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Manufacturing Menopause: An Analysis Of The Portrayal Of Menopause And Information Content On Pharmaceutical Web Sites

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MANUFACTURING MENOPAUSE: AN ANALYSIS OF THE PORTRAYAL OF MENOPAUSE AND INFORMATION CONTENT ON PHARMACEUTICAL WEB SITES

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DEDICATION

For Norm

And for my parents:

Richard and Margaret Hile

This dissertation is also dedicated to the memory

of my grandmother, Mary Amelia Hile.

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CHAPTER 1

INTRODUCTION

The Internet is a major source of information for health issues for the general public. According to the Pew Internet Project (2002), 62% of Internet users, or 73 million people in the United States, have gone online in search of health information. The growth of online direct-to-consumer advertising of prescription drugs in the United States is a growing phenomenon resulting in the proliferation of web sites for specific medical "conditions" and pharmaceutical "treatments." As such, the dramatic increase in accessibility and availability of online information about prescription medications raises interesting questions about the Internet as a fluid marketing medium. In particular, consumer-targeted prescription drug advertising serves as an interesting lens through which we can begin to examine the portrayal of menopause in online drug advertisements. Therefore, the aim of this study was to explore the portrayal of menopause on web sites sponsored by pharmaceutical companies for hormone therapies (HT).

Advertisements are one of the most important cultural factors molding and reflecting our lives (Williamson, 2002). Their very existence is more than a medium, advertising forms a "vast superstructure" with an immense influence to create structures of meaning (Williamson, 2002, p. 11). Direct-to-consumer advertising (DTCA) is defined as "any promotional effort by a pharmaceutical company to present prescription drug information to the general public through the lay media" such as popular magazines and television (Bradley and Zito,

1997, p. 86). Web sites are not merely just an informational venue rather they are another way that DTCA can reach consumers (Khim, 2009). In fact, 30% of Americans surveyed state that they have talked with a doctor about a specific medication as a result of some form of direct-to-consumer advertising (Kaiser Family Foundation, 2001). Because the selling of prescription drugs in the United States requires the cooperation of health care providers, direct-to-consumer advertisements contain messages that may function to motivate consumers to take action in the form of seeking out health care providers in order to obtain certain pharmaceutical products (Cline and Young, 2004).

As Conrad and Leiter (2008) note, the Internet has become “another direct avenue from pharmaceutical companies to consumers, and one that is not limited to national boundaries” (p. 834). Broadly speaking, the Internet may provide unprecedented access to individuals and new opportunities for information retrieval, pharmaceutical marketing, and consumption (Fox, Ward, and O’Rourke, 2006). Indeed, the Internet has further expanded the potential to reach specific audiences for pharmaceutical products. Therefore, how pharmaceutical web sites frame and construct messages is of particular interest because these messages play an important role in shaping cultural attitudes and beliefs. Interestingly, there are no specific regulations for Internet marketing in the United States and pharmaceutical web sites are expected to conform to the same guidelines established for any DTCA (Woodlock, 2005). Due to the lack of regulation pertaining to Internet marketing and DTCA, the role of direct-to-consumer

advertising of pharmaceuticals in a global information environment warrants further investigation.

Previous research has examined the topics of women and menopause in the popular media, such as print, television, and radio advertisements. A standard definition of menopause found in the medical literature is the absence of menstrual periods for one year (Mansfield and Voda, 1997). The assumption that menopause will be accompanied by hot flashes, night sweats, vaginal changes, irritability, and depression has become ingrained in medical and popular culture in North America (Kaufert, 1996). Yet, research has shown that menopause is not a universal experience. Some women may experience difficulty during this transition while others will experience little, if any, discomfort (Mansfield and Voda, 1997). In this study, menopause is defined more broadly as a natural part of the aging process, rather than an event that limits women's psychological or physical capacities (McCrea, 1983).

The existing literature demonstrates that representations of menopause in newspapers and popular magazines as a hormone deficiency disease that can be easily "fixed" with drugs are common in the print media (Carlson, Li, and Holm, 1997; Cimons, 2008; Gannon and Stevens; 1998; Hust and Andsager, 2003; Lyons and Griffin, 2003; Shoebridge and Steed, 1999). Previous research has also shown that hormone therapies (HT) have been frequently portrayed as the remedy for menopausal symptoms and even as an "elixir of life" in helping women to maintain youthfulness (Watkins, 2007, p.1). The term *hormone therapies* (HT) refers to when a woman takes supplements of hormones, such as

estrogen alone or estrogen with another hormone called progesterone (progestin in its synthetic form) for menopause (FDA, 2008b).

Hormone therapies come in many forms and dosages, including skin patches, vaginal tablets or creams, and prescription pills. In addition, implants, shots, or vaginal ring inserts are also available (National Institute on Aging, 2009). As Conrad (2007) notes, early medical articles reported that estrogen could "reduce menopausal symptoms" (p. 121). In addition, some medical articles also claimed the preventive benefits of estrogen, such as preventing breast cancer (McCrea, 1983). Other presumed benefits for women taking HT were thought to be a "lower risk of coronary heart disease, hip and spinal fracture, vaginal atrophy, urinary incontinence and, possibly, Alzheimer's disease" (Kaufert and Lock, 1997, p. 84). Furthermore, magazines and newspapers periodically run articles about menopause and the results of major medical studies relating to HT are reported. As a result, menopause and HT have become popular topics in the print media.

In 1997, hormone therapies were part of a large set of clinical trials called the Women's Health Initiative (WHI). These large, multi-center trials were part of the largest coordinated study of women's health ever undertaken by the National Institutes of Health. Although the WHI study began in 1997 and was expected to run at least 10 years, the National Institutes of Health abruptly terminated a major clinical trial in June 2002 when unexpected results indicated increased risks for heart disease, stokes, blood clots, and breast cancer for those using HT. In light of the landmark decision to stop the WHI clinical trial early, there has been an

explosion of “media attention leading to confusion among women and health professionals about the benefits, risks, and uncertainties” regarding hormone therapies (Rees, 2005, p. 287).

Despite these risks, the HT industry continues to be a multi-billion dollar business “admonishing women to do everything within their power to resist hormonal decline and atrophy” (Perz and Ussher, 2008, p. 294). Existing research on direct-to-consumer marketing shows that HT was advertised heavily to health professionals via medial journals and featured drugs for hormone replacement. As such, advertisements for HT published in professional and trade journals portrayed menopause as a “deficiency disease” advocating for HT as a widespread treatment for women (Richter, 2002; Whittaker, 1998). Yet, little is known about online direct-to-consumer advertising strategies and campaigns for hormone therapies aimed directly at the general public. In fact, Worcester and Whatley (1992) speak of the importance of evaluating and critiquing the mass marketing of hormones. Furthermore, Worcester (2004) states that “consumer literacy and action related to demanding safe, effective products, marketed by ethical corporations, and administered by physicians who have accurate, science-based information is urgent” (p. 62). Thus, an important step in unraveling the DTCA strategies employed on pharmaceutical web sites is to explore the representation of menopause in online advertisements for hormone therapies. Specifically, I am interested in exploring the information content and how menopause is portrayed on web sites for hormone therapies sponsored by pharmaceutical companies.

Purpose of Study

To better understand the construction of menopause in online DTCA drug advertisements, the purpose of this study was to explore how menopause was being portrayed on web sites for hormone therapies sponsored by pharmaceutical companies. In examining the web sites, I was curious about the portrayal of menopause and information content presented on DTCA pharmaceutical web sites since the WHI. Given this, further research on the construction of menopause on contemporary web sites for hormone therapies sponsored by pharmaceutical companies eight years following the decision to stop the WHI clinical trial was warranted.

Significance of the Study

By analyzing how menopause is portrayed on web sites for hormone therapies sponsored by pharmaceutical companies, this study provides a missing piece in the understanding of representations of menopause in various media. In particular, my analysis addressed how menopause was constructed on pharmaceutical web sites in order to address the knowledge gap in relation to online representations of menopause. In examining these web sites, I was particularly interested in the messages that pharmaceutical companies were constructing and conveying about women and menopause. As Hust and

Andsager (2003) note, although media are only one venue for information, they are a “powerful means of transmitting ideas and shaping thought” (p. 116). Conrad and Leiter (2008) further state, DTCA establishes a direct and independent relationship between drug companies and consumers “encouraging self-diagnosis and requests for specific drugs” (p. 825).

DTCA on the Internet has been called “one of the largest single threats to global healthcare safety” (Lorence and Churchill, 2007, p. 551). In fact, the advertising of prescription drugs to the general public is illegal in most countries. Legal DTCA is exclusive to New Zealand and the United States (Woodlock, 2005). As online DTCA becomes increasing prevalent, a discussion of the implications of the broad reach of DTCA of hormone therapies on the World Wide Web was also warranted. Hence, both the growth and magnitude of DTCA prescription drug advertising on the Internet and its potential consequences for public health overall add to the importance of understanding its far-reaching influence.

CHAPTER 2

LITERATURE REVIEW

Introduction

Menopause has been theorized over the years by a range of medical, social science, and feminist researchers. In fact, a variety of differing perspectives on menopause exist and the paradigms through which menopause has been represented varies considerably (Lyons and Griffin, 2003). While the biomedical model views menopause as a "disease" that can be treated medically, other models have emerged offering alternate frameworks for understanding menopausal experiences. First, various models of menopausal research found in the literature will be discussed. Then, the rise in popularity of hormone therapies as a treatment for menopause is traced. Next, a brief history of the Women's Health Initiative, the first major study to examine the effects of hormone therapies, is provided. Finally, federal regulations of direct-to-consumer advertising in the United States and the pharmaceutical industry's involvement in marketing hormone therapies to physicians and consumers are discussed.

Biomedical Model of Menopause

According to Lyons and Griffin (2003), several paradigms of menopause research exist, of which the biomedical paradigm is the most dominant model.

Promoting a woman's natural change of life as a medical condition of "estrogen loss" has a history dating back several decades (Moynihan and Cassels, 2005). In fact, the social construction of menopause as a "deficiency disease" has been well-documented in the sociological literature (for example, see: Bell, 1987; McCrea, 1983; Riessman, 1983; Posner, 1979). Negative biomedical definitions of menopause include portraying menopause as the "end of fertility, ovarian failure, or the loss of womanhood" (Dillaway, 2005, p. 400). Thus, meanings around the aging feminine body cemented in a biomedical approach to menopause center on "the loss of attractiveness, fertility, and function" (Lupton, 1996, p. 92).

Basically, the biomedical model assumes that menopause is "best understood in terms of the biology of disease mechanisms" (Derry, 2002, p. 20). In this prevalent model, menopause is considered to be pathological and abnormal (Bell, 1987). As noted above, the biomedical model regards menopause as an "estrogen deficiency disease for which estrogen replacement is the therapy of choice" (Kaufert and Gilbert, 1986, p. 8). Therefore, a biomedical perspective has constructed menopause as a negative event requiring medical intervention. As Derry (2008) notes, postmenopausal women "do produce estrogen in their bodies [and] these lower levels of hormone were assumed to be negligible" (p. 722).

Early medical reports suggested that estrogen could "reduce menopausal symptoms" (Conrad, 2007, p. 121). Articles in the scientific and medical literature also claimed the preventive benefits of estrogen, such as preventing breast

cancer (McCrea, 1983). Furthermore, Robert Wilson's bestselling book entitled *Feminine Forever* (1966) declared a revolutionary breakthrough claiming that hormones would "cure" the disease of menopause and reverse signs of aging.

Notably, the idea of menopause as a disease requiring medical treatment was popularized in a book entitled *Feminine Forever* (1966) by Robert Wilson, a New York physician and gynecologist. A central claim of the book was that menopause was a condition that required management by a medical professional. In this book, Wilson (1966) described menopausal women as diseased and proclaimed that their ovaries were dead. Wilson (1966) further asserted that menopause was an estrogen deficiency disease treatable with estrogen replacement therapy.

Essentially, Wilson (1966) solidified the idea of "menopause as a disease," employed terms which were primarily negative about women and aging, and focused on deficiency and deterioration which he claimed could be treated by the beneficial effects of estrogen. As a result, Wilson (1966) defined menopause as a biomedical event thereby laying the groundwork for treating menopause with hormones (Lyons and Griffin, 2003). Thus, the idea that menopausal women had an estrogen deficiency became widely accepted in society and established the foundation for a pharmaceutical "treatment" for menopause.

The view of menopause as a disease necessitating medical treatment has been a dominate discourse in the scientific and medical literature (Voda, 1992). Rostosky and Travis (1996) also noted the predominance of articles in the scientific literature about menopause based on the biomedical paradigm.

According to Dickson (1993), menopause is frequently depicted by metaphors of disease or breakdown in the biomedical research. Additionally, Kaufert and Lock (1997) reported how the medical-scientific literature uses “graphs, tables, and histograms to demonstrate that women who take hormones are at a lower risk of coronary heart disease, hip and spinal fracture, vaginal atrophy, urinary incontinence, and, possibly, Alzheimer’s disease” (p. 84). Thus, advertisements and articles in the medical literature actively promote and disseminate a medical model of menopause.

The biomedical perspective has also been dominant in popular media accounts of menopause (Lyons and Griffin, 2003). Interestingly, research indicates that women obtain much of their information about menopause from the media and other forms of popular culture, most notably a primary source of information is from women’s magazines (Clinkingbeard *et al.,* 1999). Therefore, investigations into representations of menopause in the popular media are valuable.

The growing interest in menopause is illustrated by the increasing number of articles published in the popular press (Carlson, Li, and Holm, 1997). An analysis of the “lay” literature on menopause over a 10-year period showed that most of the magazine articles blended opinion with fact, many of the authors of the articles did not state their credentials, and physicians were often quoted as experts about midlife women’s health (Carlson, Li, and Holm, 1997). Gannon and Stevens (1998) examined the portrayal of menopause in the British media over a 15-year time period and found the articles emphasized this time of life as a

negative experience or as a disease needing medical treatment. Similarly, Hust and Andsager (2003) found that photos of women shown in magazines over a 20-year period were predominately white and the coverage was narrowly focused on scientific developments related to fertility. Shoebridge and Steed (1999) also examined the print media in Australia. In particular, they assessed articles relating to menopause over a 10-year period in two daily newspapers and four women's magazines finding that articles drew on and reinforced the biological nature and disease management aspects. Moreover, Lyons and Griffin (2003) analyzed four self-help texts and found that terms such as "symptoms, deficiency, and atrophy" were employed across all four of the texts about menopause (p. 1634).

In sum, the biomedical model of menopause as a deficiency disease requiring medical treatment has dominated "both the popular and clinical domains" (Lyons and Griffin, 2003, p. 1631). The literature cited above demonstrates that the prevailing biomedical model is one that portrays menopause as a disease and offers a negative view of menopause. In addition, a biomedical approach has further been associated with the emergence of hormone therapies that can be prescribed to "treat" menopause.

Socio-cultural and Feminist Models of Menopause

One critique of the biomedical approach to menopause is that this perspective largely ignores "social and cultural aspects of the passage into menopause for

women in American society" (Bell, 1987, p. 539). Given this, some researchers have moved away from the biomedical perspective of menopause. In contrast, the socio-cultural paradigm views the experiences of menopause as a natural event in which social and cultural contexts and meanings are significant (Lyons and Griffin, 2003). The socio-cultural perspective of menopause was developed by sociologists, anthropologists, and others partly in response to the growing dominance of the biomedical model (Hunter and O'Dea, 1997). Arguing that women are "not diseased, defective, or disabled at menopause," the socio-cultural perspective considers menopause to be a natural process and normal event (Voda, 1992, p. 923). Essentially, the socio-cultural paradigm views menopause as a normal process and offers an alternative to the biomedical model. From this perspective, menopause is conceptualized as a natural part of the aging process, rather than an event that limits women's psychological or physical capacities (McCrea, 1983).

Another approach to understanding menopause found in the literature is a feminist paradigm which refutes the disease model. A feminist approach views menopause as a natural process and universal event for all women (Bell, 1987; Lyons and Griffin, 2003; Voda, 1992). According to this model, menopause is a significant landmark for women marking the normal "closure of menstrual life" (Voda, 1992, p. 923). Simply put, menopause is largely regarded in this model as a "natural life transition" (Zita, 1993, p. 61). Moreover, a feminist model considers menopause to be the point at which a woman ceases to menstruate and signifies the end of fertility (Lyons and Griffin, 2003). Some feminist researchers have also

highlighted positive aspects of menopause. For example, Zita (1993) notes while some women may experience this transition with difficulty, others may find it to be a positive and easy experience. Voda (1997) further elaborates that menopausal transition can be a time of personal growth and productivity.

A feminist approach to understanding menopausal experiences offers a critique of the biomedical model of menopause. Bell (1987) argues that the biomedical model and negative constructions of menopause reinforce traditional ideas "of women as biologically different and inferior" (p. 538). In fact, the feminist model views menopause as "yet another biological experience [that has] been used to suppress women's positions" in society (Lyons and Griffin, 2003, p. 1630). As noted, the biomedical model suggests that menopausal symptoms are caused by a biological breakdown or malfunction, namely the lack of estrogen. As such, the definition of menopause as a disease derived from the biomedical model has "its origins in patriarchal views and beliefs of women as defective and imperfect" (Voda, 1992, p. 923). Derry (2004) further asserts a biomedical model of menopause directs attention to a simple variable, in this case estrogen, which can be modified in straightforward ways. Specifically, a biomedical model reduces the "problem [to] having the right amount of estrogen" (Derry, 2004, p. 15). The basic reasoning, according to a biomedical model, remains that some kind of biological breakdown or malfunction can be altered with effective medical intervention.

A feminist perspective also contends that the medical profession has helped to transform the "meaning of menopause and defined it as a medical problem

with a medical solution" (Bell, 1987, p. 539). According to medical reasoning, if a health care provider believed that menopausal symptoms resulted from a lack of estrogen, then estrogen replacement therapy was promoted as the logical solution (Bell, 1987). If the disease definition of menopause is accepted, then women should report any change or symptom to their physician to be medically managed. Thus, physicians (usually male) reinforced their dominant social status as they also reinforced the subordination of women by "giving expert advice about how to grow old gracefully" (Bell, 1987, p. 540). As a result, a feminist model regards this as one way in which the medical profession has been able to assert control over women's experiences of menopause (Coney, 1994; Kaufert and Gilbert, 1986).

For these reasons, feminist researchers and women's health advocates contend that medicine does not have the right to "alter, manipulate, and control the life course of women" (Voda, 1992, p. 931). As Derry (2002) states, "menopause is larger than a medical event" (p. 22). Feminist approaches to menopause may also give voice to female experiences of menopause that have either been "silenced or erased by the medical gaze that sets it sights on the horrifying dangers" of menopause (Zita, 1993, p. 66). As such, a feminist view of menopause attempts to offer a broader model exploring the "social, cultural, and psychological variables that influence the experiences of menopausal women" (Derry, 2002, p. 21).

Overall, various models of menopausal research exist in the literature. These models provide a framework through which we can begin to understand how

menopause has largely been defined and promoted as a medical problem requiring a medical solution. Clearly, the biomedical model of menopause has been the dominant discourse surrounding menopause and has permeated the scientific and popular literature. However, other models of menopause have emerged, such as the socio-cultural and feminist paradigms, seeking to refute the biomedical model by offering alternative perspectives through which menopause experiences can be understood. Nevertheless, the dominant discourse remains to be "menopause as a deficiency and disease" which is based on a biomedical paradigm firmly grounded in a medical approach to menopause.

History of Hormone Therapies

As noted above, the prevailing biomedical notion that menopausal symptoms are caused by a lack of estrogen helped to set the stage for a medical treatment for menopause. Accordingly, estrogen therapy could replace this biological deficiency. To fully appreciate the widespread use and acceptance of hormone therapies for the "treatment" of menopause, a brief history of the rise in popularity of hormone therapies in the last few decades is provided. The term *hormone therapies* (HT) refers to when a woman takes supplements of hormones, such as estrogen alone or estrogen with another hormone called progesterone (progestin in its synthetic form) (FDA, 2008b). It was presumed that "women who take hormones are at lower risk of coronary heart disease, hip and spinal fracture,

vaginal atrophy, urinary incontinence and, possibly, Alzheimer's disease" (Kaufert and Lock, 1997, p. 84). It is also important to note that these hormone therapies come in many forms and dosages, including skin patches, vaginal tablets or creams, and prescription pills. In addition, implants, shots, or vaginal ring inserts are also available (National Institute on Aging, 2009).

As Conrad (2007) points out, early medical articles reported that estrogen could "reduce menopausal symptoms" (p. 121). In addition, some medical articles also claimed the preventive benefits of estrogen, such as preventing breast cancer (McCrea, 1983). Furthermore, Robert Wilson's bestselling book entitled *Feminine Forever* (1966), which was discussed above, declared that hormones would "cure" the disease of menopause and reverse signs of aging. Although some of the proclaimed benefits of HT lacked scientific evidence, two symptoms in particular appear "to be related to declining levels of estrogen during the menopausal transition" (Mansfield and Voda, 1997, p. 59). Therefore, HT may be effective in helping to moderate hot flashes and vaginal dryness.

As Derry (2004) noted, the "enthusiasm for hormone use" probably had many roots (p. 214). In the 1930s and 1940s, American medical professionals started using DES, a synthetic estrogen, to treat menopause (Bell, 1987). During this time period, medical professionals started investigating the use of this synthetic estrogen, raising the possibility of treating so-called hormone deficiencies in women with hormone therapies. Subsequently, this became the first widely used estrogen replacement therapy and it was approved for marketing in 1941 (Bell, 1987).

Treatment with estrogen replacement therapy continued to grow. In the 1960s, there was a surge of interest in estrogen therapy and estrogen sales soared. As previously noted, Dr. Wilson (1966) first popularized the notion that a wonder drug (estrogen) could prevent the aging process in women in the book *Feminine Forever* (Worcester and Whatley, 1992). In this book, the idea that estrogen could keep women young forever and prevent the "decaying" process of aging was promoted (Worcester and Whatley, 1992). As a result, idea of menopause as an "estrogen deficiency disease" became widely accepted in our society and laid the foundation for a medical "treatment" of menopause with hormone therapies (HT).

By the mid-1970s, a series of research papers confirmed a link between estrogen and endometrial cancer (Mansfield and Voda, 1997). In reaction to this news, sales of estrogen dropped drastically. Yet, this did not deter pharmaceutical marketing efforts to promote hormones. This was followed by research attempts to find a way to protect a woman's uterus from developing cancer. In the 1980s, this research paid off and estrogens were re-introduced to consumers in combination with a progestin (Voda and Ashton, 2006). By adding a progestin to estrogen, the medical thought was that the uterine lining would be protected. The new combination treatment, in which a woman was given both an estrogen and a progestin hormone, meant that women would need to take hormones every day (Voda and Ashton, 2006). Needless to say, menopausal and postmenopausal women represented a huge potential market for the drug industry.

Also in the 1980s, a new marketing strategy focused on the prevention of heart disease and osteoporosis. In particular, pharmaceutical manufacturers aggressively advertised the preventative benefits of hormones to both health care providers and consumers. This was evident in mass marketing efforts that "encouraged *all* women over thirty-five years to consider taking estrogens to prevent osteoporosis" (Worcester and Whatley, 1992, p. 4, italics in the original). By linking osteoporosis with menopause, the implication was that "osteoporosis practically [became] identified as a symptom of menopause" (Worcester and Whatley, 1992, p. 9). As a result of this marketing campaign, women not only heard about osteoporosis but they were also "frightened by the seeming inevitability of postmenopausal hip fractures or of becoming like the elderly woman with the severely bent spine" they saw in drug advertisements (Worcester and Whatley, 1992, p. 4).

The use of HT for protection against heart disease in women was another strategy employed by pharmaceutical companies to further generate interest in hormones. Despite solid clinical evidence supporting the preventative benefits of HT related to heart disease, this technique aimed to raise anxiety "to the point at which a new group of women [would] actively seek" hormone prescriptions (Worcester and Whatley, 1992, p. 4). As a consequence, HT became symbolic of "the pattern of untested, unneeded products being marketed to healthy women for pharmaceutical-company inspired 'medical conditions'" (Worcester, 2004, p. 57).

According to Worcester (2004), when drug companies started promoting HT for the prevention of heart disease and osteoporosis, “they hoped to hook women into a product they would stay on for the rest of their lives” (p. 63). Obviously, this strategy had consequences for women. A major ramification was that women would be using hormones “for the rest of their lives and dependent upon expensive medical services to monitor how their bodies adjust to these products” (Worcester and Whatley, 1992, p. 16).

In the 1990s, researchers explored the possibility that estrogen loss may contribute to the development of Alzheimer's disease. As such, this fostered the idea that estrogen replacement therapy may be useful for preventing or delaying the onset of this dementia (Paganini-Hill and Henderson, 1994). At the same time, there was a growing awareness of a variety of health risks associated with hormone use, including gallbladder disease, elevated blood pressure, and blood clots (Mansfield and Voda, 1997). In addition, evidence began to surface about the relationship between estrogens and breast cancer. Not surprisingly, many women became reluctant about using hormones and had concerns regarding the long-term safety and effectiveness of hormone therapies.

Given the growing concerns about the side effects and risks associated with hormones, women began questioning the benefits of using hormones. According to Mansfield and Voda (1994), the control of hot flashes and sleep disturbances were cited by women as primary reasons for continuing to use hormones. In addition, women also stated that they decided to take hormones because their health care provider recommended hormone therapy. Yet, some women cited

reasons for not using hormones which included that they did not perceive menopause as a condition needing treatment, as well as their ongoing concerns about risks or unpleasant side effects (Mansfield and Voda, 1994).

Attitudes towards menopause and hormone use also vary between women in different social groups. For example, research has demonstrated that rates of hormone use are typically lower among African-American and Hispanic women in the United States (Kaufert and Lock, 1997). This pattern of hormone use is reflective of previous research also showing that attitudes towards menopause and aging differed across ethnic groups, with African American women having more positive views than those expressed by Caucasian women (Sommer *et al.,* 1999). In fact, healthy, white middle-class women have typically been the usual subjects of hormone-related menopausal research (Kaufert and Lock, 1997).

In light of the growing concerns over the potential risks associating with using hormones, the U.S. National Institutes of Health began a set of clinical trials in 1997 to test hormone therapies known as the Women's Health Initiative (WHI). Although the WHI study began in 1997 and was expected to run at least 10 years, the National Institutes of Health halted a major clinical trial in June 2002 when unexpected results indicated increased risks for heart disease, stokes, blood clots, and breast cancer for those using HT. Next, I turn to a discussion of the history of the WHI.

History of the Women's Health Initiative (WHI)

A large set of clinical trials known as the Women's Health Initiative (WHI) began in 1997. The WHI was a massive initiative of the U.S. National Institutes of Health (NIH) pertaining to the health of postmenopausal women and included several studies designed to evaluate the effects of prescribed hormone therapies (HT) on the incidence of heart disease. The first study evaluated the effects of daily use of a combination therapy consisting of estrogen plus progestin and this arm of the study became known as the Combination Hormone Therapy Study (Voda and Ashton, 2006). The second arm of the study, known as the Estrogen Hormone-only Study, evaluated the effect of Estrogen on heart disease (Voda and Ashton, 2006). Taken together, these large multi-center trials were part of the largest coordinated study of women's health ever undertaken by the National Institutes of Health.

One component of the WHI was a clinical trial designed to test whether the combined therapy of estrogen plus progestin was safe and effective for the primary prevention of coronary heart disease and was ended prematurely in July 2002 (Derry, 2004)**.** As originally designed, subjects involved in this clinical trial were to be followed for 8.5 years. However, WHI researchers announced that the study was going to be halted after an average of 5.2 years of follow-up after an excess number of subjects developed breast cancer (Derry, 2004).

As Voda and Ashton (2006) have pointed out, the “theoretical underpinning of the WHI” was embedded in a biomedical model that defined menopause as a state of estrogen deficiency that could lead to disease (p. 402). To help further illustrate this point, a separate clinical trial of the WHI examined whether

estrogen alone was safe and effective for heart disease prevention. This second arm of the WHI was also halted earlier than originally planned, in 2004, when study participants had an increased risk of stroke (Derry, 2004). Thus, the WHI clinical trials provided “strong clinical trial evidence that postmenopausal HT does not prevent heart problems” (Derry, 2008, p. 731).

As a result of the WHI findings, the FDA concluded that HT should be used only for treatment of hot flashes, vaginal dryness, and possible osteoporosis at the lowest dose and for the shortest period of time (FDA, 2003). In brief, risks to health such as stroke and breast cancer were found, the studies were prematurely discontinued, and acclaimed benefits of hormone use were not supported (Voda and Ashton, 2006). Indeed, the WHI findings had a “seismic effect on menopausal women’s health care in the U.S. and the rest of the Westernized world” (Voda and Ashton, 2006, p. 402).

Yet, the idea that hormone therapy is “a valuable and powerful agent” to treat menopausal symptoms has not subsided resulting in campaigns from pharmaceutical companies to resurrect hormone therapies (Voda and Ashton, 2006). As a result, HT are being strategically re-introduced to health care providers and consumers with an emphasis on improving the “quality of life” of menopausal women (Voda and Ashton, 2006, p. 410). Presently, women are again encouraged to take hormones, only now it is for symptom relief. This “resurrection” is being witnessed in the promotion of HT as a viable treatment for “debilitating” menopausal symptoms, such as hot flashes, burning, itching, and painful urination (Derry, 2006, p. 406). Still implicit in this approach in the belief

that women are “hormone deficient [and…] the right combination of hormones can be found to prescribe” for any so-called menopausal symptom (Derry, 2004, p. 408). Ultimately, this thinking continues past practices and beliefs of menopause as a deficiency disease treatable with hormone therapies. In particular, direct-to-consumer advertising is one way that pharmaceutical companies are aggressively marketing hormone therapies to potential consumers for their products.

Direct-to-Consumer Advertising

Direct-to-consumer advertising (DTCA) is a growing area of pharmaceutical marketing activity (Berger et al., 2001). DTCA is defined as “any promotional effort by a pharmaceutical company to present prescription drug information to the general public through the lay media” such as popular magazines and television (Bradley and Zito, 1997, p. 86). The FDA further states that direct-to-consumer advertisements are “published in magazines and newspapers that are distributed to a general audience rather than to healthcare providers such as doctors, nurses, and pharmacists [and] can also be broadcast through television or radio” (FDA web site: http://www.fda.gov/Drugs/ResourcesForYou/Consumers/PrescriptionDrugAdvertising/ucm072025.htm. Retrieved: August 22, 2010). Currently, DTCA is only permitted in the United States and New Zealand (Conrad and Leiter, 2008). In the United States, DTCA is unique because prescription pharmaceutical products

cannot be purchased without a physician's prescription and DTCA is also regulated by the FDA (Huh and Langteau, 2007).

In light of increasing direct-to-consumer advertising efforts, it is helpful to understand several advertising principles involved in the naming, labeling, and packaging of pharmaceuticals. Drug companies use several criteria for selecting a brand name. First and foremost, the name of the drug "must be easy to remember" (Kenagy and Stein, 2001, p. 2036). The name of the drug should also be easy to spell (Gundersen, 1998). Ideally, the drug name should be one that physicians and consumers will not confuse with another product. The use of color in the product packaging may help to differentiate the pharmaceutical product from other competitors (Kenagy and Stein, 2001). In addition, drug labels should be easy to read and the name of the drug should be the most prominent feature (Kenagy and Stein, 2001). Taken together, these key principles constitute the common practices involved in the naming and marketing of prescription drug products.

FDA Regulations of DTCA

Between the years of 1906-1980 in the United States, advertising of prescription medications was restricted to physicians only (Conrad and Leiter, 2008). Specifically, the pharmaceutical industry promoted HT to physicians in multiple ways. First, the pharmaceutical industry purchased advertising space in medical journals. Although prescription drug advertising is not a new

phenomenon with the medical community, advertisements in medical journals functioned as a way to introduce HT to physicians. Advertisements for HT, which were placed in these journals specifically to influence doctors and their prescribing patterns, contain "concepts and ideas that are prevalent across the history of medical journals ads" (Richter, 2002, p. 16). For instance, advertising messages in medical journals portrayed menopause as an illness and reinforced the authority and patriarchal role of physicians (Richter, 2002).

In addition, the ads also reinforced the prescribing of estrogen products to midlife and older women. In particular, ads for HT emphasized the physician's ability to help women (Watkins, 2007). For instance, ads showed images of both distraught women and cheerful women signifying before medication and after medication (Watkins, 2007). Furthermore, these portraits contributed to the negative images of midlife and older women in American society (Whittaker, 1998).

Moreover, HT advertisements in medical journals expanded from focusing on short-term "symptoms" of menopause to include indications for long-term use. By promoting HT for the prevention of the "long-term ravages of aging," pharmaceutical companies tapped into the potentially enormous market of older women in America (Watkins, 2007, p. 54). In fact, some advertisements in medical journals approached the length of journal articles, including four-page spreads offering references and results of clinical studies to help make the case for the efficacy of HT (Watkins, 2007).

Forging alliances with physicians in preventing diseases was another strategy employed by pharmaceutical companies to create a potential captive market. In particular, Dukes (1997) states “osteoporosis was clearly a central target if the physicians were to be won” (p. 185). Therefore, pharmaceutical company-funded patient booklets were produced and distributed to physicians. These patient booklets and leaflets emphasized the benefits of HT, such as relief from hot flashes, night sweats, and the reversal of bone loss, and were readily available to women in waiting rooms at doctors’ offices. As a result, HT was constructed by the pharmaceutical industry as a “preventive measure” for osteoporosis (Worcester and Whatley, 1992). In fact, Moynihan and Cassels (2005) refer to this alliance between parts of the medical profession and pharmaceutical companies as the “menopause industry” (p. 48).

The promotion of drugs to physicians has been “one of the reasons for the success” of HT (Katz, 2004, p. 931). Existing research has elucidated how pharmaceutical companies embarked on a crusade through an array of marketing techniques to promote HT to physicians. Through several strategies, the pharmaceutical companies effectively promoted HT as a “blanket therapy for all women” (Dukes, 1997, p. 185). Strategies used by the pharmaceutical industry to shape medical opinion included purchasing advertisement space in medical journals, forging alliances with physicians in preventing osteoporosis, and producing patient information booklets to be distributed to women in waiting rooms. Indeed, the pharmaceutical industry’s campaign to convey messages to physicians in order to expand the market for HT has been strategic and

calculated. From these advertisements, physicians received the message that unflattering and undesirable “symptoms” of menopause, as well as aging in general, were treatable by HT.

DTCA and Print Media

In the 1980s, pharmaceutical companies started expanding DTCA to the general public in magazines and newspapers. The dramatic growth in DTCA can be traced to 1985 when the FDA lifted restrictions on advertisements of prescription medications aimed at consumers. In 1985, the FDA determined that existing regulations in place for advertisements to physicians were sufficient to cover print advertisements aimed at consumers (Perri, Shinde, & Banavali, 1999). As a result, the FDA permitted the pharmaceutical industry “sufficient latitude to allow a broader engagement with print ads for prescription drugs” (Conrad and Leiter, 2008, p. 834). Since then, the growth of DTCA of prescription drugs has “grown exponentially” (Cline and Young, 2004, p. 132).

