories still exists but is not as pronounced, 47% vs. 40%, respectively.

	Total FMC subjects Postmenopausal 171	Group I (ages 50-65) 109	Group II (over 65) 62
<b>Surgical</b>	70 (41%)	45 (41%)	25 (40%)
HRT users	52 (74%)	36 (80%)	16 (64%)
Non-users	18 (26%)	9 (20%)	9 (36%)
<b>Natural</b>	101 (59%)	64 (59%)	37 (60%)
HRT users	45 (45%)	30 (47%)	15 (40%)
Non-users	56 (55%)	34 (53%)	22 (60%)

Table 3. Comparison of HRT utilization in the family practice setting (FMC) based on age category in relationship to subjects with surgical vs. natural menopause.

Table 4 compares the data from this study and a recent geriatric study done in Colorado Springs<sup>5</sup>. The total number enrolled in both studies is comparable in terms of total number of subjects, ages of subjects, and percentages of subjects with surgical and with natural menopause. Subjects with surgical menopause are more likely to be on HRT than those with natural menopause; although, in the family practice setting, a higher percentage of natural HRT postmenopausal women are on HRT than at the geriatric center (40%, FMC vs. 17%, MSHC).

<u>Postmenopausal Subjects &gt; 65 years</u>	<u>FMC</u> 62	<u>MHSHC</u> 78
<u>Surgical</u>	25 (40%)	30 (39%)
HRT users	16 (64%)	23 (77%)
Non-users	9 (36%)	7 (23%)
<u>Natural</u>	37 (60%)	48 (61%)
HRT users	15 (40%)	8 (17%)
NON-users	22 (60%)	40 (83%)

Table 4. Comparison of HRT utilization in women greater than 65 years of age in the family practice setting (FMC) and in the geriatric center (MHSHC) with respect to surgical vs. natural menopause.

Table 5 presents a comparison of HRT utilization between the two age-defined categories at FMC, a family practice setting, and at MHSCH, the geriatric center, in relationship to the prevalence of CHD and osteoporosis as well as the risk factors for CHD and osteoporosis<sup>5</sup>. In all categories with the exception of hyperlipidemia, there were significantly more HRT users in the family practice setting, FMC, than in the geriatric center, MSHC. However, there were many subjects with CHD risk factor(s) or already with CHD who were not receiving HRT in both Groups I and II.

RISK FACTOR	FMC-Group I (109)		FMC-Group II (62)		MHSHC (78)	
	50-65yrs User	50-65yrs Non-user	>65yrs User	>65yrs Non-user	65-70yrs User	65-70yrs Non-user
Hx of CHD	14	10	9	8	8	4
Diabetes	9	7	4	6	2	9
Tobacco	9	0	1	1	10	13
Hypertension	26	15	13	9	10	20
Hyperlipidemia	3	0	2	1	14	19
Obesity	9	0	0	1	6	14
Osteoporosis	4	2	11	8	3	4
Thyroid Rx	8	2	7	5	3	9

Table 5, Number 5 of HRT users in Group I (50-65 yrs.), Group II (>65 yrs.), and in MHSHC Group (65-70 yrs.), with reference to their specific risk factors for CHD and osteoporosis.

## SUMMARY

The overall rate of HRT utilization in the family practice setting (FMC) was 57%. HRT utilization was higher in younger patients between 50 and 65 years of age (Group I: 60% vs Group II: 50%) and in surgical postmenopausal subjects than in natural postmenopausal subjects (74% vs. 45%).

Seventy-four or 43% of the total 171 subjects were not receiving hormone replacement therapy at FMC. According to the chart review, 49 of these 74 subjects' charts had a documentation of HRT discussion between physicians and patients nor was there documentation for reason of refusal of HRT. Recorded medical contraindications included hepatic disease(2), thromboembolic disease(2), breast cancer(4), and uterine cancer(3). Other reasons for discontinuance of HRT included migraine cephalgia(1), allergic reaction(2), language or cultural barriers(5), and psychiatric disease(6).

Considering that over half of the non-users' charts had no documentation of HRT discussion, there is a need for improvement in physician and patient education regarding the role of HRT in prevention of coronary heart disease and osteoporosis. In the family practice clinical setting, there are many patients with cardiac and osteoporosis risk factors who would benefit from HRT. With a better understanding of the value of hormone replacement therapy in prevention of coronary heart disease, more postmenopausal women may choose to utilize HRT and more family physicians may actively advocate the use of HRT for their postmenopausal patients.

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