In addition to strategies used by pharmaceutical companies to shape medical opinion about HT, the drug industry also employed a number of DTCA tactics to shape public opinion. These DTCA strategies included consumer awareness campaigns designed to “build a collective consciousness regarding estrogen therapy for menopausal and postmenopausal women” (Palmlund, 1997, p. 159). As a result, a new brand of DTCA was witnessed in the form of consumer awareness education programs. Frequently, newspaper ads failed to mention

that drug companies were funding the campaigns (Moynihan and Cassels, 2005). The hidden company sponsorship of such consumer awareness campaigns has been criticized as “marketing masquerading as education” (Moynihan and Cassels, 2005, p. 55). Nonetheless, “consumer education” efforts saturated advertisements in newspapers and popular magazines informing women that they should demand their doctors prescribe HT for menopausal symptoms (Cimons, 2008).

Whittaker (1998) also conducted an analysis of HT advertisements in magazines and found that information in popular magazines relied heavily on the importance of doctors prescribing HT for the woes of menopause and aging. Interestingly, Whittaker (1998) found that women in the HT advertisements were generally portrayed with “naked or near naked bodies that were in most instances impossibly youthful for the age group they were representing” (p. 78). Moreover, the images implied that women taking HT would “not succumb to exhaustion, diminution, deficiency or decay” as a result of menopause (Whittaker, 1998, p. 80). Thus, traditional definitions and idealized notions of femininity, youth, and beauty prevailed in the DTCA advertisements for HT. The advertisements cemented the idea that “menopause is an inevitable but unnatural and undesirable process” (Richter, 2002, p. 2).

In addition, DTCA in popular women’s magazines conveyed the “consistent message of the necessity” of hormone therapies (Watkins, 2007, p. 70). Women were advised to seek medical counsel, even if they did not have any symptoms (Watkins, 2007). Thus, popular information about menopause and HT

in newspapers and magazine DTCA followed the medical model and echoed what women were hearing from the medical establishment (Watkins, 2007). This is troubling given the fact that previous research has reported women cited popular magazines as a primary source of information they consulted for information about menopause (Clinkingbeard *et al.,* 1999). Consequently, advertisements for HT in popular magazines aimed at women perpetuated messages that menopause was "difficult to come to terms with because [women] are supposedly physically, sexually and emotionally in decline" (Whittaker, 1998, p. 80).

The use of high-profile celebrities was another means used by pharmaceutical companies to promote HT directly to women. Widely recognized celebrities, such as Lauren Hutton, singer Patti LaBelle, and actress Cheryl Ladd appeared in magazine advertisements as health advocates on an important mission to educate the public about menopause and the "medical condition of estrogen loss" (Moynihan and Cassels, 2005, p. 45). By reinforcing public fears about menopause and aging, celebrity campaigns promoting the use of HT were effective in helping to transform the way the general public viewed common ailments. After all, the goal of these company-funded celebrity campaigns was to "drive patients into doctors' offices to seek treatment" (Moynihan and Cassels, 2005, p. 44).

In order to further expand markets for their products, pharmaceutical companies also created DTCA capitalizing on fear. Another DTCA strategy to promote HT to women was the promotion of fear and anxiety about "future ill-

health in healthy individuals" (Mintzes, 2006, p. 0461). For many years, drug companies actively marketed HT for the prevention of heart disease (Katz, 2003). As seen with the marketing of HT to physicians to prevent osteoporosis, selling HT directly to women also linked osteoporosis as a "symptom" of menopause in such a way to create fear. Specifically, Wyeth-Ayerst advertisements featured postmenopausal hip fractures and images of older women with severely bent spines (Worcester and Whatley, 1992). Furthermore, HT advertisements encouraged all women over thirty-five years to consider taking hormones for osteoporosis as a "preventive measure" (Worcester and Whatley, 1992, p. 9). Thus, defining menopause as a risk for other conditions further illustrated how pharmaceutical companies were able to target menopausal and postmenopausal women intentionally with a manufactured idea intended to create a "social demand" for hormone products (Palmlund, 1997, p. 162).

Consequently, the information women received from DTCA in newspapers and magazines was biased towards the use of hormones. As a result, women "learned to view menopause in terms of increased health risks that could be prevented" with HT (Mintzes, 2006, p. 0462). By redefining the use of HT for menopause in terms of prevention, osteoporosis became a mechanism for the pharmaceutical industry to provoke undue anxiety in order to expand their marketing of HT as a preventive measure (Mintzes, 2006).

A review of the literature helps to establish a picture of how pharmaceutical companies utilized DTCA to promote HT to women. The selling of HT directly to women was accomplished through pharmaceutical company-

based “consumer awareness programs,” which largely consisted of advertisements in newspapers and popular magazines informing women to ask their doctors about HT. Furthermore, the use of celebrity spokespeople helped to transform the way the general public viewed menopause. Thus, women learned about the existence of HT and the claims made for the potential benefits, including its anti-aging effects (Watkins, 2007). In addition, information in popular magazines depicted negative images of menopause and supported following the advice of a medical expert. In particular, DTCA in newspapers and magazines transmitted the notion that menopause was best navigated and “managed” with guidance of a physician. Through the use of celebrities and advertisements in print media, the pharmaceutical industry presented women with a positive image of hormone therapies, made claims for its potential healing effects, and supported physicians as the experts in “treating” women’s reproductive health experiences.

Revised DTCA Regulations and Implications

In 1997, the FDA published revised guidelines that had major implications for direct-to-consumer advertising beyond print ads. Pharmaceutical companies could now market product-specific prescription medications, allowing both the name and use of a medication to be mentioned, directly to consumers through broadcast advertisements on television and radio. Essentially, this policy change made it easier for pharmaceutical companies to advertise via broadcast media,

such as television and radio, because it eased the type of risk disclosure needed. Previously, regulations required drug companies to furnish a summary of the product label, including all of the risk-related information in a product's package labeling, in any promotional materials (Gellad and Lyles, 2007). Under these new guidelines, the drug companies were no longer required to provide all of the risk-related information in their promotional materials. The FDA would allow product-specific DTCA if "adequate provision" was provided regarding information on the manufacturer's safety and efficacy claims (Gellad and Lyles, 2007). Since this change in 1997, pharmaceutical companies could now tell consumers where to find additional information, such as by referring them to an Internet web site or providing a toll free telephone number.

Consequently, the updated 1997 FDA guidelines led to widespread print and broadcast DTCA (Conrad and Leiter, 2008). In fact, spending on advertising in medical journals to physicians decreased while DTCA spending for prescription drugs increased rapidly (Berger et al., 2001). Since the FDA's relaxation of its regulation in 1997, pharmaceutical industry spending on DTCA has more than tripled reaching $4.2 billion in 2005 for American broadcast DTCA efforts (Conrad and Leiter, 2008). In 2004, the FDA further announced that print advertisements no longer had to include full prescribing information thereby raising important questions about the consistency and completeness of information contained in DTCA (Hollon, 2005, p. 2030). Ultimately, DTCA has provided pharmaceutical manufacturers with "a new avenue for increasing the

rate of diffusion and adoption of new drugs" (Perri, Shinde, & Banavali, 1999, p. 1806).

To further complicate matters surrounding DTCA, the Internet has become "another direct avenue from pharmaceutical companies to consumers, and one that is not limited to national boundaries" (Conrad and Leiter, 2008, p. 834). As researchers have noted, the pharmaceutical industry is in a position to "benefit commercially from environmental changes such as the Internet" (Fox, Ward, and O'Rourke, 2006, p. 323). For instance, the Internet may provide access to individuals and new opportunities for information retrieval, pharmaceutical marketing, and consumption (Fox, Ward, and O'Rourke, 2006). Indeed, the Internet has further expanded the potential to reach specific audiences for pharmaceutical products. According to Khim (2009), web sites are another way that DTCA can reach consumers. Yet, there are no specific regulations for Internet marketing in the United States and pharmaceutical web sites are expected to adhere to the same guidelines set for any DTCA (Woodlock, 2005). Therefore, the role of direct-to-consumer advertising of pharmaceuticals in a global information environment warrants further investigation.

To date, no research exists on the representation of menopause and information content on DTCA pharmaceutical web sites for hormone therapies. However, a few studies of Internet web sites of pharmaceutical products exist in the literature. Such examples provide direction for future research exploring DTCA pharmaceutical web sites for HT.

In a study examining several antidepressant web sites, Woodlock (2005) found that depression, anxiety, eating disorders, and low self-esteem, were classified as “illnesses” and the information on the web sites was based on biological models with little attention to possible social reasons for the disorders. Additionally, a vast majority of the images on the antidepressant web sites were of young to middle aged, white women (Woodlock, 2005). Similarly, another study of the portrayal of depression on Selective Serotonin Reuptake Inhibitors (SSRIs) web sites found that the symptoms of depression listed on the pharmaceutical web sites conveyed that the disorder was likely to be permanent without treatment (Gawley, 2007). Specifically, the likelihood of depression being a chronic condition and the danger of leaving any mental disorder untreated were emphasized in the depression web sites sponsored by pharmaceutical companies (Gawley, 2007). These two studies demonstrated the ways in which prescription medications for mental health issues, such as depression, were being marketed to consumers on the Internet and highlight the need for further studies to look at how drug companies are marketing their drugs to women (Woodlock, 2005). As noted, there is a lack of research on the representation of menopause and information content on DTCA pharmaceutical web sites for hormone therapies. According to Worcester and Whatley (1992), evaluating and critiquing the mass marketing of hormones is of great importance.

Summary

In this chapter, several theoretical perspectives were described, including biomedical, socio-cultural, and feminist models. Although a biomedical view of menopause tends to be the dominant discourse found in the scientific literature and popular media accounts, other models have emerged offering alternatives to the biomedical model. Yet, the biomedical model persists. Thus, the dominant biomedical discourse of menopause as a "disease" caused by an estrogen deficiency has resulted in menopause being largely regarded as a biomedical breakdown of malfunction in need of medical treatment (Lyons and Griffin, 2003). Despite the pervasiveness of the biomedical model found in the scientific literature and popular media accounts, a biomedical approach does not adequately reflect social and cultural aspects which can have an influence on women's complex menopausal experiences.

A review of the existing literature also provided possible explanations for the rise in popularity of HT. From early proclaimed benefits of protection against heart disease to the re-introduction of HT for symptoms relief, reasons for hormone use had many origins. Within this context, a large set of clinical trials known as the Women's Health Initiative (WHI) began in 1997 to evaluate the effects of prescribed hormone therapies (HT) on the incidence of heart disease. In short, the WHI studies were prematurely discontinued, risks to health such as stroke and breast cancer were found, and proclaimed benefits of hormone use were not supported (Voda and Ashton, 2006). Yet, the pharmaceutical industry continues to strategically find ways to re-introduce HT as a viable option. Indeed, "post-WHI risks to women's health persist" (Voda and Ashton, 2006, p. 410)

This chapter also examined regulations of DTCA in the United States and characterized the pharmaceutical industry's involvement in DTCA of hormone therapies to physicians and consumers. A central focus of the existing research is on how the pharmaceutical industry has promoted HT to physicians through professional publications. Furthermore, research has examined how pharmaceutical companies have targeted women directly through DTCA in newspapers and magazines promoting the widespread use of HT as a universal remedy for menopause and aging.

Lorence and Churchill (2007) state the growth of direct-to-consumer marketing of pharmaceuticals in the United States has "spawned the generation of web sites for consumer information" (p. 551). Despite this, little is known about DTCA on pharmaceutical web sites for HT. As the Internet presents pharmaceutical companies with a way to expand their advertising to potential audiences for their prescription medications, a key concern is the ongoing "invisible and unregulated attempts to change public perceptions about health and illness to widen markets for new drugs" (Moynihan *et al.,* 2002, p. 890). Future research needs to explore online DTCA aiming to stimulate profits from women's reproductive experiences. Therefore, this study examined how menopause was being portrayed on pharmaceutical web site advertisements for hormone therapies to address this void in the literature. The following set of research questions helped to address the gaps in the existing literature:

1. What is the prominent discourse about menopause on the pharmaceutical web sites? Did it vary across the web sites? If the biomedical perspective is used in the portrayal of menopause, then menopause will be presented as a medical event to be medically managed. Furthermore, “deficiency” will be a common theme if the biomedical perspective is accepted. If a feminist perspective is used in the portrayal of menopause, I would expect to see an alternative discourse that rejects the medical construction of menopause as requiring medical treatment and supervision by a health care professional. In addition, I will explore how symptoms are presented and if the symptoms are the same across the web sites.
2. How is the Women’s Health Initiative (WHI) framed on the pharmaceutical web sites? Likewise, I will also examine if evidence of actual clinical studies, such as the WHI or others, are referenced on the pharmaceutical web sites.
3. Who is/are the intended target audience(s) of the web sites? To help determine if the web sites are geared towards a specific audience, I will examine the language and/or visual cues employed on the pharmaceutical web sites.
4. Is the information presented differently for various audiences, and if so, how? (*i.e.* health professionals, consumers, etc.). For example, I will investigate if the advertising slogans differ depending on the

target audience. In addition, I will examine what (if anything) is absent or lacking on the web sites.

CHAPTER 3

THEORETICAL FRAMEWORK

Overall, the concept of medicalization has been widely used by social scientists to examine how processes come to be perceived and treated as illnesses. Essentially, medicalization is a process that entails the transformation of human conditions into treatable disorders (Zola, 1991). Thus, the existing literature has tended to focus on "how diagnostic categories emerge, evolve, and are phenomenologically experienced in particular health contexts" (Timmermans and Haas, 2008, p. 663). Notable examples of medicalization described by sociologists include hyperactivity in children (Conrad, 1975), aging and disability (Zola, 1991), pregnancy (Oakley, 1984; Riessman, 1983), and menopause (McCrea, 1983). Next, I describe the process of medicalization and take a closer look at the specific social contexts in which the different dimensions of medicalization arise.

Medicalization

Conrad (2007) defines medicalization as the process by which non-medical problems are defined and treated as medical problems. For Conrad, the "key to medicalization is definition" (2007, p. 5). In particular, medicalization occurs "when human problems or experiences become defined as medical problems, usually in terms of illnesses, diseases, or syndromes" (Conrad and

Barker, 2010, *in press*). Hence, the process of medicalization includes defining a problem in medical terms, adopting a medical framework, and treating a problem with medical interventions (Conrad, 2007).

Originally, the concept of medicalization was associated with the notion of professional dominance (Freidson, 1970). Early sociological studies focused on the creation of "new medical categories with the subsequent expansion of medical jurisdiction" (Conrad, 2007, p. 8). In this context, the power and authority of the medical profession was "evident in the medicalization" of hyperactivity in children and childbirth (Conrad, 2007, p. 9). In addition, "deviant" behaviors, such excessive alcohol consumption and homosexual behavior, also came to be regarded and treated as medical conditions (Conrad and Schneider, 1992). As noted by Zola (1991), several natural processes, including aging, have also been transformed into diseases. As such, the increasing trend of medicalization of natural processes and "deviant" behaviors were linked to the growing authority of the medical profession. Beginning with the extension of medicine's jurisdiction, medicalization was viewed as a process whereby natural occurrences in everyday life came "under medical domination, influence, and supervision" (Zola, 1983, p. 295).

Conrad and Schneider (1980) further suggest that there are three levels to medicalization. First, the conceptual level entails the use of medical language to define a problem. Second, the institutional level consists of medical collaboration with authorities to gain legitimacy over management of the problem. The third level consists of the interaction between physicians and the patient where the

problem is defined and managed with medical treatments (Conrad and Schneider, 1980). Thus, these various levels of medicalization illustrate how the medical profession has been able to assert social control over natural processes and "deviant" behaviors.

As noted, early formulations of the concept of medicalization considered the extension of medicine's jurisdiction over "normal" life events as the major catalyst driving this phenomenon. However, Conrad (2007) elaborated and identified three emerging forces also contributing to medicalization. These forces are the pharmaceutical industry, consumers, and managed care. Thus, several new forces are seen as providing momentum for further medicalization. Specifically, the rise of pharmaceutical advertisements "marketing diseases and then promoting drugs to treat those diseases" is now common practice (Conrad, 2007, p. 135). Given these changes in the health care landscape, Conrad argues that the physicians' role in medicalization in decreasing while the role of pharmaceutical companies is increasing (Conrad, 2007). As Conrad states, "while physicians are still the gatekeepers for many drugs, the pharmaceutical companies have become a major player in medicalization" (Conrad, 2007, p. 134). As Riessman notes, this process has had "far-reaching consequences" for women (1983, p. 3). As a result, the process of medicalization has transformed several reproductive experiences, such as childbirth and menopause, into medical-technical problems necessitating medical intervention.

Medicalization of Women's Reproductive Experiences

According to Riessman (1983), a “plethora of female conditions” have been re-conceptualized as illnesses (p. 9). In fact, research on medicalization has shown that women’s issues have been disproportionately medicalized (Conrad, 2007; Lorber, 1997; Riessman, 1983; Riska, 2003). For example, childbirth has been medicalized (Barker, 1998; Brubaker and Dillaway, 2009; Riessman, 1983). With childbirth, there has been an increase in the use of medical technology (Williams and Umberson, 1999). As such, women are admitted as patients to a hospital and hooked up to monitors (Riessman, 1983). As a result, one consequence is the expectation of women to be under medical supervision during childbirth and to relinquish some control over the childbirth process.

Furthermore, menstruation has also been medicalized (Chrisler and Levy, 1990). Negative consequences of medicalizing menstruation include that women are seen as angry, moody, irritable, and irrational during menstruation (Chrisler and Levy, 1990). Such labels have implications and suggest that women are unable to fulfill their social roles and obligations. As such, the transformation and labeling of these natural processes into diseases has severe consequences for women.

Indeed, childbirth and menstruation are two examples of natural processes and reproductive experiences that have been medicalized. Through this widespread medicalization of gendered reproductive experiences, women have received messages that their bodies are a “burden, particularly during the

hormonal and physiological changes associated with menstruation, pregnancy, and menopause" (Whittaker, 1998, p. 80). Consequently, reproductive experiences among women have been medicalized resulting in the expansion of medical jurisdiction over women's bodies.

Medicalization of Menopause

In addition to menstruation and childbirth, menopause has also been medicalized further illustrating how definitions "of health and illness are socially constructed" (McCrea, 1983, p. 111). As noted, although menopause is a part of the natural aging process, it has been socially constructed by clinical communities and pharmaceutical companies as a pathological and abnormal "condition" in need of medical intervention (Dillaway, 2005; Ferguson and Parry, 1998; McCrea, 1983; Riessman 1983). This standpoint stems from the widespread acceptance and adoption of a biomedical model of menopause which regards menopause as an "estrogen deficiency disease for which estrogen replacement is the therapy of choice" (Kaufert and Gilbert, 1986, p. 8). Hence, a biomedical perspective has constructed menopause as a negative event requiring medical intervention. As Derry (2008) notes, postmenopausal women "do produce estrogen in their bodies [and] these lower levels of hormone were assumed to be negligible" (p. 722). Moreover, McCrea (1983) suggests such medical definitions of menopause as a "deficiency disease" have resulted in many women to feel morally obligated to accept medical intervention. Thus, all

midlife and older women are being defined as “hormonally deficient” and in need of medical intervention (Meyer, 2001, p. 770). As a result, the medicalization of menopause allows for the “widespread acceptance of hormone use as a primary prevention strategy” for menopause (Meyer, 2001, p. 779). Furthermore, the medical label of “hormone deficiency” decreases the status and autonomy of women while increasing the status and power of the physician (Bell, 1990; Coney, 1994; Lupton, 1996; McCrea, 1983). In summary, the reproductive aging experiences of women have been particularly susceptible to medicalization in our society.

Importance of Framework

The process of medicalization allows for a researcher to recognize and understand the levels of medicalization operating within the constructions of menopause in online drug advertisements. Within this study, medicalization provides a useful framework for understanding the degree to which any process of medicalization is present in portrayals of menopause on the web sites for hormone therapies. Conrad (2007) identifies “diagnostic expansion” as one way in which medicalization can occur (p. 47). Hence, the expansion of established diagnosis and definitional boundaries to include new problems or new markets beyond what something was originally designated for provides an opportunity to investigate how this aspect of medicalization operates (Conrad, 2007).

Additionally, Kaufert and Gilbert (1986) describe several tests for medicalization that can be used to determine if the process of medicalization is occurring. One sign is when the decline of estrogen production has become a central theme. When menopause becomes defined exclusively as an estrogen deficiency or disease-like requiring medical management, proposed treatment options for menopause will involve the use of hormone therapies to supplement or balance this loss of hormones. Another indication is when women are told that they should depend on a physician to have their menopausal status recognized and defined, rather than relying on their own judgment (Kaufert and Gilbert, 1986). Taken together, these "tests for medicalization" will be helpful to help ascertain if the process of medicalization is occurring or advanced across the DTCA web sites for HT. Furthermore, this theoretical grounding allows for greater insight and understanding of the wider social processes shaping the medicalization of menopause, such as the availability of new technologies and pharmaceutical products for profit which provide further potential for medicalization.

CHAPTER 4

METHODOLOGY

The primary focus of this qualitative investigation was on how menopause was portrayed on web sites for hormone therapies sponsored by pharmaceutical companies. Because of this focus, a qualitative and interpretive approach was most appropriate. In particular, qualitative content analysis focuses on the content and contextual meaning of text (Creswell, 2007). Furthermore, a qualitative content analysis also emphasizes the interaction among the researcher and the data to "develop a theory or pattern of meaning" (Creswell, 2007, p. 21). Within this tradition, I employed an interactive and reflexive approach to data collection and analysis in order to develop a fuller understanding of the phenomenon under investigation.

By exploring the constructions of menopause in online advertisements for hormone therapies, I sought to generate rich insight into subjective meanings that are negotiated and situated both socially and historically. As stated earlier, exploring the online messages that pharmaceutical companies were conveying about women and menopause was of particular interest in this study. As a result, this qualitative investigation contributes to the "critical analysis of social texts" (Denzin and Lincoln, 1994, p. 101).

Within my review of the existing literature, I identified several key issues that were relevant for developing an understanding of how menopause is constructed in online DTC advertisements for hormone therapies. These key issues included:

understanding how menopause is portrayed on web sites for hormone therapies sponsored by pharmaceutical companies, identifying intended target audiences of the web sites, determining whether the information is presented differently for these various target audiences, and assessing if anything is silent or missing on the web sites. As such, the core research questions were generated with these issues in mind to allow for exploration of these key dimensions.

As noted, previous research of DTC advertising on the Internet provided a useful foundation for this study of web sites for hormone therapies. In particular, Gawley (2007) examined the medicalization of depression on Selective Serotonin Reuptake Inhibitors (SSRIs) web sites and found that medicalization had a strong impact on the portrayal of depression on the web sites. In particular, the likelihood of depression being a chronic condition and the danger of leaving any mental disorder untreated were emphasized in the depression web sites sponsored by pharmaceutical companies. Furthermore, symptoms of depression listed on the pharmaceutical web sites conveyed that the disorder was likely to be permanent without treatment (Gawley, 2007). Specifically, the dataset for the study by Gawley (2007) was comprised of online DTC advertisement web sites for SSRI antidepressants. Modeled after this study, I used a list of FDA-approved drug products for treating postmenopausal symptoms and identified relevant web sites sponsored by pharmaceutical companies for analysis to explore how menopause was portrayed in the online advertisements.

The Sample

This study was a cross-sectional observation and the dataset was comprised of a sample of online DTC advertisement web sites for hormone therapies. Specifically, the web sites marketed prescription "treatments" for menopause as a primary focus and acknowledged a sponsorship or affiliation with a pharmaceutical company. The sampling frame consisted of web sites for Estrogen and Estrogen-Progestin products approved by the U.S. Food and Drug Administration (FDA). In particular, the web sites were identified by using a list of FDA-approved estrogen- and progestin-containing drug products used for treating postmenopausal symptoms as of January 16, 2008 (see Table 1). Thus, the sample of English-language web sites were selected because of their wide circulation on the World Wide Web, accessibility to the researcher, authorship (*i.e.* created by a pharmaceutical company), FDA-approved products, and target audience or audiences. The units of analysis were the printed textual web pages. In accordance with University policies, I applied for exemption from the Wayne State University Human Investigation Committee since this study entailed analyzing data available from publically available web sites and human subjects were not involved in the research. In June 2009, exemption was granted (see Appendix B) from the Wayne State University Human Investigation Committee for this study.

Table 1: FDA-Approved Estrogen and Estrogen-Progestin Products*

HT Web Site	Date of Last Update on Web Site
1. Alora (N/A)	1. N/A
2. Angeliq (http://www.angeliq-us.com)	2. Not Stated
3. Climara (N/A)	3. N/A
4. Climara Pro (N/A)	4. N/A
5. Combipatch (http://www.combipatch.com)	5. 2006
6. Delestrogen (N/A)	6. N/A
7. Enjuvia (http://www.enjuvia.com)	7. 2008
8. Estraderm (N/A)	8. N/A
9. Estrasorb (http://www.estrasorb.com)	9. 2008
10. femhrt (http://www.wcrx.com/products/femhrt)	10. Not Stated
11. Femring (http://www.wcrx.com/products/femring)	11. Not Stated
12. Prefest (N/A)	12. N/A
13. Premarin (http://www.premarin.com)	13. 2006
14. PREMPRO (http://www.prempro.com)	14. 2006
15. Vivelle-Dot (N/A)	15. N/A
(Source: FDA, 2008a.)	
*Information current as of January 16, 2008.	

The criteria for the online DTC advertisement web sites for hormone therapies were:

1. FDA-approved Estrogen and Estrogen-Progestin products as of January 2008 (presented in Table 1).
2. The FDA-approved prescription products (mentioned above) must have a web site.
3. Web sites promoting alternatives for menopause, such as herbs, supplements, and alternative therapies, were excluded.

In this study, menopause was defined as a natural part of the aging process, rather than an event that limits women's psychological or physical capacities (McCrea, 1983). Furthermore, this study concentrated on advertisements for hormone therapies for women who reached menopause naturally, as opposed to those who had surgical menopause (*i.e.* removal of the ovaries or the uterus). This study uses the term *hormone therapies* to refer to when a woman takes supplements of hormones, such as estrogen alone or estrogen with another hormone called progesterone (progestin in its synthetic form) (FDA, 2008b). It is also important to note that these hormone therapies come in many forms and dosages, including skin patches, vaginal tablets or creams, and prescription pills. In addition, implants, shots, or vaginal ring inserts are also available (National Institute on Aging, 2009). Thus, the overall focus of this study was on the direct-to-consumer online advertisements of various FDA-approved hormone therapies,

defined as estrogen or estrogen plus progestin products, for menopausal and postmenopausal women.

Initial data collection took place over a two-week period (July 11-25, 2009). During this time, each pharmaceutical web site was printed out in its entirety over the course of one day. I also went back to the web sites in January 2010 to use the online symptom tools found on four of the pharmaceutical web sites (ANGELIQ, ENJUVIA, PREMARIN, and PREMPRO) for an experiment, which is described in Chapter 7. As indicated in Table 1, there were 15 FDA-approved Estrogen and Estrogen-Progestin products but only eight had web sites active during this time period and these comprised the study sample (N=8). I began on the home page (or main page) and systematically followed each link and menu item. Once printed, the pages were organized by the web site, labeled, and numbered. For instance, each web page was printed out and labeled using the following convention: Premarin1, Premarin2, and so forth. Moreover, each web site was coded from beginning to end in order to develop a fuller understanding of the overall content of each web site, tone, and key features. In addition, web sites are constantly evolving and changing. To address this, the URL of each web site and the date the data was retrieved was noted.

As Gawley (2007) notes, web sites are more than text. Often, web sites include diagrams, cartoons, and photographs. As such, the full-text of the printed web pages was analyzed with a focus on the content and contextual meaning of the text and visual elements. In addition, content analysis involves subjective judgments. In order to make the study as reproducible and systematic as

possible, I developed a coding instrument to help characterize the online drug advertisements.

Analysis Procedures

The advertising of hormone therapies by pharmaceutical companies via web sites offered rich data for content analysis. For the analysis, I used a qualitative content analysis approach for data analysis which is an ongoing process involving continual reflection and asking analytic questions. The analysis was guided by the core research questions. First, I answered the first research question concerning the portrayal of menopause on web sites for hormone therapies. I also examined the framing of the Women's Health Initiative on the pharmaceutical web sites. Next, I examined the apparent target audience or audiences for the web sites. Further, I investigated if and how the information was presented differently for various target audiences and addressed what, if anything, was missing or silent on the web sites for hormone therapies.

My data analysis plan consisted of the following steps:

1. Look for broad themes (open coding)
2. Axial coding (recode #1, major categories emerged from data)
3. Relational / selective coding (recode #2, began to establish core categories)

4. Pattern analysis (conclusion, developed explanation, used relevant theories in discussion section and compared with other findings of similar studies)

When coding, I began by looking at several dimensions of the web sites for hormone therapies. As I started analyzing, I examined the various features of the web sites, such as online quizzes to test one's knowledge, checklists or guides for patients to talk with their physician, and self-diagnostic tools to assess menopausal "symptoms." I also looked at the words, meanings, metaphors, and color schemes. Furthermore, features such as personal testimonials proved fruitful for analysis.

The size and positioning of visual elements were also of particular interest, such as how women were positioned in images (*i.e.* if the women were active or passive). If a person was presenting a message, I also looked at the gender, estimated age, and race of the person delivering the message. In addition, I was also curious to discover if possible side effects of the hormone therapies were highlighted and if the Women's Health Initiative was mentioned. Although these were some areas that I intended to consider whenever I began my coding and analysis, I expected to expand the coding sheet and categories as new or interesting aspects emerged during coding and analysis. Indeed, this was the case as I added more categories to the coding sheet whenever I analyzed the images of the characters in the online advertisements for HT. In this way, I expanded the code sheet (Appendix A) to capture the primary location, primary

behavior, and attire for the characters being depicted in the online advertisements to help provide a richer context.

Analytic Approach

The analysis is divided into five chapters which include an overview of the web site characteristics, textual and visual elements of the web sites, the portrayal of menopause, and the presentation of benefits and side effects of hormone therapies (HT). In particular, Chapters 5 and 6 focus on the characteristics of the direct-to-consumer web sites for HT. In these chapters, I examine the menu options, slogans, color schemes, and imagery employed on the web sites for both consumers and health care professionals. Two questions are explored in these chapters. In particular, I identify two main audiences for the HT web sites and I also investigate how the online information is presented differently for these two potential markets.

Chapter 7 explores the portrayal of menopause on the web sites for HT, examining how menopause was being portrayed in the online advertisements by analyzing the definitions of menopause, descriptions of menopausal "symptoms," and self-diagnosing symptom tools found across the HT web sites in the study sample. Chapter 8 analyzes the presentation of benefits and side effects of HT. This chapter also helps to illuminate what was deficient or missing in the online drug advertisements for HT. Chapter 9 provides a discussion of the results and

compares key findings with other findings of similar studies. Finally, Chapter 10 discusses policy implications of my findings and ideas for future research.

CHAPTER 5

OVERVIEW OF PHARMACEUTICAL WEB SITES FOR HORMONE THERAPIES

This chapter provides an overview of the direct-to-consumer (DTC) pharmaceutical web sites for FDA-approved prescription hormone therapies and is divided into several sections. First, the names of the various hormone therapies (HT) and what these product names may symbolize are examined. Next, the overall layout and organization of the web sites for HT are described to help elucidate how the information content about the HT products was presented to web site users. Finally, the chapter concludes with a comparison of menu options for consumers and health care professionals observed on the web sites for HT.

Description of HT Products

To provide a foundation for analyzing the HT products in the study sample, I started by examining the name of the pharmaceutical manufacturer, the type of the HT product (*i.e.* tablet, patch, or lotion form), and the brand name of the HT products. Table 2 shows the name of the pharmaceutical manufacturer for each of the HT products and the type of HT product in the sample (N=8). As seen in Table 2, the study sample contained HT products from six different pharmaceutical manufacturers. Two of the HT products in the sample (femhrt

and Femring) were manufactured by Warner Chilcott. In addition, two of the HT products (PREMARIN and PREMPRO) were from Wyeth Pharmaceuticals (now part of Pfizer Inc.) Out of the four remaining HT products in the sample, one each was from the following pharmaceutical manufacturers: Bayer HealthCare Pharmaceuticals (ANGELIQ), Novogyne Pharmaceuticals (CombiPatch), Duramed Pharmaceuticals (ENJUVIA), and Graceway Pharmaceuticals (Estrasorb).

Table 2: Description of HT Products

Name of HT Product	**Manufacturer**	**Type of HT Product**
ANGELIQ	Bayer HealthCare Pharmaceuticals	Tablets
CombiPatch	Novogyne Pharmaceuticals	Patch
ENJUVIA	Duramed Pharmaceuticals	Tablets
Estrasorb	Graceway Pharmaceuticals	Lotion
femhrt	Warner Chilcott	Tablets
Femring	Warner Chilcott	Vaginal Ring
PREMARIN	Wyeth Pharmaceuticals (now part of Pfizer Inc.)	Tablets
PREMPRO	Wyeth Pharmaceuticals (now part of Pfizer Inc.)	Tablets

Table 2 further shows the type of the HT products in the sample. In most cases (n=5), the HT product was available in tablet form. The HT products

available in tablet form included ANGELIQ, ENJUVIA, femhrt, PREMARIN, and PREMPRO. It should be noted that PREMARIN and PREMPRO were also available as vaginal creams; however, the PREMARIN and PREMPRO web sites reflected information about HT product in the tablet form. Therefore, information about these two HT products in tablet form was included in the analyses.

Additionally, one of the HT products (CombiPatch) was available as a combination patch containing both estrogen and a progestin. According to the CombiPatch web site, the product is an alcohol-free patch that "releases both estrogen and progestin continuously through your skin" (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). The HT product known as Estrasorb was available as a "topical estrogen delivered in a moisturizing, soy-based lotion" (Estrasorb web site: http://www.estrasorb.com. Retrieved: July 15, 2009). Furthermore, one of the HT products was provided as a vaginal ring. The Femring web site described the product as "an off-white, soft, flexible vaginal ring with a center that contains an estrogen" (Femring web site: http://www.wcrx.com/products/femring. Retrieved: July 17, 2009). As made evident by the product name Femring, the form of the HT product was sometimes embedded in the product name. Therefore, next I examined the names of the various HT products.

As noted in an earlier chapter, there are several advertising principles involved in the naming, labeling, and marketing of pharmaceutical prescription products. According to Gundersen (1998), the brand name for a prescription drug is "owned solely by the manufacturer […and] choice of the brand name is

motivated by marketing considerations" (p. 678). Considerations that play a role in a company's decision include a brand name that is easy to spell and one that consumers and health care providers will remember (Gundersen, 1998).

Among the HT product names, two brand names were unique in the sense that the form of the HT product was incorporated directly into the product name. For example, Femring can be viewed as a combination of "feminine" and "ring," or alternatively, "female" and "ring." Another example was CombiPatch where the name of the product captured the essence of the product which was a combination patch containing both estrogen and a progestin. Here, it is likely that the naming choices of these two HT products reflected a common advertising technique of selecting a brand name for a drug that is easy to remember (Kenagy and Stein, 2001).

For other drug names in the sample, interesting word associations were embedded into the brand names of the HT product. The name ANGELIQ in and of itself may suggest something being angelic, ethereal, celestial, or saintly. The name ENJUVIA closely resembled the word rejuvenate and may imply the possibility to make young again or restore to youthful vigor. Both the brand names ANGELIQ and ENJUVIA are examples of how HT products may be marketed by likening them to positive words and their possible associations.

Additionally, the name PREMARIN referred to origin of drug. According to Vance (2007), the name PREMARIN was "coined from pregnant mare urine, from which the estrogen complex was isolated" (p. 282). Furthermore, Estrasorb could be viewed as a play on words suggesting that the HT product works by

absorbing the estrogen cream into the skin. These are possible interpretations of the brand names and what they may signify. Although these are interpretations, an analysis of the brand names has been productive for understanding several key points.

First, the brand names of the HT products reflected common DTCA techniques. Two of the HT products, CombiPatch and Femring, incorporated the form of the product into the name. This technique can help potential consumers and health care providers to remember the drug name (Kenagy and Stein, 2001, p. 2036). Additionally, such strategic naming choices for prescription products may also help distinguish the product so that physicians and consumers will not confuse it with another HT product on the market. Second, certain words were embedded into the HT product names to evoke positive associations and feelings about the HT products. In this sense, the product name of ANGELIQ is an example used to connote particular qualities or desires, such as suggesting something is angelic. Next, I examined the layout and organization of the HT web sites to help demonstrate how information about the HT products was presented to web site users.

Web Site Layout and Organization

To help understand the construction of menopause in online drug advertisements for HT, an examination of the overall organization of the web sites in the sample was warranted. Table 3 illustrates the layout of the HT web

sites. There are many common elements on a web site; such as links, logos, and textual content. Navigation systems, presented to web site visitors in the form of menu options and links, are typically found on the left side or across the top of web sites. As shown in Table 3, all of the web sites in the sample (N=8) provided links for navigating content on the left side and across the top of the web sites.

Table 3: Layout of HT Web Sites

Name of HT Product	**Navigation Links on Left**	**Navigation Links Across Top**	**Logo in Top Left Corner**	**Textual Content Centered**
ANGELIQ	Yes	Yes	Yes	Yes
CombiPatch	Yes	Yes	Yes	Yes
ENJUVIA	Yes	Yes	Yes	Yes
Estrasorb	Yes	Yes	Yes	Yes
femhrt	Yes	Yes	Yes	Yes
Femring	Yes	Yes	Yes	Yes
PREMARIN	Yes	Yes	Yes	Yes
PREMPRO	Yes	Yes	Yes	Yes

Another common element of web site design includes the positioning of logos in the upper left corner of web sites. Here again, logos were observed in the upper left corner on each of the HT web sites (N=8). Furthermore, another common web site design technique is to center or display the primary textual content in the middle of the web page as a focal point. In the online

advertisements for HT, all of the web sites (N=8) adhered to these conventions. Within these online advertisements, the placement of logos was in the top left corner, navigation links were positioned on the left side and across the top, and main textual content was centered on the web page.

Hence, this analysis is important for illustrating how the layout and organization of the pharmaceutical web sites provided a structure to help guide web site users through information about the HT products. These basic web site design techniques offered a consistent way for the pharmaceutical companies to present information about their HT products to potential markets. Next, I take a closer look at the information content found across web site portals designed specifically for two potential markets: consumers and health care providers.

Consumer and Health Care Provider Portals

In this study, all of the web sites for HT (N=8) provided information about their products to two discernable yet distinct audiences, consumers and health care providers. In fact, specific sections of the web sites were clearly labeled for each intended audience. Specifically, Table 4 illustrates how the various web site portals for health care providers were labeled. A total number of 608 printed pages of web site content were analyzed in this study from the eight HT web sites (N=8). As illustrated in Table 4, 134 of printed pages were geared towards health care providers. In comparison, there were 474 of printed pages of web site content for consumers demonstrating the amount of information aimed at consumers.

Table 4: Label for Section of Web Site and Number of Printed Pages of Web Site Content for Health Care Providers

Name of HT Product	**Label for Health Care Provider Portal**	**Number of Printed Pages of Web Site Content for Health Care Providers**
ANGELIQ	Physician Information	1
CombiPatch	For Health Care Professionals	37
ENJUVIA	Healthcare Professionals Click Here	43
Estrasorb	Healthcare Professionals	11
femhrt	Full U.S. Prescribing Information	1
Femring	Full U.S. Prescribing Information	1
PREMARIN	Health Care Professionals' Info	20
PREMPRO	Health Care Professionals' Info	20

As shown in Table 4, five of the HT web sites (n=5) provided information for health care providers in a section of the web site labeled with the words "health care professionals." Two of the HT web sites (femhrt and Femring) simply provided "Full U.S. Prescribing Information" for health care professionals. In one instance, the ANGELIQ web site used the label "physician information."

Interestingly, the ENJUVIA web site provided information for pharmacists in addition to physicians. By including information aimed at pharmacists, pharmaceutical manufacturers were able to extend their reach to other health providers thereby widening their potential market for their products. Nevertheless, a web site visitor was transported to an entirely different set of content on all of the HT web sites (N=8) by selecting one of the web site portal options intended for health care professionals. Next, a comparison of the type of menu options provided for consumers and health care providers is discussed.

Menu Options for Consumers

Menu options were important indicators of how information about the HT products was presented to web site visitors. In this section, I examine the type and amount of menu options available on the web sites for consumers, which were presumably female consumers. Table 5 shows the number of menu options for consumers provided on each of the HT web sites. As shown in Table 5, the number of menu items provided across all of the web sites for consumers totals 134. The number of menu items ranged from five menu items provided on the femhrt web site to 24 menu items for consumers on the ANGELIQ web site.

Table 5: The Number of Menu Options for Consumers

HT Web Site	**Number of Menu Options for Consumers**
ANGELIQ	24
CombiPatch	22
ENJUVIA	22
Estrasorb	8
femhrt	5
Femring	8
PREMARIN	23
PREMPRO	22
Total	**134**

A variety of menu options were presented to consumers across the HT web sites. Table 6 details the menu options observed for consumers across all of the HT web sites in the sample. In every instance, information for consumers about the HT product was located under a menu option entitled “About” followed by name of the particular HT product (N=8). For example, information about ANGELIQ was observed under the menu option entitled “About ANGELIQ” on the HT web site (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). Likewise, this trend was observed in another example in which web site visitors could learn more about CombiPatch by following the link titled “About CombiPatch” (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009).

Table 6: Menu Options for Consumers

HT Web Site	**Menu Options for Consumers**
ANGELIQ	About ANGELIQ • The Difference in DRSP (DRSP refers to drospirenone, a synthetic progesterone and a spironolactone analog) • Is ANGELIQ Right for me? • How do I Get ANGELIQ? • Discussion Guides for Talking with Your Health Care Professional Using ANGELIQ • What to Expect About Menopause • Understanding Your Symptoms • Treatment Options • Healthy Lifestyle Changes • Assess Your Symptoms About Hormone Therapy • Hormone Therapy in the News FAQ Tools • Quiz How Much Do You Know About Menopause • Guide for Talking with Your Health Care Provider • Assess Your Symptoms Patient Information Safety Information Refer a Friend Contact Us ANGELIQ Press Room
CombiPatch	New to CombiPatch? Already Using CombiPatch? About Menopause • Menopausal Symptoms • Natural vs. Surgical Menopause • Menopause FAQs • Menopause Resources Living with Menopause • Eating Right

	• Keeping Fit • Sex After Menopause About Hormone Therapy • Risks/Benefits of Hormone Therapy • Myths About Hormone Therapy About CombiPatch • How It Works • How to Use It • Risks/Benefits of Using CombiPatch • Talking to Your Doctor • CombiPatch FAQs • Cyclic Therapy FAQs Contact Us
ENJUVIA	A Stage of Life Called Menopause • Surgical Menopause • Natural Menopause About ENJUVIA • ENJUVIA Is Demonstrated to Help • Taking ENJUVIA • Safety and Tolerability • Frequently Asked Questions Advice for Coping With Menopause • Little Steps that Can Make a Big Difference • Tip of the Month • Tips for Talking with Your Healthcare Professional About Menopause and Hormone Therapy Resources • Glossary • Assessing Your Symptoms: The Menopause Impact Tool • Mystified About Menopause? Want to Talk About It? • Related Web Sites • ENJUVIA Coupon Prescribing Information Important Safety Information Contact Us Assess Your Symptoms

	Free Coupon for ENJUVIA
Estrasorb	About Estrasorb How to use Estrasorb About Menopause Estrasorb Experiences FAQ Important Safety Information Contact Us Women's Health Resources
femhrt	About FEMHRT What is Menopause? What Are the Recent Concerns Regarding HRT? Important Safety Information Patient Product Information
Femring	About Femring About Menopause Hormone Therapy News Important Safety Information Femring Reminder Program FAQ Inserting Instructions Patient Acceptability
PREMARIN	Understanding Menopause • What is Menopause? • What to Expect During Menopause • Common Symptoms of Menopause • Menopausal Symptom Assessor About PREMARIN • What is PREMARIN? • Benefits of PREMARIN • Dosing and Time on Therapy • Side Effects and Safety Wellness Plan • Seeing Your Health Care Professional During Menopause • Taking Care of Yourself Women's Stories • Connie • Jeanne

	• Mary • Maureen • Rochelle Prescribing Information Important Safety Information Tell a Friend Contact Us
PREMPRO	Understanding Menopause • What is Menopause? • What to Expect During Menopause • Common Symptoms of Menopause • Menopausal Symptom Assessor About PREMPRO • What is PREMPRO? • Benefits of PREMPRO • Dosing and Time on Therapy • Side Effects and Safety Wellness Plan • Seeing Your Health Care Professional During Menopause • Taking Care of Yourself Women's Stories • Carol • Debbie • Penny • Carolyn Important Safety Information Tell a Friend New Packaging Contact Us

Further analysis regarding the breakdown of broad categories for the menu options for consumers is displayed in Table 7. In the online advertisements, all of the HT web sites (N=8) provided information about menopause for consumers. On four of the HT web sites, the menu option was labeled "About Menopause." These four web sites included ANGELIQ, CombiPatch, Estrasorb, and Femring.

In addition, three of the HT web sites (femhrt, PREMARIN, and PREMPRO) highlighted information about menopause under the menu option entitled “What is Menopause.” Another example was found on the ENJUVIA web site and the menu option was called “a Stage of Life Called Menopause.” Thus, all of the HT web sites furnished information about menopause for web site visitors. Common information under this menu option across all of the HT web sites (N=8) included a definition of menopause and information about menopausal symptoms.

Table 7: Breakdown of Categories of Menu Options for Consumers

Menu Option	**Number of HT Web Sites with Menu Option**	**HT Web Site**
About [HT Product]	8	ANGELIQ, CombiPatch, ENJUVIA, Estrasorb, femhrt, Femring, PREMARIN, PREMPRO
About Menopause	8	ANGELIQ, CombiPatch, ENJUVIA, Estrasorb, femhrt, Femring, PREMARIN, PREMPRO
Advice for Talking with Health Care Provider	5	ANGELIQ, CombiPatch, ENJUVIA, PREMARIN, PREMPRO
FAQs	4	ANGELIQ, CombiPatch, Estrasorb, Femring
Women's Stories	3	Estrasorb, PREMARIN, PREMPRO
Refer a Friend	3	ANGELIQ, PREMARIN, PREMPRO
Coupon	2	ANGELIQ, ENJUVIA
Glossary of Terms	1	ENJUVIA

Moreover, five of the HT web sites in the sample provided advice to consumers for talking with their health care providers. These five web sites included ANGELIQ, CombiPatch, ENJUVIA, PREMARIN, and PREMPRO. Consumers could access the "Guide for Talking with Your Health Care Provider" on the ANGELIQ web site (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). In addition, CombiPatch provided information for

"Talking with Your Doctor" (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). Visitors to the ENJUVIA web site could learn "Tips for Talking with Your Healthcare Professional about Menopause and Hormone Therapy" (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). According to the ENJUVIA web site, consumers may "find that this simple form will make it easier to talk with your healthcare professional [so] simply complete the form, print it, and take it with you to your next appointment" (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). Advice for what to expect during your first visit with your health care professional was provided on both the PREMARIN and PREMPRO web sites under the menu choices entitled "Seeing your Health Care Professional during Menopause."

On all five of the web sites that offered guidance to consumers, a list of recommended questions that consumers could ask their health care provider was presented. In these questions, consumers were first and foremost encouraged to ask their health care provider about HT treatment options. Undeniably, the positioning of this question implied the importance of inquiring about HT. Interestingly, two of the web sites (ANGELIQ and CombiPatch) suggested that consumers may also want to ask about non-medical options, such as diet modifications for reducing symptoms. However, this question was positioned at the very end of the recommended list of questions for consumers to ask their health care provider. Obviously, by positioning non-medical options as last on the list of questions to ask, the implication was that non-medical options were not as important. In addition, the ENJUVIA web site told consumers to "talk with your

health care professional before you begin any new exercise plan or diet" (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). In this case, non-medical options were being referred to a health care provider for medical supervision and guidance. As a result, the ENJUVIA web site implied that *all* options, HT and non-medical options, should be discussed, approved, and even supervised by a health care professional.

Also under the guise of providing "advice," consumers were reminded to see their physician on a regular basis and to obtain more medical tests. Mammograms and bone density tests were examples of recommended medical tests (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). Thus, the advice to consumers emphasized that continued medical monitoring was important for staying healthy. The PREMARIN web site informed consumers that "achieving the best possible health during menopause means seeing your health care professional on a regular basis during this time of transition" (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009). In this statement, the role of the health care provider was linked to achieving positive health outcomes thereby encouraging consumers to consult medical treatment. Consumers were also told on the ENJUVIA web site that talking with a health care professional was important because it "could lead to a more accurate assessment of your symptoms" (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). As a result, the so-called "advice" furnished to consumers on the pharmaceutical web sites privileged

medical authority and the physician's role in providing a diagnosis was reinforced.

In comparison, physicians were also provided with information about talking with patients. Yet here, information provided to health care professionals for talking with their patients emphasized their medical expertise and authority in "combating" misinformation about HT. One example was found on the CombiPatch web site in which health care providers were told that consumers will "look to you for guidance" (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). Specifically, health care providers were told they may need to help "combat the many misconceptions about HT" (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). To help combat this confusion, the drug manufacturers supplied information for health care providers in case they were asked to provide a clarification for their patients.

Continuing with my analysis of the menu options for consumers, four of the HT web sites provided Frequently Asked Questions (FAQs). These four web sites were ANGELIQ, CombiPatch, Estrasorb, and Femring. In addition, "Women's Stories" were also observed as a menu option on three of the HT web sites (Estrasorb, PREMARIN, and PREMPRO), which will be explored further in Chapter 7. Also, three web sites (ANGELIQ, PREMARIN, and PREMPRO) had a menu option where consumers could "Tell a friend" about the HT product. In these three instances, web site visitors could type in the email address of a "friend" and send them information about the HT product. Interestingly, this email

"Tell a Friend" option capitalized on technology to further disseminate information about HT products to potential consumers.

In the menu options for consumers, coupons and a glossary were also observed. Specifically, two of the HT web sites offered a coupon. A coupon found on the ANGELIQ web site informed consumers that they could "save up to $50 on your first 3 prescriptions of ANGELIQ" (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). Another coupon on the ENJUVIA web site could be printed out "to receive 30 tablets of ENJUVIA – Free!" (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). Upon further scrutiny of the coupon, it stated "once your healthcare professional attaches this coupon to a completed, signed prescription form, you can take the prescription to your pharmacy and receive up to 30 tablets of ENJUVIA at no charge" (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). Here again, the importance of the health care provider providing a prescription in order to receive the "free" tablets was noted. Finally, the ENJUVIA web site provided an alphabetical glossary of terms for consumers. Some examples of terms found in the glossary include estrogen, hot flashes, night sweats, and osteoporosis.

To summarize, the menu items provided for (female) consumers generally fell into three leading categories: First, an "About" section described the various HT products. Second, an "About Menopause" menu option identified several menopausal symptoms for web site users. Next, information was provided to consumers for talking with their health care provider. Taken together, the top

menu categories emphasized information about the HT products, information about menopause, and advice for talking with a physician focused on HT treatment and the need to consult a health care professional. For comparison, I examined the type of menu options available on the web sites for health care providers, which is discussed further in the next section of this chapter.

Menu Options for Health Care Providers

In contrast, the number of menu items on the HT web sites geared towards health care providers is shown in Table 8. In the online advertisements, the number of menu options for health care providers totaled 51 menu items. In particular, two of the HT web sites (Femring and ANGELIQ) provided only one menu option for health care providers which led to detailed prescribing instructions. On the other hand, 16 menu options were observed on both the CombiPatch and ENJUVIA web sites for health care providers.

Table 8: The Number of Menu Options for Health Care Providers

HT Web Site	**Number of Menu Options for Health Providers**
ANGELIQ	1
CombiPatch	16
ENJUVIA	16
Estrasorb	3
femhrt	2
Femring	1
PREMARIN	6
PREMPRO	6
Total	**51**

As shown next in Table 9, a range of menu options were presented to health care providers across the HT web sites. In every instance, prescribing information was provided for health care professionals (N=8). While all of the HT web sites provided prescribing information for health care providers, important differences existed between the web sites. For example, four of the HT web sites provided a menu option about dosage options. The four web sites providing a menu option for health care providers to learn more about various dosage strengths were CombiPatch, ENJUVIA, PREMARIN, and PREMPRO. In all four instances, this menu option led to information about various dosage options and was accompanied by colorful pictures of the HT products in their various dosage

strengths. On the PREMARIN web site, a picture of five colored tablets representing a “range of dosing options” was displayed (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009). Likewise, a “variety of dosage strengths for prescribing flexibility” was shown on the ENJUVIA web site complimented with a picture of five colored tablets (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). In addition, a picture of three colored tablets was observed on the PREMPRO web site (PREMPRO web site: http://www.prempro.com. Retrieved: July 17, 2009). Another example was present on the CombiPatch web site. In this case, pictures of two different sized patches were shown to depict the “two treatment regimens for CombiPatch” (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009).

Table 9: Menu Options for Health Care Providers

HT Web Site	**Menu Options for Health Providers**
ANGELIQ	Physician Information
CombiPatch	About CombiPatch • How It Works • Why It's Different • Dosage and Regimen Options • Choosing a Treatment Regimen • Clinical Trial Information • Transdermal Preference Talking to Your Patients • Risks/Benefits of Hormone Therapy • Myths about Hormone Therapy • Women's Health Initiative Library • Online Resources • CME • Events CombiPatch Prescribing Information
ENJUVIA	Enjuvia Home Discover the ENJUVIA Effect • Discover the ENJUVIA Effect on Moderate-to-Severe Vasomotor Symptoms • Discover the ENJUVIA Effect on Moderate-to-Severe Vaginal Dryness and Pain With Sex • Low-Dose Efficacy with the ENJUVIA Effect • The ENJUVIA Delivery System • ENJUVIA Dosage Strengths • ENJUVIA Safety Profile • Frequently Asked Questions About ENJUVIA Resources Information for Pharmacists Menopause Impact Tool Prescribing Information Important Safety Information References

	Contact Us
Estrasorb	Symptoms and Therapy Efficacy Delivery and Safety
femhrt	Full Prescribing Information Information for the Patient
Femring	Full Prescribing Information
PREMARIN	Premarin Home Premarin Family Name Practice Resources Patient Materials Important Safety Information Prescribing Information
PREMPRO	Prempro Home Practice Resources Patient Materials Important Safety Information Prescribing Information New Packaging for Prempro

Further analysis of the categories of menu options provided to health care professionals across the HT web sites is shown in Table 10. As seen in Table 10, the most frequently observed menu choice for health care providers was prescribing instructions. As already noted, this menu option was provided across all of the HT web sites (N=8). This was followed by a menu option about the range of dosage options on four of the HT web sites (CombiPatch, ENJUVIA, PREMARIN, and PREMPRO). Additionally, a menu option leading to information that health care providers could distribute to their patients was also presented. The four web sites providing information for patients were CombiPatch, femhrt,

PREMARIN, and PREMPRO. Interestingly, a health care provider had to register first for a free account in order to access the patient education materials from the PREMARIN and PREMPRO web sites. However, information for patients was available on the CombiPatch and femhrt web sites and health care providers could easily print out the information from these two web sites and distribute it to their patients.

Table 10: Breakdown of Categories of Menu Options

for Health Care Professionals

Menu Option	**Number of HT Web Sites with Menu Option**	**HT Web Site**
Prescribing Information	8	ANGELIQ, CombiPatch, ENJUVIA, Estrasorb, femhrt, Femring, PREMARIN, PREMPRO
Dosage Options	4	CombiPatch, ENJUVIA, PREMARIN, PREMPRO
Information for Patients	4	CombiPatch, femhrt, PREMARIN, PREMPRO
How it Works	3	CombiPatch, ENJUVIA, Estrasorb
Events Calendar	3	CombiPatch, PREMARIN, PREMPRO
Efficacy	2	ENJUVIA, Estrasorb
CME	1	CombiPatch

To continue with my analysis of the main categories of menu options for health care providers, next I observed a menu option about how the HT product worked on three of the web sites (CombiPatch, ENJUVIA, and Estrasorb). For example, health care providers could select the menu option labeled “How CombiPatch Works” to learn more about how hormones were delivered to patients using the product (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). Health care providers could also click on the menu choice titled “The ENJUVIA Delivery System” and watch an animated video that shows how ENJUVIA was released (ENJUVIA web site: http://www.enjuvia.com.

Retrieved: July 14, 2009). Likewise, a menu option entitled “Delivery and Safety” was provided to health care professionals on the Estrasorb web site (Estrasorb web site: http://www.estrasorb.com. Retrieved: July 15, 2009).

Next, an event calendar was observed on three of the HT web sites. These event calendars were designed so that a health care provider could learn more about upcoming events and stop by a pharmaceutical booth “to learn more about [their] product portfolio or to speak with a representative” (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009). Two of the HT web sites also provided a menu option specifically discussing the efficacy of the HT product (ENJUVIA and Estrasorb). In fact, the word “efficacy” was used in the title of the menu option. For instance, health care providers were presented with a menu option simply entitled “Efficacy” on the Estrasorb web site (Estrasorb web site: http://www.estrasorb.com. Retrieved: July 15, 2009). Moreover, the menu option on the ENJUVIA web site was called “low-dose efficacy with ENJUVIA” (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009).

Furthermore, the CombiPatch web site was unique in the study sample because it was the only web site that provided continuing medical education (CME) opportunities for health care providers. In this case, a list of five online continuing education resources, “designed to meet the Continuing Medical Education information needs of health care professionals” was provided (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). Interestingly, whenever a web site user would click on one of the online resources for CME, they were informed “you are now leaving the CombiPatch

web site and moving to an external web site independently operated and not managed by Novogyne Pharmaceuticals. Novogyne assumes no responsibility for the sites" (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). All of the five online resources for CME were commercially-produced and anyone interested in obtain CME credits had to register and create an account with the company. The inclusion of such resources on the CombiPatch web site demonstrated that the pharmaceutical company recognized these online continuing education opportunities might be of particular interest to this target audience (*i.e.* health care professionals) visiting information about their HT product.

In summary, menu options for health care professionals could be grouped into four main categories. First, a menu option linking to full prescribing information was observed on all of the HT web sites. Second, the next frequently observed menu option for health care providers was for the range of available dosage strengths. In all four instances, colorful pictures of the HT product were included to help illustrate the range of dosage options. As noted, the language used in the menu options was biomedical in nature and used easily recognizable language by the intended audience, such as prescribing information and dosage and regimen options. Health care professionals were also supplied with information that could be distributed to their patients. In the information that health care provider could supply to patients, the physician's medical authority and clinical expertise were reinforced. Hence, a comparison of menu options for

consumers and health care providers illustrated how information was presented to targeted web site audiences for the HT products.

Summary

In this chapter, I presented an analysis of the overall layout and organization of the web site for HT. My analysis included an examination of the names of the HT products and I found that brand names either indicated the form that the product was available or played with word associations, such as rejuvenation and angelic, to link HT products with certain feelings or desires. In addition, I observed the presence of two web site portals on the HT web sites for different audiences. This analysis was valuable because it helped to demonstrate how information content on the pharmaceutical web sites was being presented to these two potential markets for HT products. As evident in the creation of distinct web portals for consumers and health care providers, this enabled the drug manufacturers to organize and present information to two potential markets for their products. By also utilizing web portals for distinct audiences and then labeling these sections for consumers and health care providers, drug companies were further able to furnish certain types of information tailored for different audiences.

My analysis also revealed that the menu options presented to consumers varied from the content provided to health care providers. Leading menu options for consumers included an “About” menu option describing the HT products (*i.e.*

About ANGELIQ), an “About Menopause” menu option, and a menu option providing information to assist consumers in talking with their health care provider. Thus, the order of the menu options for consumers created a context where consumers first learned about a particular HT product, then they learned about menopause, and next they were given advice for talking with their health care provider. Within the advice provided on the web sites, consumers were encouraged to first ask about HT treatment options and were also told that seeing a health care provider on a regular basis during menopause was important to a healthy outcome.

On the other hand, health care providers were presented with different menu options. Of these menu options, prescribing information, the range of available dosage strengths, and information for patients were prominent. Correspondingly, the menu options for health care providers utilized biomedical rhetoric, such as dosage and regimen options, likely because it was familiar to the target audience. Health care providers were told that patients would look to them for guidance thereby reinforcing their medical authority and expertise in helping combat misconceptions about HT that consumers may have. By presenting information to health care providers that emphasized their medical authority, and by also providing “advice” for consumers that clearly reinforced the importance of medical supervision and routine medical tests during menopause, we begin to see how a biomedical perspective of menopause was being adopted and articulated on the web sites for HT.

This chapter provided a foundation for understanding how information about the HT products was presented differently on the web sites depending on the target audience. As made evident by the menu options provided to consumers, information about the HT products, information about menopause, and advice for talking with a physician were prominent. When taken together, the menu options for consumers focused on HT treatment and the need for consumers to consult a health care professional.

In sum, the pharmaceutical web sites introduced consumers to the importance of consulting with a health care provider about HT treatment options. In contrast, common menu options for health care providers utilized biomedical rhetoric, such as dosage and regimen options. Additionally, the information for physicians to distribute to their patients reinforced their medical authority and expertise in helping to combat consumer “misconceptions” about HT.

In the next chapter, I delve more into the textual and visual elements observed on the web sites for HT. In particular, the advertising slogans found on the web sites are examined. In addition, an analysis of the color schemes and imagery observed across the HT web sites is presented.

CHAPTER 6

TEXTUAL AND VISUAL ELEMENTS OF THE WEB SITES FOR HORMONE THERAPIES

This chapter examines the textual and visual elements present on the direct-to-consumer (DTC) web sites for hormone therapies. First, the advertising slogans found on the web sites are analyzed. In particular, a comparison of advertising slogans aimed at consumers and health care professionals is presented. Next, an analysis of the color schemes and imagery observed across the HT web sites is provided. Finally, the chapter concludes with a discussion of multimedia elements present on several of the HT web sites.

Advertising Slogans

In general, corporations depend on a variety of advertising strategies to help achieve their marketing success. Pharmaceutical manufacturers of HT products are no exception and use carefully constructed online advertising slogans to promote a product and to generate interest in their products. In this study, *advertising slogans* are defined as those few words beneath, below, or beside the HT product name often found in the upper left corner on the web sites. These slogans appeared in the largest font on the HT web sites and were separated from the rest of the web site content for easy recognition. Therefore, their prominent placement on the web sites helped to draw attention to these

advertising slogans. In fact, these slogans were among the first words a web site visitor would likely see, following the product name and product logo, and were some of the most repeated words throughout the HT web sites. This key placement is in agreement with a key direct-to-consumer advertising principle in which the brand name of a drug should be the most prominent feature in advertisements (Kenagy and Stein, 2001).

On seven of the HT web sites in this study (n=7), the main advertising slogan was repeated on subsequent web pages. Repetition of the advertising slogans from web page to page helped to unify a drug manufacturer's message about its HT product. Hence, advertising slogans can help form an initial impression for web site visitors and assist with product name recognition. Next, I examined the advertising slogans aimed at consumers observed on the web sites for HT.

Advertising Slogans for Consumers

From a sociological perspective, advertising slogans are a useful data source that can be used to investigate the messages and meanings embedded in a drug company's communications. As Table 11 indicates, seven of the HT web sites (n=7) presented advertising slogans aimed at consumers. Out of the seven slogans, a number of recurring key phrases or words were observed. In the online advertisements, the words "discover," "relief," and "treat" were repeated within the slogans.

Table 11: Advertising Slogans for Consumers on the HT web sites

HT Web Site	Advertising Slogans for Consumers
ANGELIQ	• Focus on You • Discover the Difference • Ask for ANGELIQ • Relief may be a once-a-day tablet away
CombiPatch	• The New Menopause
ENJUVIA	• Great Expectations • Discover ENJUVIA • ENJUVIA is Demonstrated to Help
Estrasorb	• Feel Good Again • Treat Yourself • Get Relief
femhrt	N/A
Femring	• Change Your Menopause Not Your Life
PREMARIN	• Treat Your Menopausal Symptoms
PREMPRO	• Relief from Hot Flashes, Night Sweats, and Vaginal Symptoms

In particular, the word “relief” was noted in three of the slogans on the web sites (ANGELIQ, Estrasorb, and PREMPRO). The ANGELIQ web site proclaimed “Relief may be a once-a-day tablet away” (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). The slogan suggesting that “relief may be once a-day tablet away,” introduced the idea that well-being is just

a pill away and depended on the assumption that potential consumers will desire the convenience of a daily tablet to treat their “symptoms” all day, every day. With the possibility that “relief may be once a-day tablet away,” the advertising slogan further suggested to consumers what can be expected from using their product. By pairing up the words “relief” and “once a-day tablet” in the same slogan, the message was clear. The slogan conveyed that medical intervention would lead to some type of “relief.”

Another example was found on the Estrasorb web site which stated “Get Relief” (Estrasorb web site: http://www.estrasorb.com. Retrieved: July 15, 2009). Visitors to the PREMPRO web site were greeted by the slogan “Relief from Hot Flashes, Night Sweats, and Vaginal Symptoms” (PREMPRO web site: http://www.prempro.com. Retrieved: July 17, 2009). Thus, the most frequently observed word in the slogans aimed at consumers was the word “relief.” Here again, by pairing up the words “relief” alongside hot flashes, night sweats, and vaginal symptoms, the slogan conveyed that medical intervention would lead to “relief” from such symptoms. Moreover, the use of the specific word “relief” implied that something was unfavorable and was treatable with HT. By proposing to consumers that they could get “relief” from various symptoms, the language in the slogans helped to present symptoms as “problematic” and could be medically managed.

As seen in Table 11, the use of the word “”relief” was followed by the use of the words “discover” and “treat” in the slogans which were observed two times each. For example, the ANGELIQ web site stated “Discover the Difference”

(ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). By encouraging web site visitors to “Discover the Difference,” this slogan provided a structure for the pharmaceutical company to make a convincing case that there was a significant difference to be discovered when consumers learned more about their HT product. Similarly, web site visitors were presented with the slogan “Discover ENJUVIA” (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009).

As noted, the word “treat” was also found in several of the advertising slogans. The slogan on the Estrasorb web site tells consumers to “Treat Yourself” (Estrasorb web site: http://www.estrasorb.com. Retrieved: July 15, 2009). Likewise, the slogan “Treat Your Menopausal Symptoms” was found on the PREMARIN web site (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009).

Upon further analysis, the advertising slogans also demonstrated how the use of language could assist pharmaceutical companies in conveying messages about their products directly to consumers. In particular, the slogans “Treat yourself,” “Focus on you,” and “Find your comfort zone” caught my attention. In these instances, the three advertising slogans made a personal appeal by directly addressing the potential consumer by using the words “you,” “yourself” and “your” in the advertising slogans.

To summarize, the use of the word “relief” was the most frequently used word in the advertising slogans aimed at consumers. By proposing to consumers that they could get “relief” by using HT, the slogans helped to introduce the idea

to consumers that menopause could be medically managed. Meanwhile, this was followed by the use of the words “discover” and “treat” in the slogans. All of these examples clearly illustrated the deliberate use of certain words to help set the stage for using HT products to get “relief” from problematic menopausal symptoms. Additionally, I observed the use of the words “you,” “yourself” and “your” in the advertising slogans which spoke directly to consumers. As made evident in the slogans across the web sites, the language employed articulated a biomedical perspective and treatment for menopause. For comparison, I then investigated the slogans employed on the web sites for HT aimed at health care providers.

Advertising Slogans for Health Care Providers

Four of the HT web sites (n=4) in the study sample utilized different advertising slogans when targeting health care providers. As such, each of these four advertising slogans is discussed in this section of the chapter. Table 12 lists the advertising slogans aimed at health care providers found on the HT web sites.

Table 12: Advertising Slogans for Health Care Providers

on the HT Web Sites

HT Web Site	**Advertising Slogans for Health Care Providers**
ANGELIQ	N/A
CombiPatch	N/A
ENJUVIA	• Have You Discovered the ENJUVIA Effect?
Estrasorb	• A Novel, Effective Delivery System
femhrt	N/A
Femring	N/A
PREMARIN	• A Blend of Estrogens with Extensive Evidence to Support Your Recommendation
PREMPRO	• More Dosing Options than Any Other Single-Tablet Combination Hormone Therapy

As seen in Table 12, the first advertising slogan aimed at health care providers was observed on the ENJUVIA web site. The slogan “Have You Discovered the ENJUVIA Effect?” posed a question to health care providers (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). Similar to the advertising slogan used for consumers on the same web site, which simply stated “Discover ENJUVIA,” this slogan utilized the word “discover” to encourage health care providers to also learn more about their product.

A second advertising slogan was found on the Estrasorb web site. The slogan "A Novel, Effective Delivery System" attempted to distinguish the HT product, which is a topical estrogen lotion, from other available HT products on the market (Estrasorb web site: http://www.estrasorb.com. Retrieved: July 15, 2009). In this case, the advertising slogan emphasized the "novel" delivery system of the product as being unique and different from its competitors.

The third advertising slogan, "A Blend of Estrogens with Extensive Evidence to Support Your Recommendation," was presented to health care professionals on the PREMARIN web site (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009). In this slogan, the reference to "evidence" was noticeable. Thus, the advertising slogan assured health care providers about the scientific merit of the HT product.

Finally, a fourth advertising slogan was found on the PREMPRO web site. Health care providers were told that PREMPRO provided "More Dosing Options than Any Other Single-Tablet Combination Hormone Therapy" (PREMPRO web site: http://www.prempro.com. Retrieved: July 17, 2009). From this slogan it was evident that a range of dosage options was viewed as an attractive feature to advertise to health care professionals. Thus, my analysis indicates that the advertising slogans for health care professionals emphasized "discovering" a particular product, a "novel" delivery system, evidence of scientific merit, and a range of available dosage options. Clearly, the advertising slogans for health care providers relied on medical rhetoric that would be familiar to the target audience. Correspondingly, the language used in the slogans for health care

providers mentioned a “novel delivery system,” “more dosing options, and “scientific evidence to support your recommendation.” In this sense, the slogans for health care providers conveyed that menopause and symptoms could be medically managed with their HT products while also reinforcing the physician’s role in medically managing menopause.

Overall, advertising slogans for consumers and health care providers appeared in larger font sizes on the HT web sites and attracted attention to messages about a product’s attributes. My analysis suggests that consumers were informed about what can be expected from using the HT products from the repeated use of the words “relief,” “discover,” and “treat” observed in the advertising slogans. In addition, health care providers were informed about the range of available “treatment options” and dosage strengths. In other words, the advertising slogans differed depending on the potential market. Given this, the advertising slogans illustrated an important distinction between the information content being presented to health care providers and potential consumers. The slogans further demonstrated the role of language as an effective means of introducing the idea that menopause and menopausal symptoms could be medically managed with HT products. In the next section of the chapter, I take a closer look at the various color schemes and imagery found on the web sites for HT products.

Color Schemes

As noted earlier, the use of color to help differentiate pharmaceutical products from other competitors is a fundamental DTCA marketing strategy (Kenagy and Stein, 2001). Importantly, color is an integral part of products, packaging, and logos and can be an effective means of "creating and sustaining brand and corporate images in customers' minds" (Madden, Hewett, and Roth, 1999, p. 90). Colors used on the various HT web sites ranged from purple, pink, green, blue, to yellow. Table 13 illustrates the colors found across the web sites for HT in the study sample.

Table 13: Colors used on the HT Web Sites

HT Web Site	**Colors**
ANGELIQ	Pink, purple, white
CombiPatch	Yellow, green, blue
ENJUVIA	Green, white, purple
Estrasorb	Purple, white, green
femhrt	Blue, purple, white
Femring	Pink, purple, white
PREMARIN	Blue, white
PREMPRO	Purple, white, green

The most popular color scheme observed on the web sites for HT was the combination of purple, white, green. Three of the web sites utilized this color scheme (ENJUVIA, Estrasorb, and PREMPRO). This color combination was followed by the use of pink, purple, and white on two of the web sites (ANGELIQ and Femring). However, some differences across the HT web sites existed. One instance of the combination of yellow, green, and blue was observed (CombiPatch). Another color scheme was evident on the femhrt web site in which blue, purple, and white was present. Finally, one instance of the use of blue and white was found on the PREMARIN web site. Given this, the most popular color scheme observed on the HT web sites was the combination of purple, white, green and this was followed by the color combination of pink, purple, and white.

Notably, seven of the HT web sites utilized the color white. According to Kress and Van Leeuwen (2002), the color white has long been associated with the idea of "purity" (p. 348). Additionally, the color white mostly has positive connotations (Allan, 2009). On the pharmaceutical web sites, the color white was used heavily as a background color on seven of the web sites. In addition, white flowers were observed on the PREMPRO and PREMARIN web sites. Since color can symbolize ideas that help convey meaning, the white flowers assisted in making an association with purity, cleanliness, and serenity. In these cases, the color white was tied to particular HT products and assisted consumers in the interpretation of product attributes. Here, the visual image of the white flowers made a connection with cleanliness and purity. As also seen in Table 13, six of the HT web sites used the color purple as a background color. Once again, the use of certain colors can express or reproduce ideas about femininity (Kress and Van Leeuwen, 2002). Given the prevalent use of white and purple on the HT web sites, I speculate that the pharmaceutical companies were making associations with femininity in order to appeal to potential female consumers.

Organic and Nature Imagery

In the online advertisements for HT, the use of arcs, circles, ribbons, and rounded edges were observed. Table 14 shows the use of this imagery across the web sites for HT. Next, I further examine these visual elements.

Table 14: Imagery used on the HT Web Sites

HT Web Site	**Imagery**
ANGELIQ	• Circles (pink and purple) • Swirly, scrolls that resemble flowers and stems (pink) • Ribbons (purple)
CombiPatch	• Ribbons (green and blue) • Circles (green and blue)
ENJUVIA	• Ribbons (green)
Estrasorb	• Leaves (green) • Ribbons (cream-colored) • Curves (purple) • Flowers (pink)
femhrt	• Circle (blue)
Femring	• Flowers (pink)
PREMARIN*****	• Flowers (white)
PREMPRO*****	• Flowers (white)

(***** HT web sites also used interactive web site banners)

As Table 14 indicates, the use of ribbons was observed on four of the HT web sites (ANGELIQ, CombiPatch, ENJUVIA, and Estrasorb). An example of a curly or wavy green “ribbon” was observed on the ENJUVIA web site. This visual element was repeated whenever a woman was pictured wearing a green scarf closely resembling the green ribbon found in the web site banner. In fact, the green ribbon was reminiscent of a holiday ribbon or decoration on a package.

These repetitive elements, such as the soft “curves” of the green ribbon and green scarf, helped to create a visual coherence about the HT product. Hence, the use of such feminine imagery on the HT web sites, such as the curves and ribbons, were used as a way to make connections with femininity in order to appeal to and attract attention of potential female consumers.

Soft “curves” or “ribbons” were also used to underline an advertising slogan. In particular, one example was observed on the Estrasorb web site, which is a topical estrogen lotion available by prescription. In this case, a cream-colored “ribbon” (similar to the actual HT product in its white color and cream-like texture) was used to underscore the advertising slogan for the HT product. To this end, the curvy ribbon underscoring the Estrasorb advertising slogan “Feel Good Again” intentionally resembled the actual HT product which is an estrogen lotion.

Circle shapes were also present on three of the web sites (ANGELIQ, CombiPatch, and femhrt). For example, CombiPatch web site had a blue circle in product logo which closely resembled the HT product (*i.e.* patch). Similarly, the femhrt and Femring web sites had blue circles incorporated into their logos which also resembled the shape of the HT product (tablets). In all three cases, the circles found in the HT product logos were blue in color.

The presence of nature imagery was also observed on several of the HT web sites. As seen in Table 14, pictures of flowers and leaves were noted. Flowers were observed on five of the HT web sites. In three instances, the flowers were pink (ANGELIQ, Estrasorb, and Femring). The use of green leaves

was noted on the Estrasorb web site. Hence, the use of ribbons was the most popular image found across the web sites and this was followed by the use of flowers and circles. Therefore, the ribbons, flowers, and circles in the online advertisements for HT drew upon traditional symbols of feminine imagery. Certainly, the use of a particular image in concert with a specific color, such as the pink flowers or green leaves, was a noticeable pattern in the online advertisements. As is evident, these were strategic marketing attempts to "package" information about the HT products in a way that would appeal or resonate with potential female consumers.

Images of HT Products

In addition, pictures of the various HT products were observed on seven of the HT web sites (n=7). Table 15 shows which of the web sites provided pictures of the various HT products. As seen in Table 15, pictures related to the HT products found on the web sites included images of the actual prescription tablets or pictures of the packaging for the HT product, such as lotion packets or the cardboard box.

Table 15: Web Sites with Pictures of HT Products

HT Web Site	**Pictures of HT Product**
ANGELIQ	• Tablets (pink) • Packaging (purple and pink box)
CombiPatch	• Patch • Packaging/Box
ENJUVIA	• Tablets (5 dosage strengths, 5 different colored pills)
Estrasorb	• Lotion packets
femhrt	N/A
Femring	• Picture of product (ring)
PREMARIN	• Tablets (5 dosage strengths, 5 different colored pills)
PREMPRO	• Tablets (3 dosage strengths, 3 different colored pills) • Packaging/Box

As noted, seven web sites had pictures of the actual HT products. Of these seven, the most popular images were pictures of the tablets. Four of the web sites for HT presented colorful pictures of the tablets (ANGELIQ, ENJUVIA, PREMARIN, and PREMPRO). One web site had a picture of the patch (CombiPatch). Another web site provided a picture of lotion packets (Estrasorb). In addition, one web site displayed a picture of the ring (Femring). Thus, seven of the web sites included pictures of the HT products.

In addition, three of the web sites provided pictures of the packaging of the product (ANGELIQ, CombiPatch, and PREMPRO). Certainly, the product

packaging is an effective communication tool and the intention behind the inclusion of such product pictures can be viewed as two-fold. First, featuring pictures of the HT product may aid in easier consumer identification of the product. As I witnessed with the three instances from the study sample, the product packaging clearly displayed the product name and colorful logo. Secondly, product packaging also plays a crucial role in explaining to consumers how to use the HT product. With names such as the “EZ Dispenser,” the product packaging for PREMPRO enables the drug manufacturer to speak to the consumers directly with claims of how their product is easy to use by simply pushing the “tablets through the sealed foil to obtain your daily dose” (PREMPRO web site: http://www.prempro.com. Retrieved: July 17, 2009). Thus, pictures of various HT products and their packaging found on the web sites achieved several purposes. Pictures of the actual HT products or their packaging may assist with easier brand recognition, speak to consumers directly, and also help to differentiate among the various products on the markets with company logos. Accordingly, these are direct-to-consumer advertising strategies commonly used to ensure that a product is easy to remember (Kenagy and Stein, 2001).

Yet, some marked differences across HT web sites were noted. In particular, only two of the pharmaceutical web sites for HT showed the product being used. The first instance was found on the Estrasrob web site in which a woman was shown applying the estrogen cream to her thigh. The second instance was observed on the Femring web site. In this case, a drawing depicted a woman demonstrating how to insert the feminine ring. Again, these were the only two

web sites in the sample that showed the HT products being used. None of the pharmaceutical web sites in the sample pictured women taking prescription pills.

Portraits of Characters in the Online Advertisements

This study also investigated the representation of female and male characters in the online advertisements, including depictions of health care professionals. Table 16 shows the range of the characters found across the web sites for HT. As seen in Table 16, characters were observed on six of the HT web sites. Within these six web sites, a total of 25 images of characters were observed throughout the web sites. These twenty-five images depicted 28 different characters. Therefore, in some instances, there were two characters present within one image.

Table 16: Portrayal of Characters on the HT Web Sites

HT Web Site	**Primary Setting**	**Primary Behavior**	**Appearance** (estimated age range, race, and attire)
ANGELIQ (Three images)	1. work 2. recreational 3. residential	1. work 2. walking 3. talking	1. Middle-aged Caucasian woman in business attire (jacket and scarf) 2. Two Middle-aged Caucasian women in active wear (jogging suits) 3. Picture of Middle-aged Caucasian woman in casual attire, Caucasian man, and a dog
CombiPatch (Five images)	1. not known 2. recreational 3. recreational 4. recreational 5. not known	1. headshot, looking at audience 2. walking/hiking 3. yoga/stretches 4. on exercise bike 5. headshot, looking at audience	1. Middle-aged Caucasian woman in casual attire (sweater) 2. Middle-aged Caucasian woman in active wear (shirt, shorts, and hiking boots) 3. Middle-aged Caucasian woman in active wear (sweat shirt and sweat pants) 4. Middle-aged Caucasian woman in active wear (tank top, shorts, and sneakers) 5. Middle-aged Caucasian woman in casual attire (shirt and vest)
ENJUVIA (Three images)	1. work 2. not known 3. health care environment	1. work 2. headshot, looking at audience 3. sitting in exam room	1. Middle-aged Caucasian woman in business attire (suit, scarf, and brief case) 2. Middle-aged African American woman in casual attire (sweater) 3. Middle-aged Caucasian woman sitting in exam room with female health care professional who is middle-aged and Caucasian (wearing a white coat and stethoscope)

Estrasorb (Three images)	1. not known 2. not known 3. not known	1. headshot, looking at audience 2. headshot, looking at audience 3. headshot, looking at audience	1. Middle-aged Caucasian woman in casual attire (sweater) 2. Middle-aged Caucasian woman in casual attire (sweater) 3. Middle-aged African American woman in casual attire (sweater)
Femhrt (no images)	N/A	N/A	N/A
Femring (no images)	N/A	N/A	N/A
PREMARIN (Six images)	1. residential 2. residential 3. residential 4. residential 5. residential 6. residential	1. talking to audience, "greeted" web site visitors 2. headshot, looking at audience 3. headshot, looking at audience 4. headshot, looking at audience 5. headshot, looking at audience 6. headshot, looking at audience	1. Middle-aged Caucasian woman in business attire (jacket and scarf) 2. Middle-aged Caucasian woman in business attire (jacket and scarf) 3. Middle-aged African American woman in business attire (jacket) 4. Middle-aged Caucasian woman in casual attire (sweater) 5. Middle-aged Caucasian woman in casual attire (sweater) 6. Middle-aged Caucasian woman in casual attire (sweater)
PREMPRO (Five images)	1. residential 2. residential 3. residential 4. residential 5. residential	1. talking to audience, "greeted" web site visitors 2. headshot, looking at audience 3. headshot, looking at audience	1. Middle-aged Caucasian woman in casual attire (sweater) 2. Middle-aged Caucasian woman in casual attire (sweater) 3. Middle-aged Caucasian woman in casual attire (sweater) 4. Middle-aged Caucasian

		4. headshot, looking at audience 5. headshot, looking at audience	woman in casual attire (sweater) 5. Middle-aged Caucasian woman in casual attire (sweater)

Notably, all of the images depicted smiling people. Researchers have reported that direct-to-consumer advertisements are likely to be successful whenever they "establish positive identification with the depicted models" (Cline and Young, 2004, p. 137). Similarly, Kaufert and Lock (1997) found pictures of bright, healthy, and beautiful women appearing in pharmaceutical brochures. Here, the smiling people depicted in the images on the pharmaceutical web sites helped to develop a positive link between the HT products and happiness. Furthermore, the smiling people in the pictures could be conceived as adding their approval of the product.

In my analysis, I also examined the primary setting of the images to help provide context. As such, I coded the primary setting depicted in the images as either "work," "residential," "recreational," "health care environment," or "not known." Female characters appeared in a residential space more than any other setting. Therefore, a domestic or residential space was the most popular setting and served as the primary setting for 12 of the images. For example, five female characters were observed on the PREMARIN web site sitting on a couch, looking at photo albums, and having beverages in coffee mugs (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009). Although PREMARIN and PREMPRO are both products of Wyeth Pharmaceuticals, four different female

characters were observed on the PREMPRO web site sitting around a dining room table and having beverages in coffee mugs (PREMPRO web site: http://www.prempro.com. Retrieved: July 17, 2009). Here, the images depicted women in a social context in which they were shown smiling, interacting, and socializing. In this way, the images choreographed a "scene" that could be familiar to potential female consumers. As a result, such images may attract attention or identification with the people being depicted.

I coded the primary setting as "not known" for six of the images. In these six cases, the images were headshots and the focus was on the woman's face. With the characters' faces being the focal point of the pictures, these images contained minimal or no surroundings. Interestingly, these character portraits showed the woman looking directly out at the web site audience, perhaps in order to engage with the viewer. In four other instances, the primary setting was recreational. By and large, a domestic setting the most popular setting for the images, followed by images grouped into the "not known" category, and then images in a recreational setting.

As also seen in Table 16, I noted the primary behavior, or activity, of the characters being depicted in the advertisements. Instances of female characters looking directly at the web site audiences were observed 15 times in the images. As stated earlier, these images consisted of "headshots" which focused exclusively on the women's faces as they looked directly at web site visitors. Therefore, the presence of female characters "looking at the web site audience" was clearly the most popular behavior (or activity) being performed in the

images. In effect, the female characters on the pharmaceutical web sites were looking back at our gaze. Goffman (1979) has also noted how magazine advertisements show women looking back at the viewer.

In four other cases, examples of "physical activity" were observed. Specifically, two female characters were walking in an image found on the ANGELIQ web site (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). In addition, a female character was shown performing yoga stretches on the CombiPatch web site (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). Another example was also present on the CombiPatch web site in which a female character was riding an exercise bike (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009).

My analysis suggests that these depictions are meaningful in terms of the degree of physical activity being portrayed. As discussed above, the majority of images showed female characters passively looking out at web site audiences. Also among the portrayal of female characters, some of the images depicted women as being active in a very limited fashion. While such lifestyle factors, such as exercising were depicted, the web sites did *not* state that these activities could help to reduce symptoms. Rather, the Femring web site stated "You do not want to take 'time out' to deal with symptoms of menopause… [and] Femring offers a convenient and discreet approach to estrogen therapy allowing you to get on with the things that are really important" (Femring web site: http://www.wcrx.com/products/femring. Retrieved: July 17, 2009). Here, women

were told that they would not have to spend their time worrying about the symptoms of menopause if they used HT. Another example was found on the ANGELIQ web site where a woman was shown jogging and yet the web site stated “HT is one of the most effective options to help manage menopausal symptoms such as hot flashes, night sweats, vaginal dryness, and potential bone loss” (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). One more example was found in which a woman was shown walking in hiking boots and the statement on the web site said: “CombiPatch is designed to stay on during activities… [and] you can get back to enjoying an active lifestyle while wearing the patch” (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). Therefore, as illustrated by these examples, the underlying premise was that hormones could *help* to achieve the activity that was being presented. To be sure, these visual images conveyed health, activity, and vitality that could be achieved through the use of HT. According to the online advertisements, the “treated” woman was healthy, active, and happy.

Additionally, the appearance of the characters in the online advertisements, such as their estimated age, race, and attire (or dress), was included in my analysis. In the online advertisements for HT, 24 of the female characters were Caucasian, including one picture of a health care provider on the ENJUVIA web site. As Coney (1994) states, hormone therapy has been “predominantly used by white, middle-class women” (p. 224). Therefore, the depictions of female characters on the pharmaceutical web sites reflected hormone use patterns reported in the literature. Cortese (2008) further notes that

target advertising assumes a particular group or groups have money to spend. Conversely, non-representation suggests the powerless status of groups that do not “possess significant material or political power” (Cortese, 2008, p. 15). In comparison, only three of the female characters in the images were African American (ENJUVIA, Estrasorb, and PREMARIN web sites).

Since the majority of the female characters featured in the online advertisements were Caucasian women, this closely mirrored the demographic characteristics of the typical users of hormone therapies. This demographic pattern is also true of users of the Internet. Research reports that 79% of adult women use the Internet and 80% of Internet users are Caucasian, highlighting the fact that some groups lack access to the Internet (Pew Research Center Internet & American Life Project web site: http://www.pewinternet.org/Trend-Data/Whos-Online.aspx. Retrieved: September 29, 2010). As a result, the pharmaceutical web sites were likely trying to appeal to this target audience for their products.

With regards to the type of attire, 16 of the female characters wore causal attire such as sweaters. Unique among the sample, women were shown in business attire in only six of the images. Thus, women were portrayed in a professional role in limited manner. Images coded with the category of “business attire” were identified by various symbols such as business suits or brief cases. For example, one female character was observed on the ENJUVIA web site wearing a business suit (jacket and pants) and carrying a brief case (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). Finally, female

characters in active wear, such as jogging suits, were found in four of the images.

Another unique finding was that only one image of a health care professional was depicted in the online advertisements for HT. As Table 16 shows, a Caucasian female health care provider was depicted on the ENJUVIA web site (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). To this end, the image portrayed the health care provider talking with a patient in what is presumably an exam room. Not surprisingly, I found that the use of such iconic imagery, such as the white coat and stethoscope, reflected symbols commonly associated with the health care environment making the health care provider easy to identify in the image.

Furthermore, one Caucasian male character was present on the ANGELIQ web site. In this image, the male character was shown talking with a female character. In addition, a dog was also present in the picture. This image was worth noting due to the fact that it was the only image of a male character observed in the online advertisements for HT.

To briefly summarize, an analysis of the characters appearing in the online advertisements for HT was conducted. Among the online advertisements for HT, female characters were portrayed largely as passive and relegated to a residential space. This pattern persisted with the inclusion of “headshots” in the images where women were shown passively looking back at web site visitors. All of the images depicted people smiling. By also depicting women as participating in recreational activities, the images further presented “healthy” appearing

people. Since the web sites did not say that lifestyle modifications, such as exercise, could help alleviate symptoms, the images implied that the activity being depicted could be achieved through the use of HT. Overall, the online advertisements for HT positioned women within the domestic or residential realm while also conveying that health, activity, and vitality could be achieved through the use of HT.

Multimedia Elements

As discussed above with the portraits of characters in the online advertisements, pharmaceutical companies may employ visual strategies to convey messages about their products. For instance, a web site banner allows a drug manufacturer to customize their web site for their intended audiences. A traditional web site banner, sometimes referred to as a web site header, is a graphic commonly found at the top of a web site and displays the company name, logo, and advertising slogan. Six of the HT web sites (n=6) in the study sample made use of a traditional web site banner. However, two instances in which web site banners were further enhanced by audio and animation were observed. In the online advertisements for HT, web site banners with multimedia were present on the PREMARIN and PREMPRO web sites (both are products from Wyeth Pharmaceuticals). With the use of audio and Macromedia flash animations, these audio-driven web site banner advertisements introduced their HT products to potential markets by basically functioning as mini-presentations.

The PREMARIN web site featured a presumably middle-aged Caucasian woman in a business suit welcoming visitors to the web site with an introduction that begins “Hi. I am Kathy. Menopause can be a very confusing time for many women” (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009). The female character “Kathy” goes on to state “I am here to tell you that you are not alone. I will be your guide and together we will talk about some of the common symptoms of menopause” (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009).

Likewise, the PREMPRO web site featured a middle-aged Caucasian woman named “Joanne” in casual attire greeting web site visitors. The character “Joanne” greeted web site visitors with the following: “Hi. I am Joanne. We all experience menopause differently, for some women it can be a confusing time… but you are not alone. Follow me and together we talk about some of the common symptoms of menopause” (PREMPRO web site: http://www.prempro.com. Retrieved: July 17, 2009). The female character “Joanne” continued with “we are in it together and we will find some of the answers you may be looking for” (PREMPRO web site: http://www.prempro.com. Retrieved: July 17, 2009).

As previously noted, both PREMARIN and PREMPRO are products of Wyeth Pharmaceuticals. In both of these cases, the audio introductions are accompanied by captions which may be turned off or on at the discretion of the web site visitor. Nevertheless, both the PREMARIN and PREMPRO web sites

utilized web site banners enhanced with multimedia to welcome visitors to their web sites.

In brief, the multimedia banners on the two HT web sites entice consumers to view much more information than can typically fit into a traditional banner (without audio or animation). These mini-commercials introduce the idea to consumers that menopause can be a "difficult time," whereby reinforcing the notion that a physician can help navigate this difficult and confusing time. As such, the mini-commercials served as an introduction articulating a biomedical conceptualization of menopause as being "problematic." In doing so, the multimedia web site banners helped to advance the idea that menopause should be medically treated and managed. By harnessing such technologies, the manufacturer of these two HT products (Wyeth Pharmaceuticals) was further able to personalize an introduction to their web sites by having a female character speak directly to web site visitors. In light of this, the multimedia web site banners provided more information for potential consumers about the HT products in comparison to the text-only web sites in the sample.

Summary

In this chapter, I was particularly concerned with textual and visual elements observed on the web sites and how these elements helped to construct messages about the HT products for potential markets. To address this issue more fully, I investigated the advertising slogans presented to consumers. For

consumers, the advertising slogans included the repeated use of the words “”relief,” “discover,” and “treat” to inform consumers what can be expected from using the HT products. The ability of the slogans to conceptualize menopause as needing “relief” effectively introduced consumers to the idea that their HT products could provide some type of “relief.”

For comparison, I then analyzed the advertising slogans aimed at health care providers. Slogans for health care providers were crafted with the busy practitioner in mind and utilized biomedical rhetoric familiar to the target audience. The promise of flexibility in HT treatment options, such as the range of available dosing options, and “evidence” of scientific data supporting the use of the HT product served as “selling points” in the advertising slogans aimed at health care professionals. Such an analysis contributes to our understanding of how the information content across the DTCA web sites for HT differed in its presentation depending on the target audience. Although the slogans differed depending on the target market for the HT products, the slogans demonstrated the importance of language used in the advertising slogans in articulating menopause as medically problematic.

I also examined the color schemes and imagery utilized in the online advertisements for HT. The use of color was a fundamental advertising technique to help distinguish HT products from other competitors. Notably, the use of the colors white and purple on the HT web sites made associations with femininity. Further, feminine shapes were used on web sites, such as circles, curves, wavy

lines. Together, the gender specific nature of many of these strategies was an attempt to attract and appeal to potential female consumers for the HT products.

Pictures of HT products and their packaging were also included on the web sites to aid in easier consumer identification of the product. Only two web sites actually pictured the HT product being used. Additionally, I analyzed the images of characters in the online advertisements. My findings suggest that female characters were mostly depicted as passive and shown in domestic settings. Given that the majority of the female characters in the online advertisements were Caucasian women this mirrored the demographic characteristics of both the common users of hormone therapies and typical users of the Internet. Moreover, only one image of a health care provider was presented as well as one image of a male character.

Certainly, drug manufacturers of hormone therapies (HT) have capitalized on a range of advertising slogans, color schemes, and imagery to form the foundation for "selling" their products online directly to consumers and health care providers. In the next chapter, I take a closer look at how menopause was portrayed on the web sites for HT. In particular, the nature of the representation of menopause and the means used to construct this portrayal will be examined. Features found on web sites for HT, such as online tools for assessing menopausal symptoms, will also be investigated to help elucidate how menopause is constructed by drug manufacturers in online advertisements for HT.

CHAPTER 7

THE PORTRAYAL OF MENOPAUSE

Direct-to-consumer (DTC) web sites for hormone therapies allow for an examination of medicalization and pharmaceuticals by raising questions about the presentation of menopause. In particular, what are the web sites for hormone therapies representing about menopause? Likewise, how are messages about menopause constructed? To unravel these questions, this chapter examines how menopause is portrayed on the DTC web sites for hormone therapies (HT).

First, textual descriptions of menopause found on the web sites for HT were examined. This examination included how menopause was defined on the HT web sites with particular attention to the language being used to describe menopause. Second, I explored the various explanations presented on the HT web sites for the "causes" of menopause. Next, the variety of menopausal "symptoms" identified on the HT web sites was analyzed. As I will demonstrate, when taken together these elements played an important role in how menopause was being portrayed in the online advertisements for HT.

Description of Menopause

In the online advertisements for HT, three main phrases were used to describe menopause. Table 17 illustrates how menopause was described on the various HT web sites. Firstly, menopause was described as a "change of life" on

four of the HT web sites (CombiPatch, femhrt, Femring, and PREMARIN). Secondly, menopause was described as “three phases.” These three phases were perimenopause, menopause, and postmenopause. The description of menopause as “three phases” was found on three of the HT web sites (ANGELIQ, PREMARIN, and PREMPRO). Meanwhile, the ENJUVIA web site referred to menopause as a “stage of life.”

Table 17: Description of Menopause on HT Web Sites

Name of HT Product	**Description of Menopause**	**Key Phrases/Words**
ANGELIQ	The end of regular menstruation, can be explained in three phases	Three phases
CombiPatch	Change of life, reproductive system slowly shuts down	Change of life
ENJUVIA	Stage of life, a change that all women eventually experience	Stage of Life
Estrasorb	Period has stopped for one year	Period has stopped
femhrt	Change of life, sooner or later all women go through it	Change of life
Femring	Change of life, your body is adjusting to lower levels of hormones	Change of life
PREMARIN	Change of life, a transition in three stages	Change of life, three stages
PREMPRO	Transition in three stages	Three stages

As noted, my analysis found that menopause was described on four of the HT web sites (CombiPatch, femhrt, Femring, and PREMARIN) as a “change of life.” However, the language used on the HT web sites clearly indicated that this “change of life” was not a welcomed or positive one. For example, the CombiPatch web site proclaimed to consumers that “you don't have to suffer through moderate to severe flashes and night sweats. You have options” (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). In this example, there were several important messages implied. First, women were introduced to the idea that they did not have to “suffer” from menopause. Second, women were told that they did not have to needlessly suffer because there were medical treatment options available. As evident in the language used in this example from the CombiPatch web site, menopause was introduced to consumers as problematic. According to the CombiPatch web site, women could learn to “adjust to this change” (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). Undeniably, this “adjustment” involved the use of hormone therapies. As Derry (2008) notes, postmenopausal women “do produce estrogen in their bodies [but] these lower levels of hormones were assumed to be negligible” (p. 722). Therefore, the language on the CombiPatch web site echoed this sentiment, namely that hormone levels were deficient and women could use HT products to adjust to this so-called decline.

Moreover, the PREMARIN web site advocated that managing this “change of life” was best accomplished by conferring with a health care provider.

Specifically, consumers were told “it’s important to talk to your doctor or other health care professional about the best ways to keep healthy during this time of change” (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009). From the description of menopause presented on the PREMARIN web site, women were informed that menopause should be medically managed. Previous research has also noted women are often told they should depend on a physician’s medical expertise rather than on their own judgment (Kaufert and Gilbert, 1986). Here, the PREMARIN web site also articulated the idea that physicians should be regarded as the main source for determining whether or not a woman is “menopausal.”

Thus, not only was this “change of life” portrayed as unwelcomed specifically on the CombiPatch and PREMARIN web sites, it was also presented as being best managed by a health care expert for an optimal health outcome. Indeed, such representations of menopause as a medical event to be medically managed by an “expert” suggested that women should go to their physicians for information and advice. For these reasons, the language found on the CombiPatch and PREMARIN web sites reinforced the long-standing idea of physicians as experts over women’s experiences as “someone with power to define and categorize their experience” which are signs pointing towards a biomedical understanding of menopause (Kaufert and Gilbert, 1986, p. 14).

Meanwhile, my analysis shows that three of the HT web sites (ANGELIQ, PREMARIN, and PREMPRO) portrayed menopause as “three stages.” The three phases that these web sites are referring to were perimenopause, menopause,

and postmenopause. Research has shown that menopause is not a universal experience and women experience menopause differently (Mansfield and Voda, 1997). Coney also states that apart from menstruation stopping, there is nothing universal about menopause and there are as many “menopauses as there are cultures” (p. 95). Yet, the three stages listed on the HT web sites can be viewed as an attempt to medically “measure” when menopause begins and when it ends. Here again, the definitions of menopause found on the ANGELIQ, PREMARIN, and PREMPRO web sites suggested menopause was an event that could be defined and measured medically.

Furthermore, the ENJUVIA web site referred to menopause as a “stage of life.” In fact, the ENJUVIA web site stated this stage was one that “all women eventually experience” (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). As I have expressed, language and word choice were important to the overall context of the descriptions of menopause being used by the pharmaceutical companies in their online advertisements for HT. By suggesting that menopause was a stage that “all women eventually experience,” the ENJUVIA web site was associating menopause with something that was “natural” and “inevitable.”

Ironically, this paradoxical definition presented menopause to female consumers as both normal and abnormal. The ENJUVIA web site stated “if you can't explain how you feel, often your healthcare professional can” (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). This description seems contradictory; although the online advertisement for ENJUVIA suggested

this was a natural and inevitable stage of life, women were told it may also be a time of confusion and best understood with the help of a health care provider. As seen in the above quote, the diagnostic role of the physician in distinguishing what is "normal" from "abnormal" was implied. Therefore, the ability of the ENJUVIA web site to simultaneously represent menopause as natural and disease-like through such language effectively placed menopause under the rubric of medical supervision.

One more description of menopause was noted on the HT web sites. One instance of menopause being described as when a woman's "reproductive system slowly shuts down" was observed on CombiPatch web site (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). By describing a woman's reproductive system as "slowly shutting down," the mechanical language in this example was reminiscent of the biomedical model in which the body is viewed as a machine breaking down. An emphasis on how the "aging ovaries stop working" have resulted in menopause being regarded as a malfunction (Derry, 2002, p. 14). Here, the online advertisement likened the aging female body to a machine "breaking down," which in turn, helps to illustrate how menopause was being articulated as a declining biological function.

To summarize, menopause was described as either "three stages," "a change of life," or "a stage of life" on the HT web sites. From these examples, the language on the HT web sites introduced menopause as a medical event needing to be medically managed. Accordingly, statements found on several web sites (CombiPatch and PREMARIN) articulated a biomedical perspective by

presenting menopause as problematic thereby further solidifying the idea that menopause belongs under the domain of medicine. The PREMARIN web site also told women that this "change of life" was best managed by a medical professional thus reinforcing the physician's role and expertise in offering a diagnosis. Overall, my analysis indicated the descriptions of menopause on the HT web sites introduced menopause to consumers as a "problematic" biomedical event best managed by HT under the supervision of a health care provider. Next, I explored explanations for the "causes" of menopause provided on the HT web sites to further understand how menopause was portrayed in the online advertisements.

Explanations for Menopause

Explanations for menopause on the HT web sites further contributed to the overall portrayal of menopause. Table 18 illustrates how an explanation for menopause was represented on the various HT web sites. As noted in previous chapters, menopause was defined in this study as a natural part of the aging process, rather than an event that limits women's psychological or physical capacities (McCrea, 1983). By contrast, my analysis showed that main explanations for menopause in the online advertisements were described through the prism of biological or physiological causes to account for these changes. The two main explanations, or "causes," for menopause found on the HT web sites were the loss of hormones and the end of regular menstruation.

Table 18: Explanations for Menopause

Name of HT Product	**Explanations for Menopause**
ANGELIQ	End of regular menstruation, occurs when your body stops producing estrogen
CombiPatch	Ovaries taper off from producing estrogen and progesterone to the extent where menstruation stops
ENJUVIA	Decrease in the production of certain hormones
Estrasorb	Once your period has stopped for one year, loss of estrogen
femhrt	Your body is adjusting to lower levels of the hormones estrogen and progesterone
Femring	Loss of estradiol
PREMARIN	Once you have not had a period for 12 consecutive months, ovaries stop producing estrogen and fertility ends
PREMPRO	Ovaries stop production of hormones and no menstrual periods for 12 consecutive months

In the online advertisements, all of HT web sites (N=8) referred to menopause as the result of the loss of hormones. The ENJUVIA and PREMPRO web sites stated the decrease in production of hormones in general, while the other web sites for HT mentioned the loss of a specific hormone (*i.e.* estrogen, progesterone, and estradiol). Nevertheless, all of the HT web sites in the sample used the loss of hormones to explain menopause.

Specifically, the femhrt web sites stated that the “body is adjusting to lower levels of the hormones estrogen and progesterone” (femhrt web site: http://www.wcrx.com/products/femhrt. Retrieved: July 25, 2009). The femhrt web site goes on to state “HT is a way of providing your body with the estrogen that you no longer produce naturally after menopause” (femhrt web site: http://www.wcrx.com/products/femhrt. Retrieved: July 25, 2009). Here, an emphasis was placed on the “loss” of estrogen.

A focus on the loss of hormones was also evident on the CombiPatch web site which further explained that HT products work by “balancing the hormone levels in your body” (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). Here again, an emphasis on “balancing” hormone levels to make up for some loss of hormone production was clear. In addition, the ANGELIQ web site referred to menopause as a “balancing act” since a woman’s “reproductive cycle is based on a delicate balance of 2 hormones: estrogen and progesterone” (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). Further, the ANGELIQ web site stated “HT with ANGELIQ tablets can help bring back the balance” (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). Once more, the importance of balancing hormones was emphasized in order to “restore” or “get back” to an adequate level. Given this, three of the HT web sites (ANGELIQ, CombiPatch, and femhrt) suggested that the loss of hormones should be supplemented with HT products to help restore this “balance.” From the above examples found on the HT web sites, it was assumed the lower estrogen levels were considered to be negligible. Such

explanations for menopause direct attention to the simple variable of estrogen (Derry, 2002). Another example was particularly evident on the PREMARIN web site which stated menopause begins when "estrogen production from your ovaries starts to decline" (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009). With such words as *adjusting*, *balance*, and *decline* found on the HT web sites, I found that "deficiency" and "loss" were common themes on the web sites. The implication was that women need to "balance" or "make up" for the loss of estrogen production. Importantly, these words set the stage for the idea of using prescription HT products to restore this balance.

At the same time, five of the HT web sites cited the end of regular menstruation (ANGELIQ, CombiPatch, Estrasorb, PREMARIN, and PREMPRO). Here, a clinical definition (*i.e.* end of regular menstruation) was adopted to explain menopause. Even though changes in the menstrual cycle are a common condition of the menopausal transition, women may interpret these changes as "signs of disease and experience unnecessary fear" (Mansfield and Voda, 1997, p. 62). Thus, the explanations for menopause on the HT web sites were defined exclusively as the loss of estrogen production and the end of regular menstruation firmly grounded in a biomedical discourse of menopause.

This analysis was instrumental for beginning to illustrate the ways in which biomedical rhetoric was being used to explain menopause on the HT web sites. By emphasizing menstrual cycle changes and declining estrogen production, the HT web sites drew on biomedical definitions of menopause. As such, menopause was portrayed on the pharmaceutical web sites for HT as some type of physical

problem related to biological functioning. In light of this, women were informed by the online advertisements that they could learn to adjust to these changes and restore the balance of hormone levels by using HT.

As noted in earlier chapters, print advertisements found in popular magazines and medical journals have tended to also heavily draw on biomedical explanations of menopause as a hormone deficiency disease that can be easily "fixed" with drugs (Cimons, 2008; Richter, 2002; Whittaker, 1998). Similarly, my analysis also indicated that online advertisements continued to utilize biomedical rhetoric to emphasize a loss of hormones and implied that this transition was a state of biological decline. Indeed, all of the web sites in the sample emphasized the loss of hormones as a "reason" or explanation for menopause. While an emphasis on change was clear, only one web site (PREMARIN) actually used the word "decline." Other web sites, such as ANGELIQ, CombiPatch, and femhrt, employed the terms "adjustment" and "balance." When taken together, the language used on the web sites, helped to set the stage for using the HT products in order to restore or balance hormone levels. As a result, according to the web sites for HT, menopause could be viewed as a biomedical phenomenon and treated accordingly with HT.

Variety of Menopausal Symptoms

In addition to the definitions of menopause that accompanied the online advertisements, the HT web sites also prompted potential consumers to identify

with specific emotional or physical conditions. Table 19 indicates the type of menopausal symptoms that were found across the various HT web sites. Analysis of the data indicated that often these conditions were portrayed as problematic. In this way, by suggesting that these conditions were “symptoms” best addressed through medical avenues, potential consumers were prompted to identify with a particular HT product to alleviate the so-called symptoms. Hence, the variety of symptoms that were identified and the language used to describe these symptoms contributed to the representation of menopause in the online advertisements. As a consequence, the portrayal of symptoms and the language used to present these symptoms helped to constitute for female audiences what it means to be “menopausal.”

Table 19: Symptoms of Menopause on the HT Web Sites

Name of HT Product	**Symptoms Listed on Web Site**
ANGELIQ	Hot flashes, night sweats, vaginal dryness
CombiPatch	Hot flashes, night sweats, vaginal dryness, sleep disturbances, tiredness, postmenopausal osteoporosis, mood changes
ENJUVIA	Vasomotor symptoms, vaginal atrophy, hot flashes, night sweats, vaginal dryness, pain with sex, irregular periods, weight gain, problems sleeping, dry skin, mood swings, irritability
Estrasorb	Hot flashes, night sweats
femhrt	Hot flashes, night sweats, insomnia, vaginal changes, postmenopausal osteoporosis
Femring	Hot flashes, night sweats, vaginal dryness
PREMARIN	Hot flashes, night sweats, vaginal symptoms, postmenopausal symptoms such as increased risk of cardiovascular disease, weight gain, and bone loss
PREMPRO	Hot flashes, night sweats, vaginal symptoms

Analysis of the data indicates that two “symptoms” of menopause in particular were common across all of the HT web sites (N=8). In the online advertisements, hot flashes and night sweats were mentioned as menopausal symptoms on all of the HT web sites. A further analysis of the online advertisements indicated that seven of the HT web sites (n=7) listed the same three symptoms (hot flashes, night sweats, and vaginal changes/dryness). Therefore, the symptoms that were identified largely as “common” symptoms of

menopause across the web sites included hot flashes, night sweats, and vaginal changes/dryness.

Interestingly, the ENJUVIA web site was unique among the study sample for its use of biomedical rhetoric for describing symptoms. In this case, the terms "vasomotor symptoms" and "vaginal atrophy" were used on the ENJUVIA web site (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). By using biomedical nomenclature, this particular advertisement in my data set placed these "symptoms" within a medical context thereby suggesting to consumers that menopause was "disease-like."

While the "common" three symptoms of hot flashes, night sweats, and vaginal changes were presented across all of the HT web sites, some important differences existed between the web sites. That is to say, instances of "other" menopausal symptoms were also observed. To provide some more context for this discussion, Coney (1994) says despite the claims of some health care providers that produce lengthy menu of menopausal symptoms, there are "only three signs [that] can be directly attributed to the physiological event of menopause" (p. 102). These are menstrual changes, vasomotor effects (hot flashes and night sweats), and loss of moisture and elasticity in the vagina (Coney, 1994). Despite this, menopause continues to be defined by a long list of symptoms (Rostosky and Travis, 1996). Indeed, the HT web sites did not create the lists of symptoms rather they incorporated lists of symptoms already created by biomedical research (Mansfield and Voda, 1997). Therefore, further insight

into the portrayal of menopause was gained after examining these "other" menopausal symptoms presented on the HT web sites.

One of the most telling differences across the various the HT web sites were the additional symptoms listed on the CombiPatch and ENJUVIA web sites. In particular, mood changes, mood swings, and irritability were also observed on the CombiPatch and ENJUVIA web sites. Moreover, the ENJUVIA web site further listed irregular periods, weight gain, and dry skin as "other" symptoms of menopause (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). These changes are not necessarily related to menopause and just because a woman may experience mood changes or irritability during the menopausal transition "does not mean that menopause *caused* the condition" (Mansfield and Voda, 1997, p. 60, italics in the original). Yet, by having these listed as so-called symptoms of menopause on the CombiPatch and ENJUVIA web sites suggested a possible link or association.

Additionally, the CombiPatch and femhrt web sites listed "postmenopausal osteoporosis" as a symptom of menopause (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). The PERMARIN web site also identified an increased risk of cardiovascular disease, weight gain, and bone loss as "postmenopausal" symptoms (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009). Therefore, these three web sites in the sample (CombiPatch, femhrt, and PREMARIN) illustrated a technique described in previous research of linking osteoporosis with menopause in such a way that "osteoporosis practically becomes identified as a symptom of

menopause" (Worcester and Whatley, 1992). Again, such a technique has been seen as a way to expand the list of symptoms to include conditions that have not been traditionally associated with menopause. The U.S. Department of Health and Human Services has noted that estrogen should not be used as a first-line of treatment for osteoporosis (U.S. Department of Health and Human Services web site: http://www.womenshealth.gov/faq/menopause-treatment.cfm. Retrieved: January 24, 2010).

In all of this an especially crucial area was illuminated. One of the key ways in which these "other" symptoms have been instrumental is in their ability to encompass emotional or physical conditions that may not be related to menopause. For example, weight gain, dry skin, and mood changes may be explained by a host of other reasons than menopause and could be easily viewed as unrelated. Yet, having such symptoms listed on the web sites implied to consumers that they were important and implied they could be treated with HT. The pharmaceutical web sites were incorporating lists of so-called menopausal symptoms that already existed in the biomedical literature; however, the online advertisements for HT were effectively able to imply a connection by listing them as possible symptoms and linking them with menopause. At the present, menopausal hormone therapy is recommended only as a short-term treatment of moderate to severe symptoms such as hot flashes or night sweats (U.S. Department of Health and Human Services web site: http://www.womenshealth.gov/menopause/treatment. Retrieved: January 24, 2010). Through the alignment of such emotional and physical issues and

presenting them to consumers as so-called symptoms of menopause, drug manufacturers were able to further promote the widespread use of HT for an extended range of menopausal "symptoms."

In brief, groups of "common" and "other" symptoms emerged. A comparison of "common" and "other symptoms" brought into focus a technique to incorporate an expansive list of so-called menopausal "symptoms" into the HT web sites. Hence, my analysis demonstrated an array of menopausal "symptoms" was presented to consumers on the web sites as treatable with HT. By suggesting to potential consumers that their physical and emotional issues might fit medical models of menopause, the online advertisements capitalized on already existing lists of symptoms found in the biomedical literature and linked these symptoms with menopause to include emotional changes and the prevention of osteoporosis. Consequently, such sweeping claims of menopausal-related symptoms could be used to further propose the use of HT products for emotional and physical conditions beyond the "commonly" regarded symptoms of hot flashes, night sweats, and vaginal changes. Next, I take a closer look at the language used to describe the symptoms of menopause.

Portrayal of Symptoms

This section of the chapter analyzes the language used to describe the various menopausal symptoms listed on the HT web sites. Table 20 illustrates the language used to describe symptoms of menopause presented across the

HT web sites in the study sample. Here, I was most interested in the way language was used by the pharmaceutical companies to describe symptoms in either a positive or negative light.

Table 20: Portrayal of Symptoms

Name of HT Product	Portrayal of Symptoms	Key Phrases/Words
ANGELIQ	Disruptive and inconvenient hot flashes, night sweat can lead to poor sleep quality and a reduced sense of self	Disruptive Inconvenience Poor sleep quality Reduce sense of self
CombiPatch	Hot flashes may interrupt your sleep, causing tiredness and possibly mood changes	Interrupt sleep Tired Mood Changes
ENJUVIA	Hot flashes may be easily tolerated or range from embarrassing to debilitating	Easily Tolerated Embarrassing Debilitating
Estrasorb	Moderate to severe hot flashes, can be severe enough to interrupt your sleep and make you feel miserable	Severe Interrupt sleep Miserable
femhrt	Night sweats are often severe enough to wake you, many women going through menopause experience insomnia	Severe Insomnia
Femring	Hot flashes intruding on your day, night sweats interrupting your sleep, unpredictable hot flashes throughout the day	Intruding on day Interrupting sleep Unpredictable hot flashes
PREMARIN	Unpredictable hot flashes, may also feel irritated, annoyed, or frustrated during a hot flash	Unpredictable hot flashes Irritated Annoyed Frustrated
PREMPRO	Unpredictable hot flashes, may also feel irritated, annoyed, or frustrated during a hot flash,	Unpredictable hot flashes Irritated Annoyed

	uncomfortable or painful intimacy, hampered sex lives	Frustrated Uncomfortable Painful intimacy Hampered sexual relations

As Table 20 indicates, menopausal symptoms were represented by a number of recurring key phrases or words. In the online advertisements, menopausal symptoms were described as unpredictable, inconvenient, embarrassing, and portrayed as an interruption or intrusion. For example, the ANGELIQ web site described hot flashes as “disruptive and inconvenient” (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). Furthermore, unpredictable hot flashes may also leave one feeling “irritated, annoyed, or frustrated” (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009).

Another example was found on the ENJUVIA web site which stated hot flashes may range from “embarrassing to debilitating” (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). In addition, night sweats could “lead to poor sleep quality and a reduced sense of self” (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). On one hand, the ANGELIQ web site claimed night sweats and poor sleep could lead to a reduced sense of self, and yet, one might argue, how do we know that an individual has no sense of self? Unfortunately, neither an explanation nor description was offered to provide further context. Moreover, the negative impact that menopausal symptoms could have on sexual relations was implied on the

PREMPRO web site which stated vaginal changes can result in uncomfortable or painful intimacy leading to "hampered sex lives" (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009).

One of the most sweeping aspects of the HT web sites was the overall portrayal of symptoms in a negative light. This was accomplished by presenting symptoms in terms of *physical* symptoms, such as night sweats and vaginal dryness. The *physical* symptoms were then associated with having a negative impact on social and personal relations. Notably, the PREMPRO associated vaginal changes with hampered sex lives. Similarly, the ENJUVIA web site proclaimed that poor sleep quality resulting from night sweats could lead to a "reduced sense of self." Furthermore, instances of "disruptive hot flashes" found on the ANGELIQ, PREMARIN, and PREMPRO web sites portrayed menopausal symptoms as unpredictable, a disruption to daily life, and even something that was out-of-control.

By portraying such symptoms as "disruptive," symptoms were presented as problematic to consumers thereby positioning them within a disease-like model requiring medical treatment. Certainly, the language used to portray the symptoms in these instances helped to set the stage for using the HT products. If left untreated, extremes were presented to consumers, namely that symptoms could become debilitating, lead to a reduced sense of sense, and result in hampered sex lives. It is also noteworthy that the use of positive language, such as describing menopause as a "beginning" or "freedom," was not observed on any of the web sites for HT.

Under further scrutiny, I observed a technique in which the web sites attempted to convey that other women were also "suffering" similar menopausal symptoms. For example, the Estrasorb web site asked consumers the question "Hot Flashes? You're In Good Company!" (Estrasorb web site: http://www.estrasorb.com. Retrieved: July 15, 2009). Such advertisements favorably shape consumers' impressions about a particular product because "consumers are led to believe that the use of such a product is done en masse" (Arney and Rafalovich, 2007, p. 54). The use of the specific phrase "You are not alone" can help create what Arney and Rafalovich (2007) refer to as a "Community of Sufferers" in which potential consumers are encouraged to join the bandwagon to use a particular product (p. 54).

The notion that menopausal symptoms were common to a large number of women was also promoted through the use of numbers and statistics on the HT web sites. For instance, the CombiPatch web site asserted that hot flashes were common during menopause and "eighty-five percent of women experience this undesirable symptom" (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). Unfortunately, no reference or citation was provided to put this claim into context for the web site user. This finding is in agreement with previous research also reporting that claims were not supported in magazine advertisements for HT (Carlson, Li, and Holm, 1997).

A similar example was found on the ENJUVIA web site which stated "nearly three out of four women have hot flashes during menopause" (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). Here again, a

reference to this claim was not provided; however, we were assured by this statement that large numbers of women experience hot flashes. Therefore, assuming that web users may identify with the symptoms described on the HT web sites, a potential consumer may feel that she belongs to the group of "sufferers" because the symptoms in the advertisements were portrayed as common to a large group of women (Arney and Rafalovich, 2007).

In sum, lists of symptoms taken from the biomedical literature were capitalized and incorporated on the HT web sites. Indeed, the term "symptoms" is commonly associated with problems and illness (Rostosky and Travis, 1996). The web sites linked menopause with a long list of "symptoms" and treatments for these symptoms, as if it were a disease. Perhaps most striking about the portrayal of symptoms on the pharmaceutical web sites for HT was the way in which a connection was implied between the physical symptoms and the impact on social and personal relations. Symptoms such as hot flashes and vaginal changes were presented to consumers as "problematic" using such language as *debilitating*, *reduced sense of self*, and *hampered sex lives.* In short, symptoms presented across the HT web sites were grounded in a biomedical perspective which further articulated a disease-like model of menopause necessitating medical intervention.

Prescription of Action

Conrad and Leiter (2008) expressed concerns over the ability of DTCA to encourage consumers to self-diagnosis and influence requests for prescription medications. Statements on the HT web sites that encouraged women to seek medical treatment and advice were also evident. To investigate this phenomenon further, I analyzed the language used on the HT web sites that encouraged consumers to perform some kind of behavior or activity. To illustrate this argument, Table 21 describes the various statements found across the HT web sites.

Table 21: Prescription of Action

Name of HT Product	**Prescription of Action**
ANGELIQ	Ask to your health care professional if ANGELIQ is right for you
CombiPatch	Talk to your doctor or pharmacist for more information
ENJUVIA	Ask your healthcare professional if ENJUVIA is right for you
Estrasorb	Talk to your healthcare provider about Estrasorb for the relief of hot flashes and night sweats
femhrt	Talk to your doctor about what treatment option is right for you
Femring	Talk to your doctor about what treatment option is right for you
PREMARIN	Discuss the level of relief you can expect with PREMARIN with your health care professional
PREMPRO	Discuss the level of relief you can expect with PREMPRO with your health care professional

As seen in Table 21, all of the HT web sites in the sample (N=8) exhibited statements encouraging prospective consumers to inquire about medical treatment with a health care professional. In fact, all of the statements started with action verbs, such as “talk,” “ask,” and “discuss.” In this way, all of the HT web sites clearly suggested that consumers should *do* something. To further understand the action or behavior that was being advocated, I examined the actual language presented to consumers on the web sites.

Out of the eight web sites, four of the HT web sites used the word “talk” in their statements (CombiPatch, Estrasorb, femhrt, and Femring). For example, the CombiPatch web site stated “talk to your doctor or pharmacist for more information” (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). Another example was found on the Estrasorb site which stated “talk to your healthcare provider about Estrasorb for the relief of hot flashes and night sweats” (Estrasorb web site: http://www.estrasorb.com. Retrieved: July 15, 2009). In addition, both the femhrt and Femring web sites encouraged consumers to “talk to your doctor about what treatment option is right for you” (femhrt web site: http://www.wcrx.com/products/femhrt. Retrieved: July 25, 2009).

Two of the HT web sites (ANGELIQ and ENJUVIA) used the word “ask” in their statements. For example, visitors to the ANGELIQ web site were prompted to “ask to your health care professional if ANGELIQ is right for you” (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). Similarly, the ENJUVIA web site promoted “ask your healthcare professional if ENJUVIA is right for you” (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). By encouraging consumers to “ask” a health care provider about HT, the statements in question on ANGELIQ and ENJUVIA web sites were prescriptive. In this sense, these two web sites recommended a particular behavior or action for consumers (*i.e.* ask about HT) while also reinforcing that notion that a health care provider could determine “what is right for you.” Not only was a consumer

behavior being advocated, but the expert role of medical authority was reinforced.

In comparison, the word “discuss” was observed on two other HT web sites (PREMARIN and PREMPRO). The PREMARIN web site urged consumers to “discuss the level of relief you can expect with PREMARIN with your health care professional” (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009). Likewise, the PREMPRO web site suggested consumers should “discuss the level of relief you can expect with PREMPRO with your health care professional” (PREMPRO web site: http://www.prempro.com. Retrieved: July 17, 2009). Here, the pairing of the words “discuss” and “relief” in both of the statements associated discussing HT options with a health care provider and some form of relief that could be expected from the HT products. Therefore, when you “discuss” HT options, you will learn about the “relief” you can expect.

Although all of the web sites encouraged women to follow-up with health care providers, some differences across the web sites were detected. Interestingly, five of the HT web sites (n=5) encouraged consumers to inquire about a specific HT product. These five web sites were ANGELIQ, ENJUVIA, Estrasorb, PREMARIN, and PREMPRO. To illustrate this point, the ANGELIQ web site stated “ask to your health care professional if ANGELIQ is right for you” (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009).

On the other hand, three of the HT web sites (CombiPatch, femhrt, and Femring) encouraged consumers to inquire about general treatment options but they did not explicitly mention the name of an HT product. For instance, the

Estrasorb web site encouraged consumers to “talk to your doctor about what treatment option is right for you” (Estrasorb web site: http://www.estrasorb.com. Retrieved: July 15, 2009). Thus, more of the HT web sites in the study sample encouraged consumers to inquire about a particular HT product than asking about general treatment options. Nevertheless, all of the HT web sites encouraged women to follow-up with a health care professional regarding HT treatment options. As witnessed from the language used on the HT web sites, consumers were encouraged to contact a health care professional and inquire about medical treatment options. Overall, statements found across all of the pharmaceutical web sites prescribed a behavior or course of action for consumers.

Self-Diagnostic Symptom Tools

Up to this point, I have considered the textual representation of menopause on the HT web sites by examining the descriptions for menopause and how the various “symptoms” were portrayed through the use of language. In addition, half of the HT web sites in the sample (n=4) provided online self-diagnosing symptom tools for web site consumers. Table 22 indicates which of the HT web sites had symptom tools.

Table 22: HT Web Sites with Symptom Tools

Name of HT Product	**Symptom Tools**
ANGELIQ	**Yes**
CombiPatch	No
ENJUVIA	**Yes**
Estrasorb	No
femhrt	No
Femring	No
PREMARIN	**Yes**
PREMPRO	**Yes**

Concerning self-diagnosis, Conrad and Potter (2000) contend that adults who self-diagnose disorders might have become familiar with the condition through the media. Indeed, this concern illustrates the public's reliance on the media for information and poses interesting questions about media portrayals of menopause and the role of media in shaping the public's perception of health and illness. Since media outlets, including online advertisements, are an effective means of disseminating information about drugs and medical "conditions," an examination of how menopause was portrayed through the online self-diagnosing symptom tools was warranted.

Specifically, the ANGELIQ, ENJUVIA, PREMARIN, and PREMPRO web sites (n=4) provided symptom tools for web site users to assess the type and degree of severity of their menopausal symptoms. The self-diagnosing symptom tools

were an example of an interactive component found on the HT web sites. With these online symptom tools, consumers were presented with a series of questions and response categories to select from. The web site user then proceeded through the series of questions by clicking (or advancing) to the next question in the series until the web site visitor reached the end of the questions. At this point, a customized "report" of menopausal symptoms was provided to the web site user. I posit that these interactive self-diagnosing tools were yet another vehicle through which the pharmaceutical companies could construct and convey messages about menopause, symptoms, and their HT products. As such, they are an interesting subject for sociological analysis. Next, I examined the self-diagnosing symptom tools found on the HT web sites.

Out of curiosity, I performed an experiment with the PREMARIN symptom tool. In this experiment, I completed the PREMARIN symptom tool three different times. For each of my attempts, I indicated a different degree of "severity," for my so-called menopausal symptoms. At first, I selected that my symptoms "rarely" affected my life. Then, I indicated that my (hypothetical) symptoms "moderately" affected my life. Finally, I checked the response options expressing that my symptoms were "severely" affecting my life. With all three attempts at answering the PREMARIN symptom tool questions, the recommendation on my customized symptom "reports" was the same. In essence, all three reports recommended printing and sharing the "results" about my symptoms with a health care provider. Additionally, all three reports linked back to the PREMARIN web site to learn more about treatment options. From this experiment, I can reasonably conclude

that this online symptom tool in particular was not sophisticated enough to discern my responses, especially given the fact that I clearly indicated various degrees of “severity.” Thus, the tool primarily functioned to encourage contact with a health care provider while also referring me back to the HT web site for more information about HT treatment options.

The symptom tool located on the ANGELIQ web site was labeled “Assess Your Symptoms.” The front page of the symptom tool declared that the “first step to help you manage your menopausal symptoms is to be aware of what your body is telling you” (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: January 18, 2010). As seen in this statement, web site users were informed from the beginning that this tool could help them gain new knowledge about their bodies so that they can become more aware of what their bodies were telling them. Furthermore, a disclaimer in smaller font was also provided stating that the symptom tool could not offer a diagnosis; therefore, one should “schedule an appointment with a health care provider” (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: January 29, 2010). Not only did the legal disclaimer function to protect the pharmaceutical companies so they would not appear to be giving a diagnosis, but it also deferred to medical authority for a diagnosis thereby further encouraging potential consumers to contact a health care provider.

In general, symptom tools are designed as a quick and easy way for consumers to assess their experiences and determine when to seek medical attention. Once an ANGELIQ web site user clicked on the symptom tool they were greeted by the message “Menopause. It’s a natural part of life, but these

symptoms don't have to be" (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: January 18, 2010). From this statement, consumers were told that menopause was natural. However, the statement further implied that symptoms were "unnatural." Here, the tension between "natural" (in this case, menopause) and "unnatural" (menopausal symptoms) was conveyed and created a context for consumers to learn how to "treat" such undesirable symptoms with HT products. In this sense, it encouraged women to regard any changes as unacceptable symptoms.

Next, the web site user would proceed through a series of eleven questions designed to provide "new insight" into how the consumer feels (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: January 18, 2010). Presumably, consumers would learn more about their symptoms, which were framed as unnatural and unhealthy from the very beginning of their interaction with the online tool. Table 23 indicates the types of questions and response options that were presented to web site users on the ANGELIQ "Assess Your Symptoms" Tool.

Table 23: Questions from the ANGELIQ “Assess Your Symptoms” Tool

Symptoms Questions	**Response Categories**
How old are you?	Consumer types in response
How long has it been since your last period?	Two response options: 1. Less than one year 2. More than one year
Are you experiencing menopausal symptoms, such as hot flashes, night sweats, and vaginal dryness?	Three response options: 1. Yes 2. No 3. Not sure
Have you had your ovaries surgically removed?	Two response options: 1. Yes 2. No
How often do you experience hot flashes?	Three response options: 1. Rarely (very little or not at all) 2. Frequently (often enough that I find it to be irritating and embarrassing) 3. Severely (so often that it severely interferes with my daily activities)
On average, how many hot flashes do you experience each day?	Consumer types in response
How often do you experience night sweats?	Three response options: 1. Rarely (very little or not at all) 2. Frequently (often enough that I find it to be annoying and uncomfortable) 3. Severely (so often that it severely interferes with my sleep patterns)
On average, how many times do night sweats disrupt your sleep per night?	Consumer types in response
Are vaginal symptoms causing you discomfort? • Dryness	On a scale of 1 to 5 (1 being not at all, 5 being most severe)

• Itching • Burning • Discomfort during sex	
Are you considering using or currently using a combination (estrogen and progestin) therapy?	Two response options: 1. Yes 2. No (If yes, what are you current using? Consumer types in response)
Would you consider using a once-a-day combination pill to help manage your symptoms?	Two response options: 1. Yes 2. No

The ANGELIQ "Assess Your Symptoms" Tool entailed eleven questions about hot flashes, night sweats, and vaginal dryness. In this online symptom tool, symptoms were also presented in terms of *physical* symptoms. Specifically, two questions asked about hot flashes. As seen in Table 23, a web site visitor was asked "how often do you experience hot flashes?" The physical symptoms were then associated with having a negative affect on social and personal situations. For instance, consumers were asked to indicate how often they experienced hot flashes and they could select a response from three options (rarely, frequently, and severely). Interestingly, the response option "severely" was defined as "so often that it severely interferes with my daily activities" (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: January 29, 2010). Unfortunately, such "daily activities" referred to in the response option were not further defined for consumers. Moreover, since the mention of "daily activities" was undefined, there was no way for women working outside of the home to indicate if they experienced different "daily" concerns. Another two questions centered on

physical symptoms, including night sweats and one more question about vaginal symptoms. The remaining six questions that comprised the ANGELIQ "Assess Your Symptoms" Tool asked about age, how long it had been since menstruation, if the woman's ovaries had been surgically removed, and if the consumer was currently using any combination of hormone therapies.

At the completion of the ANGELIQ "Assess Your Symptoms" Tool, the web site user would be presented with a customized report entitled "My Symptom Report" which could be printed out and shared with their health care provider. Consumers were told to "use what you learn to talk to your healthcare professional and explore what treatment options may be right for you" (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: January 27, 2010). Based on this statement, I speculate one function of the symptom tools was to facilitate communication between the potential consumer and a health care provider. In brief, the pattern of presenting symptoms to consumers as "unnatural" was clear in this online tool. Through the response options, the online tool then implied that these physical symptoms could have a negative impact on social and personal dimensions. As a result, consumers were encouraged to print out and share their customized "symptom report" with their health care provider to learn more about HT options.

The pattern of presenting symptoms as "problematic" continued in the next online symptom tool. Secondly, the ENJUVIA web site provided the "Menopause Impact Tool" for web site users. Just as the name suggests, this tool could be used by consumers to assess the "impact" menopausal symptoms were having

on their lives. Clearly, the name of the online tool implied that symptoms *would* have an impact, it was just a matter of using their tool in order to assess *how much* of an impact. Obviously, there was a built-in assumption about the nature of menopausal symptoms and in this case symptoms were conceptualized and articulated as capable of having an "impact." Therefore, the question becomes, how can women lessen this impact? Table 24 shows the types of questions and response options from the ENJUVIA "The Menopause Impact Tool."

Table 24: Questions from the ENJUVIA "The Menopause Impact Tool"

Symptoms Questions	**Response Categories**
In the last month, to what extent have you been bothered by the following symptoms? • Hot flashes • Night sweats or chills • Sleep disturbance • Joint pain or stiffness • Fatigue	Three response options: 1. Not at all or rarely 2. A little or moderately 3. Regularly or frequently
To what extent have these symptoms negatively impacted the following? • Feelings about yourself • Relationships • Work	Three response options: 1. Not at all or rarely 2. A little or moderately 3. Regularly or frequently
In the last month, to what extent have you been bothered by the following symptoms? • Genital dryness, pain, and/or burning • Pain during sexual activity • Decreased sexual desire • Decreased sexual frequency	Three response options: 1. Not at all or rarely 2. A little or moderately 3. Regularly or frequently
To what extent have these symptoms negatively impacted the following? • Feelings about yourself • Relationships • Work	Three response options: 1. Not at all or rarely 2. A little or moderately 3. Regularly or frequently
In the last month, to what extent have you been bothered by the following symptoms? • Anxiety • Irritability • Sadness • Difficulty concentrating	Three response options: 1. Not at all or rarely 2. A little or moderately 3. Regularly or frequently
To what extent have these symptoms negatively impacted the following?	Three response options: 1. Not at all or rarely

• Feelings about yourself • Relationships • Work	2. A little or moderately 3. Regularly or frequently

The ENJUVIA web site stated the symptom tool "provides information that your health care professional can use to determine which treatment might be right for you" (ENJUVIA web site: http://www.enjuvia.com. Retrieved: January 18, 2010). In this statement, the reoccurring theme of the role of health care providers in providing a diagnosis and medically managing menopause was conveyed. Similar to the ANGELIQ symptom tool, the importance of sharing the "results" of the ENJUVIA symptom assessment was emphasized. Once again, the importance of reporting symptoms to a health care professional was stressed. As Kaufert and Gilbert (1986) noted, one indication that medicalization is occurring is whenever women are told that they should depend on a physician rather than their own judgment. Here, the ANGELIQ and ENJUVIA web sites perpetuated the idea that menopause was a medical event to be medically managed. Since only health care professionals "can determine which treatment is right," this statement reinforced the "expert" role of physicians in their ability to define and categorize women's experiences.

Likewise, consumers navigated through a series of six questions on the ENJUVIA web site designed to assess how menopause symptoms impacted their lives in four key areas. These areas were hot flashes, night sweats, sexual health, and psychological symptoms. To help assess the impact of menopausal symptoms, web site users were asked to indicate to what extent they were

"bothered" by symptoms, such as hot flashes, night sweats or chills, sleep disturbance, joint pain or stiffness, and fatigue (ENJUVIA web site: http://www.enjuvia.com. Retrieved: January 29, 2010). The use of negative language, such as being "bothered," consistently conveyed the message that symptoms were bothersome and problematic for which HT was a viable treatment.

As seen in Table 24, consumers were asked in five of the questions to speculate the extent to which these symptoms had "negatively impacted" various aspects of their lives, such feelings about their own selves, relationships, and work. The three response options that were provided for these five questions included "not at all or rarely," "a little or moderately," and "regularly or frequently." Although the pattern of response options for these five questions was consistent, it was not very helpful to consumers because definitions for the varying response categories were not provided. Meanwhile, the repeated use of the words "bothered" and "negatively impacted" in the questions observed on the ENJUVIA "The Menopause Impact Tool" played an important role in portraying such symptoms as bothersome while suggesting these had an undesirable or negative effect on personal, relationships, and work aspects. Here again, symptoms were linked to affecting social and personal situations. In doing this, the pharmaceutical companies were able to directly propose to consumers a need for their HT products to alleviate "bothersome" symptoms.

In comparison to the other online symptom tools in the sample, the ENJUVIA symptom tool was the only one to include psychological symptoms among the list

of possible menopausal symptoms. As Table 24 illustrates, the ENJUVIA "Menopause Impact Tool" included psychological symptoms such as anxiety, irritability, sadness, and difficulty concentrating. As I discussed earlier in this chapter, these psychological "symptoms" may be explained by a host of other reasons other than menopause. They could also be easily viewed as unrelated. Yet, the inclusion of such psychological symptoms in the ENJUVIA online tool implied to consumers that they were important and associated with menopause. Finally, upon completion of the ENJUVIA symptom tool consumers received a "Menopause Impact Analysis" report. Consumers were told they could "print the results and share them with your healthcare professional" (ENJUVIA web site: http://www.enjuvia.com. Retrieved: January 27, 2010).

Two more web sites (PREMARIN and PREMPRO) provided online self-diagnosing symptom tools. Both symptom tools asked the same eleven questions and also provided the same response categories to consumers. This similarity is not surprising considering the fact that both PREMARIN and PREMPRO are products of Wyeth Pharmaceuticals. Although both tools had the same content, two differences were noted amongst the PREMARIN and PREMPRO online symptom tools. First, the PREMARIN and PREMPRO online symptom tools utilized different background colors. For instance, the PREMARIN symptom tool was blue. In contrast, the PREMPRO symptom tool was purple. In fact, these color choices were consistent with the color schemes found on each corresponding HT web site. In addition, a different woman was pictured on each of the symptom tools. On the left side of each symptom tool, a different picture of

a woman was present. Again, different pictures of women on the PREMARIN and PREMPRO online symptom tools helped to visually tie the specific symptom tool to a particular HT web site. Essentially, I found that the content of the PREMARIN and PREMPRO online symptom tools was the same but some visual differences, such as the background color and images of two different women, were employed to help tie the symptom tool to the particular HT web site. Given this, next I analyzed the questions from the PREMARIN and PREMPRO "Menopausal Symptoms Assessor" Tools.

Upon arriving at the PREMARIN and PREMPRO "Menopausal Symptoms Assessor" tools, web site users were told that "tracking and assessing your menopausal symptoms are important first steps in managing them" (PREMARIN web site: http://www.premarin.com. Retrieved: January 18, 2010). This statement reinforced the connection between assessing your symptoms and the ability to "manage" them. The terms "tracking," "assessing," and "managing" are symbolic medical terms that stem from the dominant biomedical view of menopause where any changes are regarded as pathological. The PREMARIN and PREMPRO symptom tools consisted of eleven questions for the consumer to answer. Table 25 shows the types of questions and response options from the PREMARIN and PREMPRO "Menopausal Symptoms Assessor" Tools.

Table 25: Questions from the PREMARIN and PREMPRO "Menopausal Symptoms Assessor" Tool

Symptoms Questions	**Response Categories**
How old are you?	Consumer types in response
How would you describe your menstrual status?	Four response options: 1. No change in frequency or flow of my menstrual period 2. There seem to be some changes in the flow, frequency, or length of my period 3. I stopped having my menstrual periods 4. I stopped having menstrual periods because of surgery
How long has it been since your last menstrual period?	Two response options: 1. Less than a year 2. More than a year
Please indicate the severity of your hot flashes.	Four response options: 1. None 2. Mild 3. Moderate 4. Severe
Next, please indicate the frequency of your hot flashes over the course of one day.	Four response options: 1. None 2. 1 to 2 3. 3 to 4 4. 5 or more
Are hot flashes affecting your life? (Please check all appropriate responses)	Seven response options: 1. Hot flashes are not affecting my life at all 2. I am constantly embarrassed 3. I feel anxious all the time 4. I am constantly sweating 5. Sometimes I feel a little uncomfortable 6. It's disruptive when I'm working 7. Hot flashes affect my personal life

Please indicate the severity of your night sweats.	Four response options: 1. None 2. Mild 3. Moderate 4. Severe
I experience night sweats over the course of one night:	Four response options: 1. Not at all 2. Once 3. Twice 4. Three times or more
Indicate all that describe how night sweats affect your life. (Check all that apply)	Six response options: 1. No effect 2. Lack of energy 3. Constantly tired 4. Have trouble sleeping through the night 5. Sleep is frequently interrupted 6. Irritable
Describe any vaginal symptoms you might be experiencing: • Dryness • Itching • Irritation • Pain with sexual activity	Four response options: 1. None 2. Mild 3. Moderate 4. Severe
Check all that accurately describe how vaginal symptoms affect your life. (Check all that apply)	Four response options: 1. No effect 2. The symptoms make me uncomfortable sometimes 3. Sexual activity often leads to bleeding 4. Sexual activity is limited due to frequent discomfort

From the eleven total questions that comprised the PREMARIN and PREMPRO “Menopausal Symptoms Assessor” tools, one question asked about the consumer’s age, two questions were related to menstrual status, three

questions inquired about hot flashes, three more questions asked about night sweats, and two final questions asked about vaginal symptoms. As witnessed with the other symptom tools, the web site user was asked to indicate the severity of symptoms and how hot flashes, night sweats, and vaginal symptoms were "affecting" their life (PREMARIN web site: http://www.premarin.com. Retrieved: January 18, 2010). Once again, the prevalence of negative language, such as being asked to indicate the "severity of symptoms," served to characterize symptoms as problematic.

As seen in Table 25, the consumer was presented with seven response options to indicate how hot flashes were "affecting" their life. The consumer was also instructed to "check all appropriate responses" to the question, meaning that they could select several response categories. In fact, the use of the words "anxious," "embarrassed," "disruptive," and "uncomfortable" in the majority of the response options helped to provide a context in which symptoms were portrayed in a negative light. In other words, the presentation of the choices was not balanced. As such, the pharmaceutical companies effectively portrayed the symptoms as "problematic" and "bothersome" on these online symptom tools through the use of negative language thereby setting the stage for use of their HT products.

In particular, the construction of response categories was interesting because they were not mutually exclusive categories. The response options that a consumer could select included: "hot flashes are not affecting my life at all," "I am constantly embarrassed," "I feel anxious all the time," "sometimes I feel a little

uncomfortable," "it's disruptive when I'm working," and "hot flashes affect my personal life" (PREMARIN web site: http://www.premarin.com. Retrieved: January 29, 2010). Specifically, these categories were not mutually exclusive because overlap in the response options was present. For example, a web site visitor could indicate both that "hot flashes are not affecting my life at all" and "I feel anxious all the time." Hence, whenever response options are not mutually exclusive, respondents have more than one legitimate way to answer the question. Furthermore, the response options helped make a connection between hot flashes and their ability to "disrupt" work and "affect" one's personal life. As a result, the eleven questions that overall constitute the PREMARIN and PREMPRO symptom tools helped to illustrate how language could be instrumental in creating a context for the web site user to assess their menopausal symptoms and the degree of severity.

One unique difference of the PREMARIN and PREMPRO symptom tools was an online glossary feature built into the symptom tools. For example, web site users could "roll over" words with their computer mouse to learn definitions of certain words. For instance, definitions for hot flashes and night sweats could be obtained. After completing the questions, consumers were once again presented with a report and were encouraged to "print it out and take it with you to your next doctor's appointment" (PREMARIN web site: http://www.premarin.com. Retrieved: January 27, 2010). In fact, the PREMARIN and PREMPRO symptom tools tell consumers to share "the results with your health care professional to help have an effective discussion" (PREMARIN web site:

http://www.premarin.com. Retrieved: January 27, 2010). By suggesting that sharing the results of the online symptom tool could help achieve an "effective discussion" with a health care professional, the implication of this statement was that the self-diagnosing tool could lead to enhanced or improved communication among consumers and health care providers.

At this point, I will review the ways in which my analysis suggests the self-diagnosing symptom tools functioned as another type of presentation form to convey messages about menopause in the online advertisements for HT. Their use of language was amplified on the web sites for HT where consumers were asked to indicate the severity and frequency of their symptoms. First, the use of language in the online self-diagnosing symptom tools provided a particular context for web site users as they interacted with the tools to assess their symptoms and the degree of severity of these symptoms. Specifically, symptoms, such as sweats and vaginal dryness, were presented to consumers in terms of *physical* symptoms and then these symptoms were linked negatively to having an impact on personal and social relations. The language observed in the question wording about menopausal symptoms, as well as certain words used in the response categories, conveyed the message that symptoms were unnatural, bothersome, and problematic. After all, we were reminded, menopause is a "natural part of life, but these symptoms don't have to be" (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: January 18, 2010). The use of such words as "anxious," "embarrassed," "disruptive," and "uncomfortable" further helped to illustrate this point (PREMARIN web site: http://www.premarin.com. Retrieved:

January 29, 2010). Certainly, the portrayal of menopausal symptoms as "impacting" and "affecting" daily activities, work, and relationships as stated across the four symptoms tools may also give impetus for seeking medical attention and set the stage for hormone use.

Second, the categories of questions found on the self-diagnosing symptom tools ranged from vasomotor symptoms (commonly known as hot flashes and night sweats), vaginal symptoms, sexual health, and psychological symptoms. As I have highlighted, the inclusion of psychological "symptoms," such as anxiety, irritability, sadness, and difficulty concentrating, was one technique that I observed on the HT web sites. While the online symptom tools capitalized on lists of menopausal symptoms generated in the biomedical literature, this technique functioned to further expand the list of possible "menopausal symptoms" that could be treated with HT. Indeed, the very fact that the list of symptoms incorporated into the online symptom tools were gleaned from biomedical research further demonstrated how the pharmaceutical companies drew upon the dominant medical discourse (Mansfield and Voda, 1997; Rostosky and Travis, 1996). Such negative descriptions of symptoms characterized any changes as "problematic" and helped to set the stage for the use of their HT products.

Upon closer examination, I also found a significant dimension of the online self-diagnostic symptom tools was their attempt to encourage contact with a health care provider. All four of the online self-diagnosing symptom tools encouraged consumers to share the "results" of the symptom tools with a health

care professional. Therefore, following-up with a health care provider to inquire about which HT treatment might be appropriate was consistently emphasized to consumers. Moreover, printer-friendly versions of the "symptom reports" were also provided as an option for consumers at the completion of the four online self-diagnostic symptom tools. Since the symptom "reports" could be printed out and shared with a health care provider, the HT web sites further helped to draw the connection that communicating with a health care provider was a logical next step. Ultimately, these instances where contact with a health care provider was encouraged further deferred to medical authority which, in turn, helps the pharmaceutical companies in their efforts to promote the use of their HT products which are only available by prescription.

While examining the online symptom tools, concerns about the reliability and validity of the symptoms tools also emerged. According to Creswell (2003), reliability is concerned with the accuracy of the actual survey instrument and validity is concerned with the instrument's success at measuring what the researcher originally set out to measure (*i.e.* menopause symptoms). Nevertheless, the four HT web sites did not state if the online symptom tools were tested for reliability and validity.

I also assessed the reading level of the four online symptom tools. To accomplish this, I utilized an online tool called "TxReadability," a free application developed by the Accessibility Institute at the University of Texas at Austin. Using the Flesch-Kincaid Grade level, this tool indicates the grade a person will have to reach to be able to understand the text (Accessibility Institute at the University of

Texas web site: http://webapps.lib.utexas.edu/TxReadability/app. Retrieved: March 9, 2010). The Flesch-Kincaid Grade level is one of the common formulas used to assess reading levels (Kars, Baker, and Wilson, 2008). For example, a score indicating the grade level of seven means that a seventh grader should be able to understand the text. An analysis of the text of the four online self-diagnosing symptom tools in this study sample (found on the ANGELIQ, ENJUVIA, PREMARIN, and PREMPRO web sites) yielded a combined score of 7.74. This score falls between a 7–8th grade reading level in the United States. Considering it is estimated that one in four adults in the United States read at or below the 3rd grade reading level, this grade level far surpasses the estimated reading level of the average adult in the U.S. (National Adult Literacy Survey, 1992).

Individually, the online symptom tools also exceeded the estimated national reading level. The readability score of ANGELIQ symptom tool was 7.9 which is close to a 8th grade reading level. Next, the ENJUVIA symptom tool received a score of 9.78 which is equivalent to a 9-10th grade reading level. Finally, the PREMARIN and PREMPRO online symptom tools yielded a score of 6.95 requiring a 6-7th grade reading level to understand the information. Both PREMARIN and PREMPRO online symptom tools received the same score because they were the same tool produced by the same pharmaceutical manufacturer (Wyeth Pharmaceuticals). Notwithstanding, the reading levels were too high on all four of the online symptom tools in the study sample. This analysis was fruitful because I identified another technique that may encourage

consumers to follow-up with health care providers. In this case, consumers may seek assistance in “making sense” of the information which I have shown was written at a high reading level on the web sites. In sum, the online self-diagnosing symptom tools were presented as a way for consumers to learn “what their bodies are telling them,” functioned to expand the range of menopausal symptoms to include psychological symptoms, and encouraged contact with a health care provider.

Tests for Medicalization

Kaufert and Gilbert (1986) describe several “tests for medicalization” that can be applied to the pharmaceutical web sites to help determine if the process of medicalization was occurring. One sign is when the decline of estrogen production has become a central theme (Kaufert and Gilbert, 1986). As noted above, the loss of hormones was used across all of the pharmaceutical web sites in the sample to explain a “reason” for menopause. Thus, menopause was defined exclusively as a biological event on the pharmaceutical web sites for HT.

Another sign of medicalization is if proposed treatment options for menopause involve the use of hormone therapies to supplement or balance this loss of hormones (Kaufert and Gilbert, 1986). Since menopause was presented as disease-like requiring medical management, the online advertisements helped to introduce the idea of using HT to restore or balance hormone levels.

Moreover, symptoms were portrayed as unnatural, problematic, and bothersome further setting the stage for use of HT.

One more indication that medicalization is occurring is when women are told that they should depend on a physician to have their menopausal status recognized and defined, rather than relying on their own judgment (Kaufert and Gilbert, 1986). This sentiment was also articulated on the pharmaceutical web sites. For example, consumers were informed on the ENJUVIA web site that health care professionals "can determine which treatment is right." Further, the ANGELIQ web site told women it was "important for you to pay attention to how you are feeling and talk to your healthcare professional about it" (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). Once again, a health care provider's knowledge was privileged. As the above quotes demonstrated, the "expert" role of physicians in their ability to define and categorize women's experiences was reinforced.

In general, the web sites in the study sample conformed to these "tests for medicalization." The web sites explained menopause in biomedical terms implying it was a medical event to be medically managed, focused on the loss of hormones, introduced HT to restore or balance hormone levels, and reinforced medical authority in providing a medical diagnosis. My analysis also revealed another medicalizing technique. Since the reading level of the four online symptom tools far surpassed the estimated reading level of the average adult in the United States, this created a context for which medicalization can occur. Since the reading level of information found on the pharmaceutical web sites in

the sample was too high, it suggested consumers may need to consult with a health care to make sense of the information. In this way, it also reinforced the role of physician as an "expert." As a result of this finding, I propose this is one more sign of medicalization and can be used to further demonstrate how the process of medicalization was operating on the pharmaceutical web sites for HT. When we take these "signs" together as a whole, we gain a sense of how the process of medicalization was occurring on the pharmaceutical web sites for HT.

However, there were some marked differences across the HT web sites. As stated, all of the web sites in the sample drew heavily on the "menopause as disease" discourse and emphasized the loss of hormones as a "reason" or explanation for menopause. While an emphasis on change was clear on the web sites, only one web site (PREMARIN) actually used the word "decline." Other web sites, such as ANGELIQ, CombiPatch, and femhrt, employed the terms "adjustment" and "balance." However, together the language used on the web sites helped to set the stage for using the HT products in order to restore hormone levels.

The ENJUVIA web site was unique among the study sample for its use of biomedical rhetoric for describing symptoms. I noted that the terms "vasomotor symptoms" and "vaginal atrophy" were used on the ENJUVIA web site. This biomedical nomenclature suggested a disease-like nature of menopause and placed these "symptoms" within a medical context.

I also noted how symptoms were presented in terms of *physical* symptoms, such as night sweats and vaginal dryness. The *physical* symptoms

were then associated with having a negative impact on social and personal relations. This technique was particularly evident on the ENJUVIA web site which proclaimed that poor sleep quality resulting from night sweats could lead to a "reduced sense of self." By characterizing symptoms as "disruptive," the negative language further set the stage for using the HT products.

In comparison to the other online symptom tools, the ENJUVIA symptom tool was the only one to include psychological symptoms among the list of possible menopausal symptoms. Specifically, the ENJUVIA "Menopause Impact Tool" included psychological symptoms such as anxiety, irritability, sadness, and difficulty concentrating. The inclusion of such psychological symptoms in the ENJUVIA online tool implied to consumers that they were both important and also linked to menopause.

Moreover, the ENJUVIA web site further listed irregular periods, weight gain, and dry skin as "other" symptoms of menopause (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). Additional menopausal "symptoms" were listed on the CombiPatch web site, including mood changes, mood swings, and irritability. These changes are not necessarily related to menopause and by having these listed as so-called symptoms of menopause on the CombiPatch and ENJUVIA web sites suggested a possible link or association with menopause.

Moreover, the CombiPatch web site described menopause as when a woman's "reproductive system slowly shuts down" (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). The mechanical

language in this example was reminiscent of the biomedical model in which the body is viewed as a machine breaking down. On the CombiPatch web site, the aging female body was compared to a machine "breaking down," which in turn, illustrated how menopause was being articulated as a declining biological function.

The above examples illustrate the differences among the HT web sites. In comparison to other web sites the sample, CombiPatch and ENJUVIA represented menopause as a highly medicalized process with their use of biomedical rhetoric (*i.e.* "atrophy" and "ovaries shutting down"). Furthermore, the CombiPatch and ENJUVIA web sites included psychological symptoms and linked them with menopause. For these reasons, I concluded that the degree of medicalization across the web sites varied with the CombiPatch and ENJUVIA web sites being more explicit in their adoption of a biomedical perspective.

Summary

From my analysis, several things became clear. First, descriptions of menopause found on the pharmaceutical web sites for HT articulated and advanced a biomedical perspective of menopause. In adopting a medical perspective, menopause was described as a "change of life" or a "stage" requiring medical management. Second, the biomedical rhetoric used to explain the "reasons" for menopause emphasized the loss of hormones and end of regular menstruation thereby setting the stage for using HT products to adjust or

restore this balance. Third, the web sites employed the terminology of illness, including the term “symptoms” which is a medically symbolic term. In the online advertisements for HT, women were told that their symptoms were to be assessed, tracked, and managed which clearly relates to a disease-like model of menopause. Likewise, symptoms were presented to consumers as problematic and bothersome. If left untreated, the web sites implied that symptoms could lead to hampered sex lives and a reduced sense of self. Fourth, the web sites were prescriptive and advocated certain consumer behaviors or actions. Specifically, women were told to “discuss” or “ask” their health care provider about HT. By following-up with a physician to inquire about HT, consumers would learn more about the “relief” they could expect from using HT. Hence, the biomedical definitions and explanations of menopause, list of symptoms needing to be medically managed, and the consumer actions being advocated on the web sites worked together in unison to set the stage for using HT to balance hormone levels and alleviate symptoms.

Throughout my analysis, attention to language and word choice was vital for gaining an understanding of how the pharmaceutical companies portrayed menopause in the online advertisements. During my analysis, I found that the online advertisements for HT continued to reflect a biomedical understanding of menopause by presenting menopause as a loss of hormones accompanied by problematic and bothersome symptoms for which HT may help to balance hormone levels. Thus, my analysis adds to our understanding of how menopause

was being portrayed on web sites for HT and elucidated several mechanisms through which the process of medicalization can occur.

Having considered the representation of menopause in online advertisements for HT, I would now like to expand my analysis in two ways. First, I examined the presentation of benefits of HT to consumers on the web sites. Second, I explored how the possible side effects of HT were portrayed in the online advertisements for HT. Therefore, at center stage of my analysis in the next chapter was how the benefits, side effects, and risks of HT were portrayed by drug manufacturers in online advertisements for HT.

CHAPTER 8

PRESENTATION OF BENEFITS AND SIDE EFFECTS OF HORMONE THERAPIES

In this chapter, my analysis of the presentation of benefits and side effects of hormone therapies (HT) in the online advertisements is offered. To help contextualize the discussion, it is important to briefly review direct-to-consumer (DTC) advertising and its regulation. In 1999, the U.S. Food and Drug Administration (FDA) provided recommendations for the mass media promotion of direct-to-consumer promotion of prescription drugs (FDA Web site: http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/ucm070065.pdf. Retrieved: May 23, 2010). The FDA further issued an update for print advertisements in 2004 which focused on conveying risk information for consumers (FDA Web site: http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/ucm069984.pdf. Retrieved: May 23, 2010). As such, existing FDA rules require all DTC prescription drug advertisements that mention the brand name and treated disease to present a "fair balance of the benefits and risks associated with the drug" (Huh and Cude, 2004, p. 530). Unfortunately, the FDA itself has not provided an explicit definition for their "fair balance" disclosure (Holtz, 1998).

To complicate matters, the FDA "has not written any regulations specific to DTC prescription drug websites" (Huh and Cude, 2004, p. 530). Thus,

pharmaceutical web sites are viewed largely as an "extension of traditional print advertising" (Davis, Cross, and Crowley, 2007, p. 35). Therefore, if a web site mentions a drug by name, it must meet the standard applied to print advertising (Moore and Newton, 1998).

Despite the "growing importance of prescription drug websites," few empirical studies have examined consumer-targeted prescription drug advertising in the online environment (Huh and Cude, 2004, p. 529). In light of this situation, I first examined the portrayal of benefits of HT to consumers on the web sites. In addition, I also explored how benefits of HT were presented to health care professionals. Next, I investigated how side effects were presented in the online advertisements for HT. As researchers have noted, risk information, such as side effects and contraindications, may be critical information that consumers seek from a web site (Holtz, 1998; Huh and Cude, 2004). As such, also of particular interest to my analysis was how the Women's Health Initiative (WHI) was framed in discussions for consumers and health care providers. Finally, the chapter concludes with a discussion of issues that emerged from my analysis pertaining to how benefits, side effects, and the WHI were portrayed by drug manufacturers in online advertisements for HT.

Location of Benefits

To examine the portrayal of benefits of HT on the web sites, I started by assessing the location of benefits information on the HT web sites. According to

the FDA, a benefit is “help provided by a drug for the person who is taking it” (FDA Web site: http://www.fda.gov/Drugs/ResourcesForYou/Consumers/PrescriptionDrugAdvertising/ucm072025.htm. Retrieved: February 13, 2010). In this study, I employed this definition provided by the FDA in order to identify where the web sites discussed the positive outcomes that could be expected as a result of using the various HT products.

All of the HT web sites (N=8) discussed the benefits of HT on a specific web page devoted to benefits information. In every instance, benefits information for consumers was located on a web page titled “About” followed by name of the particular HT product (N=8). For example, the proclaimed benefits of using ANGELIQ were observed on a web page entitled “About ANGELIQ” on the HT web site. Likewise, the advertised benefits of using PREMARIN were presented on a web page labeled “About PREMARIN.” As such, this was a recurring pattern across all of the HT web sites.

Furthermore, two HT web sites highlighted benefits information in two separate places. The PREMARIN and PREMPRO web sites, both products from Wyeth Pharmaceuticals, provided two web pages for consumers to learn about the benefits of the HT products. In these cases, the benefits of PREMARIN and PREMRO were found on a web page titled “About PREMARIN/PREMPRO” as well as another web page with identical information labeled “Benefits of PREMARIN/PREMPRO.” By having the benefits information listed on the pharmaceutical web sites in multiple places, web site users would be more likely

to find this information in case they did not know to look for this information under the "About" menu option. The significance of the placement of benefits information of HT on specific web pages illustrated that the proclaimed benefits of each HT product were prominently featured on each of the web sites. Moreover, two HT web sites in particular (PREMARIN and PREMPRO) used the repetition of this information in two distinct places to announce beneficial aspects of their HT products to web site users. Next, I take a closer look at the description of the "benefits" of HT in the online advertisements.

Presentation of Benefits to Consumers

Table 26 shows the advertised benefits of HT to consumers were represented by a number of key phrases or words. In the online advertisements, key phrases used to describe the benefits of HT included "effectively control," "significantly reduce," and "rapid relief" from menopausal symptoms. According to the ENJUVIA web site, ENJUVIA was "demonstrated to effectively control hot flashes, night sweats, vaginal dryness, and pain with sex" (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). Furthermore, Estrasorb "significantly reduces daily hot flashes" (Estrasorb web site: http://www.estrasorb.com. Retrieved: July 15, 2009). Another example was found on the ANGELIQ web site which stated the ANGELIQ pill provided "rapid relief of hot flashes, night sweats, and vaginal dryness" (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009).

Other descriptions of benefits observed included that CombiPatch was "easy to apply, discreet, and small" (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). CombiPatch was also "designed to stay on during various activities including swimming, showering and bathing. So you can enjoy an active lifestyle while wearing the patch" (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). In addition, using Estrasorb "fits easily into your beauty routine… [and] leaves your legs soft, smooth, and moisturized" (Estrasorb web site: http://www.estrasorb.com. Retrieved: July 15, 2009).

As seen in Table 26, six of the HT web sites stated benefits for hot flashes, night sweats, and vaginal symptoms (ANGELIQ, CombiPatch, ENJUVIA, Femring, PREMARIN, and PREMPRO). The femhrt web site highlighted benefits for hot flashes and night sweats. Finally, the Estrasorb web site mentioned benefits for night sweats. None of the pharmaceutical web sites in the study sample (N=8) linked back the U.S. Food and Drug Administration (FDA) web site.

Table 26: Description of Benefits of HT for Consumers

Name of HT Product	**Description of Benefits for Consumers**
ANGELIQ	• Rapid relief of hot flashes, night sweats, and vaginal dryness • Reduction of hot flashes and night sweats
CombiPatch	• Reduce hot flashes • Treat hot flashes, and vaginal dryness, itching and burning • Easy to apply, discreet and small • Ultra Convenience: The patch is designed to stay on during various activities including swimming, showering and bathing. So you can enjoy an active lifestyle while wearing the patch.
ENJUVIA	• Demonstrated to effectively control hot flashes, night sweats, vaginal dryness, and pain with sex • Shown to lower the number and severity of hot flashes and night sweats • Significantly reduced the severity of vaginal dryness and pain with sex
Estrasorb	• Significantly reduces daily hot flashes: • Easy to use • Fits easily into your beauty routine. Just apply Estrasorb lotion once a day to each leg. • Leaves your legs soft, smooth, and moisturized • Effective: in a clinical study, hot flashes were reduced by 85% • Well-tolerated: very few skin reactions have been reported
femhrt	• Treatment of menopause symptoms such as hot flashes/night sweats • Help reduce your chances of developing osteoporosis
Femring	• Effective way to treat menopause symptoms • Convenient and discreet delivery option • Aids in the relief of hot flashes, night sweats, and vaginal dryness

	• Help reduce menopausal symptoms
PREMARIN	• You can expect relief from your menopausal symptoms to begin quickly with PREMARIN. (You may begin to feel relief from hot flashes in 1 to 3 weeks.) • Hot flashes and night sweats are likely to become less frequent and intense. • Relief from vaginal symptoms • Help reduce your chances of developing osteoporosis • Proven to increase bone mineral density at the hip and the spine and help prevent postmenopausal osteoporosis
PREMPRO	• Proven to effectively relieve hot flashes, night sweats, and vaginal symptoms • Hot flashes and night sweats are likely to become less frequent and less intense • Help reduce your chances of developing osteoporosis • proven to increase bone mineral density at the hip and spine and help prevent postmenopausal osteoporosis

Further analysis revealed that the "benefits" of HT advertised to consumers could be grouped into two main themes. One of the primary benefits of HT presented on the HT web sites was symptom reduction. Specifically, mention of this benefit was observed on all of the HT web sites (N=8). According to one web site, ANGELIQ provided a "reduction of hot flashes and night sweats" (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). ENJUVIA was also "shown to lower the number and severity of hot flashes and night sweats" (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14,

2009). Furthermore, ENJUVIA "significantly reduced the severity of vaginal dryness and pain with sex" (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). Similarly, "hot flashes and night sweats are likely to become less frequent and intense" with PREMARIN (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009). Thus, the reduction in the number and severity of menopausal symptoms, such as hot flashes, night sweats, and vaginal dryness, was highlighted as a benefit on all of the HT web sites. As Table 26 illustrates, the terms "reduce" or "reduction" were observed across all of the HT web sites in the study sample.

It is worth noting that the Estrasorb web site asserted "the number of hot flashes per day were reduced by 85%" in a clinical study (Estrasorb web site: http://www.estrasorb.com. Retrieved: July 15, 2009). Interestingly, a citation to the actual research study was not provided for consumers on the Estrasorb web site to support this claim. With regards to this omission, perhaps there was an assumption that women did not want to know this scientific information, or maybe they did not need to know, or possibly women would not be able to track down the medical study. Nevertheless, claims of a scientific basis raise important questions around the use of such declarations whenever there is insufficient evidence provided to consumers. In fact, this claim may also be seen as an attempt to differentiate this particular HT product from other hormone products that do not make such claims.

The prevention of osteoporosis was another principal "benefit" of HT presented to consumers in the online advertisements. This preventative benefit

was observed on three HT web sites (femhrt, PREMARIN, and PREMPRO). According to one web site, femhrt could "help reduce your chances of developing osteoporosis by increasing bone mass" (femhrt web site: http://www.wcrx.com/products/femhrt. Retrieved: July 25, 2009). Likewise, PREMARIN informed consumers the HT product reduced "your chances of developing osteoporosis" (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009). In addition, PREMPRO could also "help prevent postmenopausal osteoporosis" (PREMPRO web site: http://www.prempro.com. Retrieved: July 17, 2009). While the FDA acknowledges that hormones "may reduce your chances of getting thin, weak bones," the FDA informs consumers there are "other medicines and things you can do to help your bones" (FDA web site: http://www.fda.gov/ForConsumers/ByAudience/ForWomen/ucm118624.htm. Retrieved: February 14, 2010). Unfortunately, the FDA does not provide further details about these other medicines or "things" that one can do to slow bone loss.

Nonetheless, this particular comment about bone health from the FDA was also echoed in another statement for health care providers which recommended "when these drugs are being prescribed only to prevent osteoporosis, health care providers are encouraged to consider other treatments before prescribing estrogen or estrogen with progestin" (FDA web site: http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm135339.htm. Retrieved: February 22, 2010). As mentioned in an earlier chapter, previous research found that drug advertisements in women's magazines encouraged all women over thirty-five years to consider taking hormones for osteoporosis as a

"preventive measure" (Worcester and Whatley, 1992, p. 9). The technique of casting menopause as a "risk" for osteoporosis and therefore promoting HT for the prevention of bone loss and fractures has also been reported in the literature as a way of expanding the list of possible symptoms treatable with HT (Dukes, 1997; Palmlund, 1997; Worcester, 2004; Worcester and Whatley, 1992). Here, my analysis suggests there was also a trend in the online drug advertisements of promoting HT for osteoporosis as a preventive measure.

To summarize, symptom reduction and the prevention of osteoporosis were two main benefits of HT promoted to consumers in the online drug advertisements. Another feature that I observed on the HT web sites was the use of "patient stories" or testimonials to support claims of a product's benefits. To illustrate the "benefits" of HT, three of the web sites (Estrasorb, PREMARIN, and PREMPRO) turned to "real life" stories. In these three online HT advertisements, women's stories were portrayed as first-person accounts of using HT. In all three instances, the women depicted in these stories made reference to seeking further medical advice as a means of alleviating menopausal symptoms. Under the "Personal Experiences" menu option found on the Estrasorb web site, consumers were introduced to a Caucasian woman named "Alice." Consumers were told that Alice was a 58 year old executive suffering from severe hot flashes and night sweats which were "disrupting sleep patterns and getting in the way of daily activities and relationships" (Estrasorb web site: http://www.estrasorb.com. Retrieved: July 15, 2009). Alice was quoted as saying that her situation was

"intolerable… [and] I'm going to talk with my doctor about Estrasorb" (Estrasorb web site: http://www.estrasorb.com. Retrieved: July 15, 2009).

The "Women's Stories" found on PREMARIN and PREMPRO web sites provided further examples of personal stories attesting to the benefits of HT and encouraging medical intervention for menopausal symptoms. On the PREMARIN web site, consumers were introduced to a Caucasian woman named "Maureen." Unlike what was witnessed with the Estrasorb character "Alice," Maureen's age and occupation were not provided on the PREMARIN web site. Nevertheless, Maureen informed web site users that she went to see her doctor to inquire about PREMARIN. Maureen recounted that "one of the best things she said to me was that she uses it and she thinks it's great. And that really helped me feel comfortable about utilizing PREMARIN" (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009). By suggesting that a health care provider also used PREMARIN, this story further reassured consumers about the appropriateness of HT for menopausal symptoms while also adding legitimacy to the claim. One more example was found on the PREMPRO web site in which a different Caucasian woman named "Debbie" stated "when I first started experiencing symptoms, I didn't know what was happening, so I asked my doctor about it" (PREMPRO web site: http://www.prempro.com. Retrieved: July 17, 2009). After taking PREMPRO, Debbie further noted that her hot flashes "got significantly better" after about two weeks (PREMPRO web site: http://www.prempro.com. Retrieved: July 17, 2009).

In fact, I realized that these women's stories adhered to a biomedical model of illness by discussing topics such as signs of symptoms of menopause, diagnosis, and treatment. Even more troubling was a disclaimer found on the Estrasorb web site that stated that the "patient profiles are hypothetical [and] models are used for illustrative purposes only" (Estrasorb web site: http://www.estrasorb.com. Retrieved: July 15, 2009). I should also note that it was not known if the "Women's Stories" found on the PREMARIN and PREMPRO web sites were actual patients or hypothetical scenarios. Nonetheless, the women's stories attested to the proclaimed benefits of HT thereby encouraging consumers to seek medical treatment. Consequently, the use of "women's stories" were constructed as first-person testimonials about experiences with HT and functioned to support a product's claims about benefits.

Presentation of Benefits to Health Care Professionals

My analysis also revealed that benefits of HT were presented differently to health care providers than consumers in the online advertisements. In this section of the chapter, I further inspect how the benefits of HT were portrayed on portions of the HT web sites designated specifically for health care professionals. Table 27 illustrates the various "selling points" of HT presented to health care professionals on the HT web sites.

Table 27: Selling Points of HT Emphasized to Health Care Professionals

Name of HT Product	**Description of Selling Points for Health Care Professionals**
ANGELIQ	None
CombiPatch	• It's a convenient alternative for patients seeking relief for menopausal symptoms • Two strengths of CombiPatch are available • It's comfortable: has a low incidence of skin irritation and side effects • It's discreet: CombiPatch is small and transparent
ENJUVIA	• Delivers effective relief of vasomotor symptoms, and vaginal dryness and pain with sex to your symptomatic menopausal patients • Significantly reduces the frequency and severity of vasomotor symptoms and vaginal dryness and pain with sex, symptoms of vulvar and vaginal atrophy, associated with menopause • ENJUVIA is something you—and your patients—will be glad to discover • ENJUVIA dosing is flexible, too.
Estrasorb	• Fast, effective symptom relief • Proven in a well-controlled clinical trial • 85% reduction in daily hot flashes • Demonstrated safety and tolerability • Demonstrated patient satisfaction: 91% of patients liked the way their skin felt after applying Estrasorb
femhrt	None
Femring	None
PREMARIN	• A blend of estrogens with extensive evidence to support your recommendation • Significant relief of vasomotor symptoms as early as 3 weeks • Significant increase in spine and hip bone mineral density • Range of dosing options

PREMPRO	• More dosing options than any other single-tablet combination hormone therapy • Individualize her therapy with a range of dosing options • Significant reduction in moderate to severe hot flashes, even at low dose • Significant increase in spine and hip bone mineral density, even at low dose

As Table 27 demonstrates, six of the HT web sites (n=6) presented selling points of HT to health care professionals. Notably, four HT web sites (n=4) highlighted a range of dosage options. The CombiPatch web site informed health care professionals that two strengths of CombiPatch were available (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). Another example was found on the PREMARIN web site which highlighted a "range of dosing options" on the section of the web site aimed to health care professionals (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009). Furthermore, PREMPRO claimed to offer "more dosing options than any other single-tablet combination hormone therapy" (PREMPRO web site: http://www.prempro.com. Retrieved: July 17, 2009). Finally, health care professionals were reminded that "ENJUVIA dosing is flexible, too" (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). Clearly, a range of dosage options was viewed as an attractive feature that would appeal to health care professionals.

Also visible on sections of the HT web sites for health care providers were references to "evidence" to support claims about the products' benefits.

Specifically, two of the HT web sites (n=2) referenced "evidence" for health care providers. According to the Estrasorb web site, the HT product had been "proven in a well-controlled clinical trial" (Estrasorb web site: http://www.estrasorb.com. Retrieved: July 15, 2009). PREMARIN was also described to health care professionals as a "blend of estrogens with extensive evidence to support your recommendation" (PREMARIN web site: http://www.premarin.com. Retrieved: July 17, 2009). On the Estrasorb and PREMARIN web sites, citations to studies supporting these beneficial claims were provided for health care professionals. Therefore, my analysis revealed that references to actual studies were provided only on portions of the HT web sites aimed at health care providers. In fact, five of the HT web sites (CombiPatch, ENJUVIA, Estrasorb, PREMARIN, and PREMPRO) provided references to actual studies for health care professionals. In contrast, consumers were not provided with clinical evidence to support pharmaceutical companies' claims about the benefits of HT.

Other selling points emphasized to health care providers that were observed included the mention of "convenience" and "patient satisfaction." CombiPatch was described as a "convenient alternative for patients seeking relief for menopausal symptoms" (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). In addition, the Estrasorb web site referred to "demonstrated patient satisfaction" which is further explained by the statement "91% of patients liked the way their skin felt after applying Estrasorb" (Estrasorb web site: http://www.estrasorb.com. Retrieved: July 15,

2009). Thus, “convenience” and “patient satisfaction” were additional selling points promoted to health care professionals in the online advertisements for HT.

To summarize, the presentation of benefits of HT in the online drug advertisements varied depending on the intended audience. Consumers were informed about the possibility of symptom reduction and the prevention of osteoporosis. On the other hand, health care professionals were told about the range of dosage options, evidence to support claims of efficacy, and patient satisfaction with HT products. Similar to my earlier findings in which I found that the pharmaceutical companies employed different product slogans for different web site audiences, here I also observed variations in the types of “benefits” or “selling points” emphasized for consumers and health care professionals. Another distinguishing characteristic was the lack of scientific evidence provided for consumers. Moreover, patient testimonials, such as the hypothetical stories presented on the Estrasorb web site, were used to support product claims on several of the HT web sites. Next, I examined how the side effects of HT were presented across the HT web sites.

Location of Side Effects

This section of the chapter analyzes the location of information about the possible side effects of HT on the web sites. Table 28 shows where the side effects of HT were discussed in the online advertisements. Specifically, I was interested in the location in which these side effects were disclosed.

Table 28: Location of Side Effects Information on the HT Web Sites

Name of HT Product	Separate Web Page for Side Effects	Name of Web Page with Side Effects Information
ANGELIQ	Yes	“Safety Information”
CombiPatch	Yes	“Risks and Benefits of Hormone Therapy”
ENJUVIA	Yes	“Safety and Tolerability”
Estrasorb	No	N/A
femhrt	Yes	“Important Safety Information”
Femring	Yes	“Important Safety Information”
PREMARIN	Yes	“Side Effects and Safety”
PREMPRO	Yes	“Side Effects and Safety”

As Table 28 indicates, seven of the HT web sites (n=7) had specific web pages discussing possible side effects. Six of the HT web sites (n=6) used the word “safety” in the title of the web page where the side effects of HT were discussed. For example, the names of the web pages on the PREMARIN and PREMPRO sites where side effects were mentioned were called “Side Effects and Safety.” The Femring and femhrt web sites had a page called “Important Safety Information” which outlined the possible side effects associated with HT.

Additionally, the ANGELIQ web site had a page entitled “Safety Information” and ENJUVIA highlighted side effects on a page called “Safety and Tolerability.”

In particular, one HT web site did not have a specific web page where side effects were discussed. On the Estrasorb web site, possible side effects were found in a footer at the bottom of the web site. Although this footer appeared throughout the web site, the text in this footer was notably a smaller font size compared to the main content found on the Estrasorb web site. Therefore, this online advertisement did not present a balance of information about the drug's possible side effects compared to the advertised benefits because the location and smaller font size minimized the importance of side effects. As a result, the side effects could potentially be overlooked by web site users due to the fact that this information appeared in a smaller font size than the benefits information and was placed at the bottom of the advertisement far from the benefits. Thus, both the location and font size of the possible side effects on the Estrasorb web site was a cause for concern. This example illustrated the need for better and consistent risk communication in online drug advertisements. Next, I examined how the side effects of HT were portrayed in the online drug advertisements.

Presentation of Side Effects

According to the FDA, a side effect of a drug refers to “what can go wrong when the drug is used” (FDA Web site: http://www.fda.gov/Drugs/ResourcesForYou/Consumers/PrescriptionDrugAdverti

sing/ucm072025.htm. Retrieved: February 20, 2010). Table 29 illustrates the language used to describe possible side effects of HT on the web sites. Here, I was most interested in the way language was used by the pharmaceutical companies to describe these side effects. My analysis shows that the side effects were presented as either “common” side effects or “less common but serious” side effects.

Table 29: Description of "Common" Side Effects and

"Less Common but Serious" Side Effects

Name of HT Product	**"Common" Side Effects**	**"Less Common but Serious" Side Effects**
ANGELIQ	• Headache • Breast pain • Irregular vaginal bleeding or spotting • Stomach/abdominal cramps, bloating • Nausea and vomiting • Hair loss	• Breast lumps • Unusual vaginal bleeding • Dizziness and faintness • Changes in speech • Severe headaches • Chest pain • Shortness of breath • Pains in your legs • Changes in vision • Vomiting
CombiPatch	• Breast pain • Vaginal bleeding • Headache	N/A
ENJUVIA	• Headache • Breast pain • Irregular vaginal bleeding or spotting • Stomach/abdominal cramps, bloating • Nausea and vomiting • Hair loss	N/A
Estrasorb	• Headache • Breast pain • Irregular vaginal bleeding or spotting • Stomach/abdominal cramps, bloating • Nausea and vomiting • Skin irritation, redness or rash at application site • Hair loss	N/A

femhrt	• Headache • Breast pain • Irregular vaginal bleeding or spotting • Stomach/abdominal cramps, bloating • Nausea and vomiting • Hair loss	• Breast lumps • Unusual vaginal bleeding • Dizziness and faintness • Changes in speech • Severe headaches • Chest pain • Shortness of breath • Pains in your legs • Changes in vision • Vomiting
Femring	• Headache • Vaginal infection • Breast tenderness • Vaginal bleeding or spotting • Back ache • Abdominal bloating	• Breast cancer • Cancer of the uterus • Stroke • Heart attack • Blood clots • Dementia • Gallbladder disease • Ovarian cancer
PREMARIN	• Vaginitis due to yeast or other causes • Vaginal bleeding • Painful menstruation • Leg cramps	N/A
PREMPRO	• Breast pain/enlargement • Vaginitis due to yeast or other causes • Leg cramps • Vaginal spotting/bleeding • Painful menstruation	N/A

As demonstrated in Table 29, breast pain and vaginal bleeding were two common side effects observed across all of the HT web sites (N=8). In fact, six of the HT web sites (n=6) listed the same “common” side effects of HT. These six possible side effects were headaches, breast pain, irregular vaginal bleeding or spotting, stomach/abdominal cramps or bloating, nausea and vomiting, and hair loss. Such statements of possible side effects coincided with the FDA which has also noted these six side effects as common with estrogen and estrogen with progestin drug products (FDA Web site: http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm135339.htm. Retrieved: February 22, 2010).

In the previous chapter, I discussed my findings from analyzing the reading levels of the information presented on the four online symptom tools in the study sample. My analysis revealed the information was written at grade levels that exceeded the estimated reading level of the average adult in the U.S. (National Adult Literacy Survey, 1992). I further assessed the reading level of these six common side effects of HT. To accomplish this, I again utilized an online tool called “TxReadability,” a free application developed by the Accessibility Institute at the University of Texas at Austin. To summarize briefly, the Flesch-Kincaid Grade level indicates the grade a person will have to reach to be able to understand the text (Accessibility Institute at the University of Texas web site: http://webapps.lib.utexas.edu/TxReadability/app. Retrieved: March 9, 2010). For instance, a score indicating the grade level of seven means that a seventh grader should be able to understand the text. An analysis of the text describing the six

common side effects of HT across the eight web sites in this study sample yielded a score of 12.94. This score is equivalent to a 12th grade reading level in the United States or some college education. As I previously noted, considering it is estimated that one in four adults in the United States read at or below the 3rd grade reading level, this grade level far surpasses the estimated reading level of the average adult in the U.S. (National Adult Literacy Survey, 1992). Moreover, the Wayne State University Institutional Review Boards (IRB) also provides guidelines for documents used in the informed consent process in participant research studies. Generally, the IRB requires consent forms to be written at 6th-8th grade reading level (Wayne State University Human Investigation Committee web site: http://www.hic.wayne.edu/policies/9-1_informed_consent_options.pdf. Retrieved: May 14, 2010). In this context, it is plausible to conclude that the information presented across all of the HT web sites about "common" side effects was too difficult for many of the intended web sites users, thus it should be rewritten to take into consideration lower literacy levels.

Further, when compared to the reading level of the online symptoms tools, which was a combined score of 7.74 falling between a 7–8th grade reading level, the information about common side effects was even higher. This finding demonstrated a range in reading levels and accessibility of information on the pharmaceutical web sites. Interestingly, I found that information on the pharmaceutical web sites was not consistently written at the same reading level. Rather, the reading level varied making some information less accessible, such as the side effects information which I reported was written at an even higher

reading level than information from the online symptom tools. Once again, since important information about possible side effects was not as readily accessible for consumers, I speculate that consumers may need to consult with health care professionals in order to make sense of the information about side effects provided on the pharmaceutical web sites. In light of this, consumers would have to rely on the "expertise" and medical knowledge of a health care professional to acquire relevant information about possible side effects.

Other side effects associated with HT were also mentioned in the online drug advertisements. Three of the HT web sites (Femring, PREMARIN, and PREMPRO) listed "vaginal infection" or "vaginitis" as a common side effect. In addition, two of the HT web sites (PREMARIN and PREMPRO) listed "leg cramps" as a common side effect. As Table 29 shows, two of the HT web sites (PREMARIN and PREMPRO) also listed "painful menstruation" as a common side effect. Another example of a "common" side effect observed was skin irritation (Estrasorb cream).

In addition to "common" side effects, three web sites (ANGELIQ, femhrt, and Femring) listed "less common but serious" side effects. As Table 29 illustrates, ANGELIQ listed "unusual vaginal bleeding" as a "less common but serious" side effect (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). However, ANGELIQ also stated "irregular vaginal bleeding or spotting" was a common side effect (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). Consequently, I noticed some overlap between the "common" and "less common but serious" side effects presented on

the HT web sites. This trend continued on the femhrt web site which listed "vaginal bleeding" and "vomiting" as both common and "less common but serious" side effects (femhrt web site: http://www.wcrx.com/products/femhrt. Retrieved: July 25, 2009). As witnessed on the ANGELIQ and femhrt web sites, the pattern of presenting side effects to consumers as both "common" and "less common but serious" could be a potential source of confusion for consumers.

In summary, both the location of the side effects information and the language used to describe possible side effects of HT illuminated several issues. First, seven of the HT web sites (n=7) had specific web pages discussing the possible side effects. However, possible side effects were found only in a footer at the bottom of the Estrasorb web site thereby underscoring the need for better risk communication. Regarding the description of side effects, possible side effects of HT were presented as either "common" and "less common but serious" in the online drug advertisements. Indeed, breast pain and vaginal bleeding were two common side effects observed across all of the HT web sites. However, one noticeable trend was the presentation of the same side effects to consumers as both "common" and "less common but serious" which could lead to confusion amongst consumers and warrants further clarification.

In light of the Women's Health Initiative (WHI), concerns about hormones being linked to an increased risk for cancer, heart attacks, and dementia were also addressed on the web sites. In the online drug advertisements, information about risks associated with HT were observed in the footer across all of the HT web sites in the study sample (N=8). Specifically, three main statements about

risks of HT were repeated consistently across all of the HT web sites. First, it was noted that estrogens increase the chance of getting cancer of the uterus. Second, it was mentioned that using estrogens (with or without progestins) may increase the chance of getting heart attacks, strokes, breast cancer, and blood clots. Finally, all of the HT web sites (N=8) stated that using estrogens (with or without progestins) may increase the chance of getting dementia. These three statements found across all of the HT web sites were consistent with FDA statements that also noted these as possible risks associated with HT (FDA Web site: http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm135339.htm. Retrieved: February 24, 2010). Given the ongoing concerns about risks associated with using HT, which were raised by the WHI clinical trial, next I examined how and where the WHI was mentioned on the HT web sites.

References to Women's Health Initiative (WHI)

In examining the portrayal of the WHI on the web sites, the location of where WHI was discussed was an important consideration. Table 30 indicates where information about the WHI was found across the eight HT web sites. As Table 30 indicates, all of the HT web sites (N=8) directly referred to the WHI. However, the location of the information about the WHI is deserving of attention.

Five of the HT web sites (n=5) referred to the WHI in sections of the web site aimed at health care providers. Out of these five HT web sites, four of them

(ENJUVIA, Estrasorb, PREMARIN, and PREMPRO) mentioned the WHI in the footer of web pages intended for health care providers. Unique among the study sample, CombiPatch was the only HT web site that discussed the WHI for health care providers on a specific web page appropriately entitled the “Women’s Health Initiative” (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). In addition, the CombiPatch web site also provided health care professionals with a link to the official WHI web site (http://www.whi.org/findings) for more information about the WHI study’s findings.

Table 30: Web Sites that Mention WHI and Location of WHI Information

Name of HT Product	**Mention of WHI**	**Location of Where WHI is Mentioned**	**Intended for Consumer or Health Care Provider**
ANGELIQ	Yes	"Recent News about Hormone Therapy"	Consumer
CombiPatch	Yes	"Women's Health Initiative"	Health Care Provider
ENJUVIA	Yes	Mentioned in footer on web page for health care providers	Health Care Provider
Estrasorb	Yes	Mentioned in footer on web page for health care providers	Health Care Provider
femhrt	Yes	"Recent Concerns Regarding HT"	Consumer
Femring	Yes	"Hormone Therapy News"	Consumer
PREMARIN	Yes	Mentioned in footer on web page "Health Care Professionals' Info"	Health Care Provider
PREMPRO	Yes	Mentioned in footer on web page "Health Care Professionals' Info"	Health Care Provider

The pharmaceutical web sites differed in how they presented and framed the WHI. By way of contrast, only three web sites in the sample discussed the WHI on specific sections of the web site intended for consumers (ANGELIQ, femhrt, and Femring). On these three HT web sites, the titles of the web page where the WHI was referenced placed an emphasis on "recent concerns" or

"news" about HT. For instance, the ANGELIQ web page discussing the WHI was entitled "Recent News about Hormone Therapy" (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). On the femhrt web site, the WHI was mentioned on the web page "Recent Concerns Regarding HT" (femhrt web site: http://www.wcrx.com/products/femhrt. Retrieved: July 25, 2009). In addition, the "Hormone Therapy News" web page on the Femring site provided consumers with information about the WHI (Femring web site: http://www.wcrx.com/products/femring. Retrieved: July 17, 2009). Since only three of the HT web sites offered discussions about the WHI for consumers, the lack of proper attention to the WHI and any discussion regarding the implications for consumers was noticeably deficient on the HT web sites.

I also noted other distinguishable differences across the pharmaceutical web sites. The Femring and femhrt web sites, both products from Warner Chilcott, highlighted *benefits* reported from the WHI. These two web sites cited fewer hip fractures and fewer cases of colorectal cancer among users of HT in the WHI clinical trial. Indeed, putting a positive "spin" on the WHI was an interesting way to frame the WHI results that effectively minimized commonly held concerns about hormone use. Further, the ANGELIQ web site stated that HT "still may be appropriate for many" and encouraged consumers to ask their health care providers if the "possible benefits of HT outweigh the risks" (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). Clearly, these three web sites painted a positive picture of the WHI study results by emphasizing potential benefits of HT. Again, these three web sites were the

only pharmaceutical web sites for HT in the study sample that specifically discussed the WHI with consumers. As evident, the framing of the WHI on these three web sites minimized the risks and concerns associated with the WHI for consumers by highlighting positive findings of the WHI. It was further suggested that possible benefits may outweigh potential risks.

On the three consumer-oriented portions of the HT web sites where the WHI was referenced (ANGELIQ, femhrt, and Femring), consumers were further encouraged to ask a health care provider for more information about the WHI findings. According to ANGELIQ web site "many aspects of the findings were not clear. However, hormone therapy still may be appropriate for many. This is something each individual woman should discuss with her healthcare provider" (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). In another example, consumers were informed their "health care provider can discuss what [the WHI] results mean to you" (femhrt web site: http://www.wcrx.com/products/femhrt. Retrieved: July 25, 2009). The Femring web site also encouraged consumers to also discuss the WHI results with their health care provider and to "review your hormone therapy options with your health care provider" (Femring web site: http://www.wcrx.com/products/femring. Retrieved: July 17, 2009). As a consequence, the WHI was referenced in a limited manner on consumer-oriented sections of the HT web sites. Given the limited information about the WHI study provided to consumers, scant discussion about any implications, and inadequate educational information, consumers were

encouraged to follow-up with their health care providers for further explanations about the WHI findings and to discuss HT options.

My analysis revealed that the manner in which the WHI was framed depended on the intended audience. In contrast, the WHI was referenced in a different manner to health care providers. In the online drug advertisements for HT, discussions of the WHI for health care providers centered on warnings about cardiovascular and other risks brought to light by the WHI study. Mention of these cardiovascular and other risks were observed on the five HT web sites which referenced the WHI for health care providers. For example, the ENJUVIA web site stated “the estrogen alone substudy of the Women's Health Initiative (WHI) reported increased risks of stroke and deep vein thrombosis (DVT) in postmenopausal women (50 to 79 years of age)” (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009). Furthermore, the ENJUVIA web site went on to state “the estrogen-plus-progestin substudy of the WHI reported increased risks of myocardial infarction, stroke, invasive breast cancer, pulmonary emboli, and deep vein thrombosis in postmenopausal women (50 to 79 years of age)” (ENJUVIA web site: http://www.enjuvia.com. Retrieved: July 14, 2009).

Thus, how the WHI was discussed on the HT web sites depended on the intended audience. Interestingly, the CombiPatch also stated the FDA “now recommends smaller doses over a shorter time for temporary symptom relief” (CombiPatch web site: http://www.combipatch.com. Retrieved: July 13, 2009). A final point to note in this discussion was that all of the HT web sites mentioned

smaller doses of HT or “low-dose” HT options. Table 31 shows that “low-dose” HT options were emphasized to both consumers and health care providers on the HT web sites. As Table 31 indicates, four the HT web sites (CombiPatch, ENJUVIA, PREMARIN, and PREMPRO) repeated the availability of “low-dose” HT options in several places. I argue that this was an important reflection of post-WHI concerns being acknowledged by the pharmaceutical companies. Indeed, mention of “low-dose” HT options was in alignment with the current FDA recommendation regarding HT which states “hormones should be used at the lowest dose that helps and for the shortest time” (FDA Web site: http://www.fda.gov/ForConsumers/ByAudience/ForWomen/ucm118624.htm. Retrieved: February 22, 2010).

Table 31: Web Sites that Mention “Low-Dose” HT

Name of HT Product	Mention “Low-Dose” HT	Wording/Phrase Used
ANGELIQ	Yes	ANGELIQ should be taken for the shortest duration of time at the lowest dose.
CombiPatch	Yes	Two places: 1. For Consumers: You and your health care professional should talk regularly about whether you are taking the lowest dose that works for you. (in footer) 2. For Health Care Professionals: The FDA and the North American Menopause Society (NAMS) now recommend smaller doses over a shorter time for temporary symptom relief.
ENJUVIA	Yes	Two places: 1. For Consumers: estrogens should be used at the lowest dose for the shortest period of time. (in footer) 2. For Health Care Professionals: Low-Dose Efficacy With the ENJUVIA
Estrasorb	Yes	Estrogens with or without progestins should be prescribed at the lowest effective doses and for the shortest duration consistent with treatment goals and risks for the individual woman.

		(in footer for health care professionals)
femhrt	Yes	Low-Dose femhrt 0.5/2.5 is the lowest effective dose approved by the FDA to treat menopausal symptoms with this combination of hormones.
Femring	Yes	For treatment of menopausal symptoms, recent guidelines recommend the lowest effective dose for menopause for the shortest time.
PREMARIN	Yes	Four places: 1. For Consumers: flexible low-dose options 2. For consumers: PREMARIN has been proven to relieve menopausal symptoms even at the lowest dose 3. For Consumers: The lowest effective dose of PREMARIN should be used. 4. For Health Care Professionals: estrogens with or without progestins should be prescribed at the lowest effective doses and for the shortest duration consistent with treatment goals and risks for the individual woman. (in footer)
PREMPRO	Yes	Four places: 1. For Consumers:

		PREMPRO offers effective hormone therapy with low-dose options to treat your menopausal symptoms 2. For consumers: PREMPRO should be used at the lowest effective dose and for the shortest duration consistent with your treatment goals and risks. 3. For Consumers: PREMPRO comes in several dosage strengths—including two low-dose formulations. These options allow your health care professional to choose the one that is right for you. 4. For Health Care Professionals: estrogens with or without progestins should be prescribed at the lowest effective doses and for the shortest duration consistent with treatment goals and risks for the individual woman. (in footer)

Summary

In summary, this chapter expanded my analysis in two ways. First, I examined the presentation of benefits of HT to consumers and health care

professionals on the web sites. My analysis indicated different benefits were emphasized for these two potential markets. Benefits promoted to consumers included symptom reduction and the prevention of osteoporosis. I also observed an expanded list of "benefits" were being promoted to consumers beyond what the HT products were originally FDA-approved for, such as smooth skin and the convenience of HT fitting "easily into a daily beauty routine." Interestingly, claims of benefits for consumers were not supported by actual scientific sources and the use of hypothetical stories on several of the HT web sites to support product claims of benefits were perplexing patterns that I witnessed. On the other hand, health care professionals were presented with several "selling points," were informed about the range of available dosing options, provided with evidence to support claims of efficacy, and told about patient satisfaction with HT products.

Second, I explored how the side effects of HT were portrayed in the online advertisements for HT. Notably, the side effects were presented as either "common" or "less common but serious" side effects across the HT web sites. Indeed, I found some overlap between these two categories of side effects. Thus, the pattern of presenting side effects to consumers as both "common" as well as "less common but serious" may be a source of potential confusion for consumers. Equally noticeable was the location of the side effects information. In particular, the Estrasorb web site only discussed possible side effects in the footer of the web site and in a smaller font size which could easily be overlooked. Therefore, the location and font size of the possible side effects on the Estrasorb web site, as well as the high reading level across all of the HT web sites, were

causes for concern and highlighted the need for better risk communication in online drug advertisements.

Finally, I found that the discussion of the WHI was presented in a positive light to consumers and repetition of the availability of “low-dose” HT options reflected post-WHI concerns. Up to this point, I have examined how the location of information and actual descriptions were contributing factors to how the proclaimed benefits, possible side effects, and potential risks of HT were portrayed by drug manufacturers in online advertisements for HT. In the next chapter, I move on to summarize and discuss my key findings.

CHAPTER 9

DISCUSSION

Direct-to-consumer advertising (DTCA) appears to be flourishing (Conrad and Leiter, 2008). Since the Internet has become another direct avenue for pharmaceutical companies to reach consumers, it is important to determine how online advertisements are portraying menopause. This portrayal is relevant for understanding society's views of menopause and it also "sheds light on how women are informed about this life-changing experience" (Hust and Andsager, 2003, p. 114). My study of pharmaceutical web sites for hormone therapies (HT) indicated that a medicalized view of menopause remained consistent in the online advertisements. In particular, a number of conclusions can be drawn from my findings.

Biomedical Perspective of Menopause

First, the pharmaceutical web sites for HT consistently articulated a biomedical perspective of menopause. An underlying assumption of the biomedical model is that menopause is "best understood in terms of the biology of disease mechanisms" (Derry, 2002, p. 20). In adopting a medical perspective, descriptions on the pharmaceutical web sites for HT described menopause as a "change of life" or a "stage" requiring medical management. The web sites consistently advocated that this "change" was best managed by a medical

professional. Thus, the physician's role and expertise in offering a diagnosis was reinforced. This finding is consistent with previous research that has also noted women are often told they should depend on a physician's medical expertise rather than on their own judgment (Kaufert and Gilbert, 1986).

Previous studies have also shown that menopause has been framed in popular magazines as a "deficiency disease" easily fixed with drugs (Cimons, 2008; Lupton, 1996; Meyer, 2001; Shoebridge and Steed, 1999). In this study, I found that explanations for menopause on the web sites focused exclusively on the loss of hormones and the end of regular menstruation. By emphasizing menstrual cycle changes and declining estrogen production, the HT web sites drew on biomedical definitions of menopause. With such words as *adjusting*, *balance*, and *decline* found on the HT web sites, the implication was that women need to "balance" or "make up" for the loss of estrogen production. Therefore, "deficiency" and "loss" were common themes on the pharmaceutical web sites. This finding is similar to other researchers that found the terms "deficiency" and "atrophy" were used in self-help texts about menopause (Lyons and Griffin, 2003). Clearly, this language reflected a biomedical model that views menopause as an "estrogen deficiency disease for which estrogen replacement is the therapy of choice" (Kaufert and Gilbert, 1986, p. 8). Importantly, these words on the web sites also set the stage for the idea of using prescription HT products to restore this balance. As Derry (2008) notes, postmenopausal women "do produce estrogen in their bodies [but] these lower levels of hormones were assumed to be negligible" (p. 722).

To further illustrate this point, menopause was described on the CombiPatch web site as when a woman's "reproductive system slowly shuts down." By describing a woman's reproductive system as "slowly shutting down," the mechanical language was reminiscent of the biomedical model in which the body is viewed as a machine breaking down. Here, this particular online advertisement likened the aging female body to a machine "breaking down." Again, this comparison contributed to the portrayal of menopause as a declining biological process or function. My finding reinforces previous research also showing menopause has been socially constructed by clinical communities and pharmaceutical companies as a pathological and an abnormal condition in need of medical intervention (Dillaway, 2005; McCrea, 1983; Posner, 1979; Riessman 1983; Whittaker, 1998).

Further analysis revealed that the pharmaceutical web sites were prescriptive and advocated certain consumer behaviors or actions. Specifically, women were told to "discuss" or "ask" their health care provider about HT. The web sites implied by following-up with a physician to inquire about HT, women would learn more about the "relief" they could expect from using HT. Hence, the biomedical definitions of menopause, explanations of menopause focusing on estrogen loss, and the consumer actions being advocated on the pharmaceutical web sites worked together to portray menopause as a medical event to be medically managed.

Presentation of "Problematic" Symptoms

As Rostosky and Travis (1996) noted, menopause continues to be defined by a long list of symptoms derived from the biomedical research. This pattern persisted on the pharmaceutical web sites for HT in which a range of menopausal "symptoms" were listed. One of the most sweeping aspects of the HT web sites was the overall portrayal of symptoms in a negative light. This was accomplished by presenting symptoms in terms of *physical* symptoms, such as hot flashes, night sweats, and vaginal dryness. The *physical* symptoms were then associated with having a negative impact on social and personal relations. Symptoms such as hot flashes and vaginal changes were presented to consumers as "problematic" using such language as *debilitating*, *reduced sense of self*, and *hampered sex lives.*

The term "symptom" itself is commonly associated with problems and illness (Rostosky and Travis, 1996). By portraying symptoms as "disruptive," such symptoms were presented as problematic to consumers thereby further positioning them within a disease-like model requiring medical treatment. Women were also told on the web sites that their symptoms were to be tracked and managed which related to a disease-like model of menopause. The terms "tracking," "assessing," and "managing" are also symbolic medical terms that stem from a dominant biomedical view of menopause. Certainly, the use of negative language in the portrayal of symptoms helped to set the stage for using the HT products. Such negative language consistently conveyed the message that symptoms were bothersome and problematic for which HT was a viable

treatment. As noted, extremes were presented to consumers, namely that symptoms could become debilitating, lead to a reduced sense of self, and result in hampered sex lives if left untreated. It is also noteworthy that the use of positive language was not observed on any of the web sites in the sample, such as describing menopause as a “beginning” or “freedom.”

Further, consumers visiting the ANGELIQ web site were greeted by the message: “Menopause. It’s a natural part of life, but these symptoms don’t have to be” (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). From this statement, consumers were told that menopause was natural. However, the statement further implied that symptoms were “unnatural.” Here, the tension between “natural” (in this case, menopause) and “unnatural” (menopausal symptoms) was conveyed and created a context for consumers to learn how to “treat” such undesirable symptoms with HT products. In this sense, it encouraged women to regard any changes as unacceptable symptoms.

One of the most discernable differences across the various the HT web sites were the additional symptoms listed on the CombiPatch and ENJUVIA web sites. In particular, mood changes, mood swings, and irritability were also observed on the CombiPatch and ENJUVIA web sites. Moreover, the ENJUVIA web site further listed irregular periods, weight gain, and dry skin as “other” symptoms of menopause. These changes are not necessarily related to menopause and just because a woman may experience mood changes or irritability during the menopausal transition “does not mean that menopause *caused* the condition” (Mansfield and Voda, 1997, p. 60, italics in the original).

The web sites incorporated lists of menopausal symptoms from the existing biomedical literature and were able to imply a connection by listing these as possible symptoms and linking them with menopause in the online advertisements for HT.

Additionally, three web sites in the sample (CombiPatch, femhrt, and PREMARIN) linked osteoporosis with menopause in such a way that "osteoporosis practically becomes identified as a symptom of menopause" implying HT could be taken to stop this process (Worcester and Whatley, 1992). The technique of promoting HT for the prevention of osteoporosis has been reported in the literature as a way to expand the list of symptoms to include conditions that have not been traditionally associated with menopause (Dukes, 1997; Palmlund, 1997; Worcester, 2004; Worcester and Whatley, 1992). By suggesting to potential consumers that their physical and emotional issues might fit medical models of menopause, the online advertisements capitalized on already existing lists of symptoms found in the biomedical literature and linked these symptoms with menopause to include emotional changes and the prevention of osteoporosis. While this finding is consistent with previous research, my analysis contributes to the existing body of literature to include analyses of pharmaceutical advertisements in an online environment. Here again, the dominant biomedical discourse of menopause was prominent on the pharmaceutical web sites for HT.

Online Self-Diagnosing Symptom Tools

Likewise, the negative portrayal of menopause persisted in the online symptom tools found on four of the HT web sites in the study sample. In these instances, information was provided to consumers by means of a set of diagnostic questions, such as an online symptom tool that women could use to assess their menopausal symptoms. The use of language in the online self-diagnosing symptom tools provided a particular context for web site users as they interacted with the tools to assess their symptoms and the degree of severity of these symptoms. The prevalence of negative language observed in the question wording about menopausal symptoms and the response categories contributed to the negative portrayal of menopause. Words such as “anxious,” “embarrassed,” “disruptive,” and “uncomfortable” characterized symptoms as problematic. Certainly, presenting symptoms as “impacting” and “affecting” daily activities, work, and relationships may also give motivation for seeking medical advice. As such, symptoms were portrayed as “problematic.” Through the use of such negative language observed across the online symptom tools, this also helped to set the stage for use of prescription HT products.

Moreover, the categories of questions found on the self-diagnosing symptom tools ranged from vasomotor symptoms (commonly known as hot flashes and night sweats), vaginal symptoms, sexual health, and psychological symptoms. Once again, the inclusion of psychological “symptoms,” such as anxiety, irritability, sadness, and difficulty concentrating, was a technique that I have

noted on the HT web sites. Here again, this technique further expand the list of possible “menopausal symptoms” that could be treated with HT.

Upon closer examination, I also found a significant dimension of the online self-diagnostic symptom tools was their attempt to encourage contact with a health care provider. All four of the online self-diagnosing symptom tools encouraged consumers to share the “results” of the symptom tools with a health care professional. By encouraging women to regard any “discomforts as unacceptable symptoms” that should be reported to a health care provider, this further provided evidence of the adoption of the biomedical model of menopause on the web sites (Derry, 2002, p. 22). A similar finding was found by Lyons and Griffin (2003) in which menopause was discussed in self-help books as requiring ongoing management by a medical professional. While previous research has reported that traditional print advertisements found in magazines and self-help books have framed menopause as necessitating medical supervision, my research extends the existing literature by adding an analysis of online self-diagnosing symptoms tools that is absent from current discussions on the portrayal of menopause and menopausal symptoms. Thus, we saw how the online symptom tools provided female consumers with a context for interacting with the tools to assess the “impact” and severity of their symptoms.

In addition, I also assessed the reading level of the four online symptom tools and found that the information presented to consumers far surpassed the estimated reading level of the average adult in the U.S. (National Adult Literacy Survey, 1992). Indeed, since the reading level of pharmaceutical advertisements

for hormone therapies has not been addressed in previous studies, this is another dimension of my research that extends the existing body of literature. In sum, the online self-diagnosing symptom tools functioned to expand the range of menopausal symptoms to include psychological symptoms, encouraged consumers to report their symptoms to a health care provider, and presented information written at a reading level that was too high for many of the intended web site users.

Portrayal of Characters

In addition, I analyzed the images of characters in the online advertisements. My findings indicated that female characters were mostly middle-aged Caucasian women depicted as passive and shown in domestic settings. As Coney (1994) states, hormone therapy has been "predominantly used by white, middle-class women" (p. 224). Thus, the majority of the female characters in the online advertisements were Caucasian women which closely mirrored the demographic characteristics of the typical users of hormone therapies.

Only one image of a health care provider was presented. In this case, the image portrayed the Caucasian female health care provider talking with a female patient in what was presumably an exam room. Not surprisingly, I found that the use of such iconic imagery, such as the white coat and stethoscope, reflected

symbols commonly associated with the health care environment making the health care provider easy to identify in the image.

All of the images on the pharmaceutical web sites in the sample depicted people smiling. Some images showed women participating in recreational activities, further depicting "healthy" appearing people. While such lifestyle factors, such as exercising were depicted, the web sites did *not* state that these non-medical options and activities could help to reduce symptoms as previous research has shown (Mansfield and Voda, 1997). Rather, a woman was shown jogging and yet this web site stated HT was one of the most effective options to help manage menopausal symptoms such as hot flashes, night sweats, vaginal dryness, and potential bone loss. Another web site showed a woman walking in hiking boots and consumers were told that the HT product (a patch) would allow women to "get back" to an active lifestyle. Therefore, the underlying premise was that hormones could *help* to achieve the activity that was being presented. To this end, the visual images helped to convey health, activity, and vitality that could be achieved through the use of HT. According to the online advertisements, the "treated" woman was healthy, active, and happy. Similarly, Kaufert and Lock (1997) found pictures of bright, healthy, and beautiful women appearing in pharmaceutical brochures. Thus once again, according to the online advertisements for HT, the "treated" woman was portrayed as healthy, active, and happy.

As noted in an earlier chapter, I also found that menopause was described as "natural" on one of the web sites, but consumers were then told that their

symptoms were unnatural. The ANGELIQ web site stated “Menopause. It’s a natural part of life, but these symptoms don’t have to be” (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). From this statement, consumers were told that menopause was natural. However, the statement further implied that symptoms were “unnatural.” Here, the tension between “natural” (in this case, menopause) and “unnatural” (menopausal symptoms) was conveyed and created a context for consumers to learn how to “treat” such undesirable symptoms with HT products. Another example was evident in the statement “while there’s no way to avoid menopause” HT can reduce the impact of symptoms (ANGELIQ web site: http://www.angeliq-us.com. Retrieved: July 13, 2009). On the surface these statements might appear to be the “menopause as natural” discourse as described by Lyons and Griffin (2003) found in self-help books; however, a closer examination showed these statements were not resisting the biomedical discourse of “menopause as a disease” as one would expect to see if a feminist or socio-cultural perspective of menopause was being articulated. In these cases, menopausal symptoms were still being portrayed as problematic thereby warranting treatment with HT.

Thus, symptoms and proposed medical treatments were presented within a biomedical realm which reflected the traditional medical paradigm. For these reasons, I concluded that the web sites were *not* offering an alternative to the biomedical discourse. Rather, the images and portrayal of problematic symptoms requiring medical treatment helped to further articulate a biomedical model of menopause on the pharmaceutical web sites.

Information Content

My analysis showed how the online information content was presented differently for two potential markets, female consumers and health care providers because specific sections of the web sites were clearly labeled for each intended audience. Additionally, the use of feminine imagery on the HT web sites, such as curves and ribbons, and the use of the colors white and purple were strategically used as a way to make connections with femininity in order to appeal to potential female consumers.

With regards to the pharmaceutical web sites, I was concerned with what information was given to women and health care providers about menopause and HT, how information was presented to these two audiences, and what information was suspiciously lacking or absent. My analysis demonstrated that the menu options presented to consumers differed from the content for health care providers. First and foremost, consumers were introduced to the HT products and HT treatment options.

The advertising slogans further illustrated an important distinction between the content being presented to consumers and health care providers. Consumers were informed about what can be expected from using the HT products from the repeated use of the words “relief,” “discover,” and “treat” observed in the advertising slogans. Notably, pictures of HT products and their packaging were included on the web sites for consumers to aid in easier consumer identification

of the product. In comparison, health care providers were informed about the range of available “treatment options” and dosage strengths. In other words, the information content on the pharmaceutical web sites differed depending on the potential market. Indeed, consumers were presented with different menu choices, different advertising slogans, and pictures of the actual HT products compared to health providers.

The proclaimed benefits of HT were also strikingly different in their presentation to consumers in comparison to the content provided to health care professionals. As Conrad (2007) pointed out, early medical articles reported that estrogen could “reduce menopausal symptoms” (p. 121). Primary benefits promoted to consumers on the pharmaceutical web sites for HT could be grouped into two themes: symptom reduction and the prevention of osteoporosis. Clearly, this reflected a current trend of focusing on symptom management in the promotion of hormone therapies (Voda and Ashton, 2006). Interestingly, claims of benefits for consumers were not supported by actual scientific sources and the use of hypothetical stories on several of the HT web sites to support claims of benefits were patterns that I also witnessed. Similarly, Carlson, Li, and Holm (1997) found that authors of articles in popular magazines did not provide references for claims of efficacy about HT. This is troubling given that women have cited the popular media as a main source of information on menopause (Clinkingbeard *et al.,* 1999).

In comparison, health care professionals were presented with several “selling points” and were informed about the range of available dosing options,

provided with evidence to support claims of efficacy, and told about patient satisfaction with HT products. The major finding here was that the creation of distinct web portals for consumers and health care professionals enabled the drug manufacturers to organize and present information to potential markets for their products. As such, this analysis contributes to our understanding of how the web site content differed in its presentation depending on the target audience.

The presentation of the side effects of HT underscored the need for better risk communication to patients in the online drug advertisements. Notably, the side effects were presented as either "common" or "less common but serious" side effects across the HT web sites. Under further scrutiny, I found some overlap between these two categories of side effects. Thus, the pattern of presenting side effects to consumers as both "common" as well as "less common but serious" may be a source of potential confusion. Equally noticeable was the location of the side effects information. In particular, one web site only discussed possible side effects in the footer of the web site and in a smaller font size which could easily be overlooked. Therefore, both the location and font size of the possible side effects on the web site in the study sample was a cause for concern.

Furthermore, an analysis of the reading level of the text describing the six common side effects of HT across the web sites in this study exceeded the estimated reading level of the average adult in the U.S. (National Adult Literacy Survey, 1992). In light of this, I concluded that the information presented across all of the HT web sites about "common" side effects was too difficult for many of

the intended web sites users. As a result, this important drug information should be rewritten for consumers to make informed drug-related decisions.

Framing of the Women's Health Initiative

Further, I found that the discussion of the Women's Health Initiative (WHI) for consumers minimized potential risks and framed the WHI in a positive light. Among the study sample, there were only three pharmaceutical web sites that provided discussions about the WHI to consumers (ANGELIQ, Femring, and femhrt). In particular, the Femring and femhrt web sites highlighted *benefits* reported from the WHI. These two web sites cited fewer hip fractures and fewer cases of colorectal cancer among users of HT in the WHI clinical trial. Clearly, putting a positive "spin" on the WHI results minimized concerns expressed by women about possible side effects associated with hormone use as reported in the literature (Mansfield and Voda, 1994). Further, the ANGELIQ web site stated that possible benefits of HT may outweigh the risks. Indeed, these three web sites painted a positive picture of the WHI study results by emphasizing potential benefits of using HT. Unfortunately, these three web sites were the *only* pharmaceutical web sites for HT in the study sample that furnished information about the WHI to consumers. As evident on these three web sites, concerns about the WHI findings were minimized by highlighting positive findings of the WHI and the web sites suggested that possible benefits may outweigh the potential risks of using HT.

As a consequence, the WHI was discussed in a limited manner on consumer-oriented sections of the HT web sites. Given the limited information about the WHI study provided to consumers, scant discussion about any implications, and inadequate educational information, consumers were encouraged to follow-up with their health care providers for explanations about the WHI findings and to discuss HT treatment options. Further analysis also revealed an emphasis on the availability of "low-dose" HT options repeated across the HT web sites. Thus, I posit that the pharmaceutical manufacturers were attempting to re-position HT as a viable treatment by highlighting positive results from the WHI study and emphasizing the availability of "low-dose options" while effectively minimizing any WHI-related concerns. As stated by Voda and Ashton (2006), "post-WHI risks to women's health persist" (p. 410).

Medicalization of Menopause

One of the stronger points of this study was its ability to demonstrate how the pharmaceutical web sites adopted a biomedical model of menopause, which in turn, helped to create a context for the process of medicalization to occur. Conrad (2007) explained the process of medicalization as defining a problem in medical terms, adopting a medical framework, and proposing to treat a problem with medical interventions. In fact, Conrad (2007) identified the pharmaceutical industry as one of the emerging forces providing momentum for further medicalization.

Kaufert and Gilbert (1986) further outlined several "tests for medicalization" that I applied to the pharmaceutical web sites to help determine if the process of medicalization could be occurring. One important sign is when the decline of estrogen production has become a central theme (Kaufert and Gilbert, 1986). As evident in my findings, the loss of hormones was used across all of the web sites in the sample to explain a "reason" for menopause. As a result, menopause was defined exclusively as a biological event.

Another sign of medicalization is when proposed treatment options for menopause involve the use of hormone therapies to supplement or balance the loss of hormones (Kaufert and Gilbert, 1986). Here again, since menopause was presented as disease-like requiring medical management, the online advertisements helped to introduce the idea of using HT to restore or balance hormone levels. Furthermore, symptoms were portrayed as unnatural, problematic, and bothersome further setting the stage for use of HT.

Another indication that medicalization can be occurring is when women are told that they should depend on a physician to have their menopausal status recognized and defined, rather than relying on their own judgment (Kaufert and Gilbert, 1986). On the ENJUVIA web site, consumers were informed that health care professionals "can determine which treatment is right." As the above quote demonstrated, the "expert" role of physicians was reinforced as well as their authority to define and categorize women's experiences.

In this context, the web sites in the study sample exhibited the "signs" that medicalization could be occurring. Primarily, the web sites explained

menopause in biomedical terms implying it was a medical event to be medical managed. Further, the loss of hormones was a common theme on the web sites which introduced HT as a way to restore or balance hormone levels. The web sites also reinforced medical authority in providing a medical diagnosis over women's experiences.

My analysis also revealed another important technique missing from previous discussions about medicalization in the literature. The reading level of the online symptom tools and side effects information far surpassed the estimated reading level of the average adult in the United States, thus creating a context for which medicalization could also occur. Since the reading level of information found on the pharmaceutical web sites in the sample was too high, it suggested consumers may need to consult with a health care to make sense of the information. In this way, it also reinforced the role of physician as an "expert."

This finding pushes and extends the existing literature to include a new "test" for medicalization. As a result of this finding, I propose the reading level of information is one more sign further demonstrating how the process of medicalization was operating on the pharmaceutical web sites for HT. Hence, this finding adds and contributes new dimensions to the analyses of the medicalization of menopause in direct-to-consumer advertisements. When taken together as a whole, we gain a sense of how the web sites provided a context for the process of medicalization to occur on the pharmaceutical web sites for HT.

Comparison of Pharmaceutical Web Sites

Although my findings revealed some unifying themes across the HT web sites, there were some marked differences across the pharmaceutical web sites. All of the web sites in the sample drew heavily on the "menopause as disease" discourse and emphasized the loss of hormones as a "reason" or explanation for menopause. While an emphasis on change was clear on the web sites, only one web site (PREMARIN) actually used the word "decline." Other web sites, such as ANGELIQ, CombiPatch, and femhrt, employed the terms "adjustment" and "balance." Yet, when taken together the language on the web sites helped to set the stage for using the HT products in order to balance or restore hormone levels.

Unique among the study sample was the ENJUVIA web site for its use of biomedical rhetoric for describing symptoms. Specifically, the terms "vasomotor symptoms" and "vaginal atrophy" were used on the ENJUVIA web site. This biomedical nomenclature suggested a disease-like nature of menopause and placed these "symptoms" within a medical context.

In comparison to the other online symptom tools, the ENJUVIA symptom tool was the only one to include psychological symptoms among the list of possible menopausal symptoms. Specifically, the ENJUVIA "Menopause Impact Tool" included psychological symptoms such as anxiety, irritability, sadness, and difficulty concentrating. The inclusion of such psychological symptoms in the ENJUVIA online tool implied to consumers that they were both important and also linked to menopause.

Additional menopausal “symptoms” were listed on the CombiPatch and ENJUVIA web sites, including mood changes, mood swings, and irritability. Moreover, the ENJUVIA web site further listed irregular periods, weight gain, and dry skin as “other” symptoms of menopause. These changes are not necessarily related to menopause and by having these listed as so-called symptoms of menopause on the CombiPatch and ENJUVIA web sites suggested a possible link or association.

Moreover, the CombiPatch web site described menopause as when a woman’s “reproductive system slowly shuts down.” The mechanical language was reminiscent of the biomedical model in which the body is viewed as a machine breaking down. Here, the aging female body was compared to a machine “breaking down” illustrating how menopause was being articulated as a declining biological function.

The above examples help to illustrate the differences among the HT web sites. In comparison to other web sites the sample, CombiPatch and ENJUVIA presented menopause as a highly medicalized process with their use of biomedical rhetoric (*i.e.* “atrophy” and “ovaries shutting down”). Furthermore, the CombiPatch and ENJUVIA web sites included psychological symptoms and linked them with menopause. For these reasons, I concluded that the degree of medicalization across the web sites varied with the CombiPatch and ENJUVIA web sites being more explicit in their adoption of a biomedical perspective and perpetuating that menopause was a medical event requiring medical

management. In the final chapter, I discuss several policy implications of my findings and ideas for future research.

CHAPTER 10

CONCLUSIONS

Advertisements are one of the most important cultural factors molding and reflecting our lives (Williamson, 2002). In fact, 30% of adults surveyed in the United States claim that they have talked with a physician about a specific medication as a result of some form of direct-to-consumer advertising (Kaiser Family Foundation, 2001). Meanwhile, Conrad and Leiter (2008) note how the Internet has become "another direct avenue from pharmaceutical companies to consumers" (p. 834). Hence, the proliferation of online health information provided to consumers on pharmaceutical web sites provides momentum for investigations of media representations of health, disease, and illness. In particular, consumer-targeted prescription drug advertising serves as an interesting lens through which we can begin to examine the portrayal of menopause in online drug advertisements. Therefore, the aim of this study was to explore the portrayal of menopause on web sites sponsored by pharmaceutical companies for hormone therapies (HT).

In this study, menopause was defined as a natural part of the aging process, rather than an event that limits women's psychological or physical capacities (McCrea, 1983). Previous research has illuminated aspects of the pharmaceutical industry's involvement in the promotion of hormone therapies (HT) for the treatment of menopausal symptoms, such as hot flashes, night sweats and vaginal changes, to physicians and consumers through

advertisements in medical journals, newspapers, and popular magazines. Yet, little is known about the convergence of women and menopause in advertisements for HT in the online environment.

In this study, I was particularly concerned with the representation of menopause in online advertisements for HT. Therefore, the main purpose of this study was to explore the portrayal of menopause on web sites sponsored by pharmaceutical companies for FDA-approved HT. To address this issue more fully, I investigated the descriptions of menopause, portrayal of menopausal "symptoms," and the use of online self-diagnosing symptom tools. Additionally, I analyzed the presentation of proclaimed benefits and possible side effects as well as the portrayal of various characters depicted in the online drug advertisements. I also sought to examine if the online information was presented differently for various web site audiences, such as consumers and health care professionals.

To unravel these questions, a qualitative content analysis of web sites for FDA-approved hormone therapies (HT) was undertaken to gain an understanding of how menopause was being portrayed in online drug advertisements. Using this qualitative method allowed the researcher to perform some exploratory research that suggests additional qualitative research in this area would be productive. A total number of 608 printed pages of web site content from eight web sites (N=8) for HT were analyzed in this study. The full-text of the web pages was analyzed with a focus on the content and contextual meaning of the text and visual elements. In order to make the study as

reproducible and systematic as possible, I developed a coding instrument to help characterize the online drug advertisements.

Four research questions guided data collection and analysis. The four research questions again were:

1. What was the prominent discourse about menopause on the pharmaceutical web sites? Did it vary across the web sites? If the biomedical perspective was used in the portrayal of menopause, then menopause would be presented as a medical event to be medically managed. Furthermore, “deficiency” would be a common theme if the biomedical perspective was accepted. If a feminist perspective was used in the portrayal of menopause, I would expect to see an alternative discourse that rejected the medical construction of menopause as requiring medical treatment and supervision by a health care professional. In addition, I explored how symptoms were presented and if the symptoms were the same across the web sites.
2. How was the Women’s Health Initiative (WHI) framed on the pharmaceutical web sites? Likewise, I also examined if evidence of actual clinical studies, such as the WHI or others, were referenced on the pharmaceutical web sites.

3. Who were the intended target audience or audiences of the web sites? To help determine if the web sites were geared towards a specific audience, I examined the language and/or visual cues employed on the pharmaceutical web sites.

4. Was the information presented differently for various audiences, and if so, how? (*i.e.* health professionals, consumers, etc.). For example, I investigated if the advertising slogans differed depending on the target audience. In addition, I examined what (if anything) was absent or lacking on the web sites.

These questions also set the stage for my analysis which was divided into five chapters spanning an overview of the web site characteristics, textual and visual elements of the web sites, the portrayal of menopause, and the presentation of benefits and side effects of HT. In particular, Chapters 5 and 6 focused on the characteristics of the direct-to-consumer web sites for HT. In these chapters, I examined the menu options, slogans, color schemes, and imagery employed on the web sites for both consumers and health care professionals. Two questions were explored in these chapters. In particular, I identified two main audiences for the HT web sites, consumers and health care providers, and I also investigated how the online information was presented differently for these two potential markets.

Chapter 7 explored the portrayal of menopause on the web sites for HT. One key question was examined in this chapter. Specifically, this chapter

revealed how menopause was being portrayed in the online advertisements by analyzing the definitions of menopause, descriptions of menopausal "symptoms," and self-diagnosing symptom tools found across the HT web sites in the study sample. Chapter 8 analyzed the presentation of benefits and side effects of HT. This chapter helped to illuminate what was deficient or missing in the online drug advertisements for HT, such as references to actual clinical studies to support proclaimed benefits and scant discussion of the Women's Health Initiative for consumers. Chapter 9 offered a discussion of my key findings and drew on similar studies from the literature.

Key Findings

My study of pharmaceutical web sites for hormone therapies (HT) indicated that a medicalized view of menopause was consistent in the online advertisements. In general, menopause was portrayed on the pharmaceutical web sites as a medical event caused by a loss of hormones often accompanied by "problematic" symptoms that could be alleviated by hormone therapies. Other authors have reached similar conclusions about the biomedical framing of menopause in traditional print magazine advertisements (Gannon and Stevens, 1998; Hust and Andsager, 2003; Lyons and Griffin, 2003; Shoebridge and Steed, 1999). My analysis contributed to the existing literature by adding an analysis of pharmaceutical advertisements in the online environment. Hence, my findings reinforced the overall dominance of the biomedical perspective of menopause in

advertisements. One of the stronger points of this study was its ability to demonstrate how a biomedical model of menopause was adopted and advanced on the pharmaceutical web sites which, in turn, created a context for which the process of medicalization could occur. To this end, several important findings emerged from my analyses.

First and foremost, the web sites drew heavily on terms that were negative and focused overwhelmingly on hormone loss thereby contributing to the disease-like conceptualization of menopause. In particular, “deficiency” and “loss” were common themes. In doing so, the pharmaceutical companies were able to effectively set the stage for using their HT products to adjust or balance hormone levels. My findings also showed that potential female consumers were exposed to an array of models and visual cues associated with positive characteristics (*i.e.* healthy, active, and smiling) that consumers might identify with. Moreover, the images of women found on the pharmaceutical web sites frequently depicted women within the domestic realm. Given that the majority of the female characters in the online advertisements were Caucasian women this also mirrored the demographic characteristics of both the common users of hormone therapies and typical users of the Internet. To be sure, this is important because if consumers identify with the models in the online advertisements for HT, then they “may also be more likely to engage in health care behaviors needed to gain access to the advertised products” (Cline and Young, 2004, p. 151).

Further analysis revealed that drug manufacturers promoted the widespread use of HT for an extended range of menopausal "symptoms" treatable with HT, such as weight gain and dry skin. To this end, I also found that claims of benefits for consumers were not supported by actual scientific sources on the web sites and the use of hypothetical "women's stories" to support product claims was also observed. One web site discussed possible side effects in the footer of the web site and in a smaller font size which could easily be overlooked.

The finding that a biomedical perspective was prominent on the pharmaceutical web sites was, in general, consistent with previous research on the framing of menopause in print magazine advertisements. However, my analysis of the reading level of information and the online self-diagnosing symptom tools offered new dimensions to research on the framing of menopause in advertisements. As a result of my findings, I propose that the high reading level of information contained in the advertisements is one more "test" signifying that medicalization was operating on the pharmaceutical web sites for HT. This finding pushes and extends the existing body of literature to include a new "test" for medicalization.

Moreover, limited information was provided to consumers about the Women's Health Initiative (WHI) study while pharmaceutical companies appeared to be re-positioning HT as a viable treatment by emphasizing "low-dose options." As noted, three pharmaceutical web sites highlighted *positive* benefits from the WHI study and consumers were encouraged to ask their health care providers if potential benefits of using HT may outweigh the risks. Given

these findings, my analysis suggests there is a need for better risk communication in online drug advertisements for HT.

Limitations of the Study

This study had some limitations. First, the dataset was only comprised of FDA-approved Estrogen and Estrogen-Progestin products for the treatment of postmenopausal women. While the degree of medicalization within the dataset was observed and analyzed, it was not clear how this compared with other online DTC advertisements for menopause such as herbs, supplements, and alternative therapies. Second, due to the subjective and interpretive nature of this qualitative research, two researchers might have arrived at different conclusions of the online advertisements for hormone therapies. Furthermore, the study sample was small and consisted of eight web sites for FDA-approved hormone therapies. At the time of the study, only eight pharmaceutical companies for FDA-approved hormone therapies had active web sites available for analysis. Further, this study was a cross-sectional observation and the dataset was collected at one point in time. Therefore, this study by design did not set out to investigate if online drug advertisements for HT have changed over time. Finally, this analysis was based on a particular perspective grounded in the sociology of health and illness and medicalization frameworks. Although the pharmaceutical web sites were analyzed from this perspective, my findings indicate that future research can help to examine the marketing decisions behind the development of such web sites

and how women have responded to the online drug advertisements for hormone therapies.

Directions for Future Research

This study demonstrates the need for further examination of gender and aging in online drug advertisements. This study focused on FDA-approved HT products for the treatment of postmenopausal women. Therefore, another productive area of future research might be analyzing online advertisements for other menopausal remedies, such as natural and herbal supplements. In addition, in-depth interviews with women users of the web sites could help illuminate how consumers search for and evaluate the credibility of information on the World Wide Web about menopause. A better understanding of the users of the web sites, such as their age, race, education level, and their use of the online symptom tools (*i.e.* do women print off the symptom assessment tools and share them with a health care provider?), would also be useful.

Another possible study could investigate if the portrayal of menopause has changed over time in direct-to-consumer advertisements. Such an analysis would add an extra layer of complexity missing from past discussions of the representation of menopause in advertising. It might also be interesting to compare the portrayal of menopause across various types of media, including print, television, and online media.

Further research is also needed to examine online drug advertisements for “male” menopause and “female” menopause. With the advent of Viagra and other treatments aimed at male consumers, it would be interesting to explore how this portrayal is framed for different audiences. Hence, such a study could help elucidate the messages about gender and aging manifested in online drug advertisements.

Policy Implications

Three major implications arise from this study. First, there is a need for better risk communication in online drug advertisements for HT. In particular, the location of side effects information was observed only in the footer on one web site and in a smaller font size. Therefore, this important information is likely to be overlooked. Furthermore, an overlap between the “common” side effects and “serious but less common” side effects was noted across the web sites in the study sample which could be a source of potential confusion for patients. This study has also shown that there was little discussion of the concerns brought to light by Women’s Health Initiative (WHI) study for consumers on the web sites. In fact, three pharmaceutical web sites highlighted positive benefits from the WHI study and suggested to consumers that potential benefits of using HT may outweigh the risks. As noted, another distinguishing characteristic was the lack of scientific evidence provided for consumers to support various advertised benefits of HT. Given the vagueness of the statements about benefits and limited

discussion about risks, more information is needed for women to be able to weigh the benefits and risks of HT. Hence, the need for better communication and educational information for consumers in online advertisements for HT was evident.

Second, this study revealed the promotion of an expanded list of "benefits" to consumers beyond what the HT products were originally FDA-approved for. By proposing such an expansive range of symptoms could be "fixed" with HT products, such as dry skin and irritability, the online advertisements proposed HT as a viable option for a range of so-called symptoms. Furthermore, the use of "hypothetical" women's stories to support product claims of benefits and efficacy was another pattern observed on several of the web sites. Taken together, these patterns illustrated a process by which non-medical problems were being defined as medical problems along with proposed medical interventions (Conrad, 2007). Therefore, a closer examination of how online drug advertisements are making claims about their products is warranted.

Third, data from this analysis also demonstrated that the reading level of the online symptoms tools and side effects information found on the pharmaceutical web sites far surpassed the reading level of the average adult in the United States (National Adult Literacy Survey, 1992). As such, this finding served as an important reminder. Clearly, safety and risk information in online drug advertisements must be written at an appropriate reading level and considerations for those with limited literacy skills should also be taken into account.

This research contributed to the critical reflection of direct-to-consumer advertising with implications for information literacy in the digital age. Women seeking health-related information about prescription drug products can use the following questions as a set of guidelines whenever evaluating pharmaceutical web sites. Moreover, this education can be further facilitated by nurses, physicians, health educators, and librarians when working with consumers seeking online health-related information:

- Who is the intended audience (or audiences) of the pharmaceutical web site?
- When was the web site last updated?
- Who provided the information on the web site and what are their credentials?
- Is contact information provided in case you have questions or need further information?
- Does the web site provide a link to U.S. Food and Drug Administration (FDA) web site?
- Were you able to locate both the benefits and side effects information about the pharmaceutical product being advertised?
- Is a “fair balance” of the proposed benefits and potential risks provided on the web site?
- Is any information on the web site provided in a smaller font size? If so, is this information difficult to read?

- Does the web site encourage you to ask a health care provider about a specific prescription drug product?
- Does the web site provide an online self-diagnosing symptom tool to assess the frequency and severity of your symptoms?
- If so, does the web site encourage you to print off and share your "symptom report" with a health care provider?
- Does the pharmaceutical web site provide information about non-medical options, such as exercise and diet modifications, that might help to reduce symptoms?
- If claims about a prescription drug product are being made, are citations to scientific sources provided to support these claims?

Summary

Advertising deconstruction "is not trivial" (Cortese, 2008, p. 4). Pharmaceutical companies spend a substantial amount of money on direct-to-consumer advertising. Since the FDA's relaxation of its regulation in 1997, pharmaceutical industry spending on direct-to-consumer advertising (DTCA) has more than tripled reaching $4.2 billion in 2005 for American broadcast DTCA efforts (Conrad and Leiter, 2008). Additionally, advertisements are visually appealing, symbolic, and persuasive. To better understand the construction of menopause in online drug advertisements, the specific aim of this study was to

explore how menopause was being portrayed on direct-to-consumer web sites for HT sponsored by pharmaceutical companies.

To accomplish this, I employed a qualitative content analysis approach to data collection and analysis in order to develop a fuller understanding of the phenomenon under investigation. By analyzing the information content and how menopause was portrayed on web sites for HT, my analysis offered insight into how menopause was constructed in online direct-to-consumer advertisements and addressed a knowledge gap in relation to representations of menopause on pharmaceutical web sites. This qualitative investigation provided evidence demonstrating how menopause was portrayed as a medical event necessitating medical treatment in the online advertisements for HT. Overall, the online advertisements articulated a biomedical perspective of menopause.

In conclusion, the findings of this study illuminated how menopause was being portrayed in online advertisements for HT and the means that were used to construct this portrayal. Findings from this research are useful for understanding how menopause was portrayed in drug advertisements for hormone therapies in the online environment. The bottom line is that negative language and visual images portrayed symptoms of menopause as “problematic” thereby effectively placing menopause under the rubric of medical supervision. In this way, the portrayal of menopause as “disease-like” set the stage for use of the HT products advertised on the pharmaceutical web sites to alleviate “problematic” and bothersome symptoms. Further, by suggesting to potential female consumers that their physical and emotional issues might fit medical models of menopause,

the online advertisements expanded the list of possible menopausal symptoms. Conrad (2007) identified “diagnostic expansion” as one way in which medicalization can occur (p. 47). As a result, my analysis of the pharmaceutical web sites revealed an expansion of definitional boundaries to include new problems and potentially new markets beyond what HT was originally designated for.

Several of my findings reinforced the acceptance and dominance of the biomedical model of menopause in advertising. Additionally, one of the strengths of this study was my analysis of the reading level, online symptom tools, and the framing of the WHI in online pharmaceutical advertisements for HT. To this end, this research contributes to the existing body of literature to include analyses of representations of menopause on pharmaceutical web sites for HT. Indeed, while physicians are “still the gatekeepers for many drugs, the pharmaceutical companies have become a major player in medicalization” (Conrad, 2007, p. 134). As online direct-to-consumer advertising becomes increasing prevalent, research that delves into the intersection of gender, aging, and consumer-targeted prescription drug advertising on the World Wide Web is further warranted.

APPENDIX A

CODE SHEET

FOR DTC WEB SITE ADVERTISEMENTS

Categories Examined:

1. Type of product (tablet, lotion, ring, or patch)
2. Name of product
3. How menopause is defined
4. "Causes" of menopause
5. How symptoms are portrayed
6. Presentation of benefit
7. Presentation of side effects
8. Prescription for action (action/behavior being advocated)
9. Nature of portrayal of patients (characteristics)
10. Nature of portrayal of health care providers (characteristics)
11. Mention of WHI (yes or no? location?)
12. Web site characteristics:
    - Number of web sites with lay person and health provider portals
    - How are the portals labeled? (i.e. how many web sites portals use the term "health care providers"?)
    - Number of menu items on the site for consumers
    - Menu options for consumers (list by web site)
    - Number of menu items on the site for health care providers
    - Menu options for health providers (list by web site)
    - Slogans for consumers

- Slogans for health care providers
- Information provided to health professionals to distribute to patients? (On every web site? in PDF? need to order?)
- How many web sites include references or citations? (If so, where are they located? Consumer pages or health provider pages?)
- How many web sites show pictures of HT products? Packaging?
- How many web sites have self-diagnosis tools? (symptom tools)
- How many web sites have guide or list of questions to ask your health provider?
- How many web sites have coupons or free samples?
- Colors used on web site
- Imagery: How many use flowers, nature, ribbons, etc.

CODE SHEET

1. Type of product	(tablet, lotion, ring, or patch)
2. Name of product	
3. How menopause is defined	Description: (describe how menopause is defined)
4. "Causes" of menopause	Description (check all that apply): • Aging • End of reproductive capacity • Other: _____
5. Portrayal of symptoms	Description (check all that apply): • "Deficiency" • "Burden" • "End" • "Beginning" • "Transition" • "Natural" • "Inevitable" • Other: _____
6. Presentation of benefit	Description (check all that apply): • "effective" • "proven" • "works"

	• "reliable" • "cure" • "prevents" • "prolongs" • "controls" • "manages" • Other: _____ • Are testimonials / personal stories used to support benefit? (Yes/No) • Are studies cited to support benefit? (Yes/No)
7. Presentation of side effects	Description (language used) • Are potential side effects mentioned? (Yes/No) • How are potential side effects presented? o Font consistent with other sections of the Web site o Smaller font o Side effects are not mentioned
8. Prescription for action	(action or behavior being advocated / encouraged) • See your doctor • Feel healthy again • Other: _____

9. Nature of portrayal of patients/characters	(characteristics) • Gender • Estimated age • Estimated race • Dress (business suit, jogging suit, etc.) • Primary setting • Primary behavior/activity
10. Nature of portrayal of health providers	(characteristics) • Gender • Estimated age • Estimated race • Dress • Primary setting • Primary behavior/activity • Are any credentials listed?
11. WHI (mentioned / referenced?)	• WHI mentioned? Yes/No • Location/where on web site?
12. Web site characteristics	
• Number of web sites with lay person and health provider portals	
• How are the portals labeled? (i.e. how many web site portals use the term “health care providers”?)	

• Number of menu items on the site for consumers	
• Menu options for consumers (list by web site)	
• Number of menu items on the site for health care providers	
• Menu options for health providers (list by web site)	
• Slogans for consumers	(Advertising message that appears in the largest font)
• Slogans for health care providers	(Advertising message that appears in the largest font)
• Information provided to health professionals to distribute to patients? (On every web site? in PDF? need to order?)	
• How many web sites include references or citations? (If so, where are they located? Consumer pages or health provider pages?)	
• How many web sites show pictures of HT products? Packaging?	
• How many web sites have self-diagnosis tools? (symptom tools)	• Symptom Tool: Yes/No
• How many web sites have guide or list of	• Guide to Talking with Health

questions to ask your health provider?	Provider: Yes/No
• How many web sites have coupons or free samples?	• Coupons: Yes/No • Free samples: Yes/No
• Colors used on web site	
• Imagery: How many use flowers, nature, ribbons, etc.	

APPENDIX B

HIC APPROVAL

WAYNE STATE UNIVERSITY

HUMAN INVESTIGATION COMMITTEE
101 East Alexandrine Building
Detroit, Michigan 48201
Phone: (313) 577-1628
FAX: (313) 993-7122
http://hic.wayne.edu

Full AAHRPP Accreditation

CONCURRENCE OF EXEMPTION

To: Deborah Charbonneau
Shiff Medical Library
123 Shiffman Medical Library

From: Ellen Barton, Ph.D.
Chairperson, Behavioral Institutional Review Board (B3)

Date: June 19, 2009

RE:

HIC #:	069209B3X
Protocol Title:	Constructions of Menopause in Online Drug Advertisements: A Content Analysis of Direct-to-Consumer Advertisements for Hormone Therapies on the World Wide Web
Sponsor:	
Protocol #:	0906007255

The above-referenced protocol has been reviewed and found to qualify for **Exemption** according to paragraph #4 of the Department of Health and Human Services Code of Federal Regulations [45 CFR 46.101(b)].

This proposal has not been evaluated for scientific merit, except to weight the risk to the human subjects in relation to the potential benefits.

- Exempt protocols do not require annual review by the IRB.
- All changes or amendments to the above-referenced protocol require review and approval by the HIC **BEFORE** implementation.
- Adverse Reactions/Unexpected Events (AR/UE) must be submitted on the appropriate form within the timeframe specified in the HIC Policy (http://www.hic.wayne.edu/hicpol.html).

NOTE:

1. Forms should be downloaded from the HIC website at each use.
2. Submit a Closure Form to the HIC Office upon completion of the study.

REFERENCES

Allen, K. (2009). The connotations of English colour terms: Colour-based x-phemisms. *Journal of Pragmatics,* 41: 626-637.

Arney, J. & Rafalovich, A. (2007). Incomplete syllogisms and techniques of medicalization: The case of direct-to-consumer advertising in popular magazines, 1997 to 2003. *Qualitative Health Research,* 17(1), 49-60.

Barker, K. (1998). A ship upon a stormy sea: The medicalization of pregnancy. *Social Science & Medicine*, 47: 1067-1076.

Bell, S. (1990). Sociological perspectives on the medicalization of menopause. *Annals of the New York Academy of Sciences,* 592: 173-178.

Bell, S.E. (1987). Changing ideas: The medicalization of menopause. *Social Science & Medicine,* 24(6): 535-542.

Berger et al. (2001). Direct-to-consumer drug marketing: Public service or disservice? *The Mount Sinai Journal of Medicine,* 68(3): 197-202.

Bradley, L.R. & Zito, J.M. (1997). Direct-to-consumer prescription drug advertising. *Medical Care,* 35: 86-92.

Brubaker, S. J. & Dillaway, H.E. (2009). Medicalization, natural childbirth and birthing experiences. *Sociology Compass,* 3(1): 31-48.

Carlson, E.S., Li, S. & Holm, K. (1997). An analysis of menopause in the popular literature. *Health Care for Women International,* 18: 557-564.

Chrisler, J. C., & Levy, K. B. (1990). The media construct a menstrual monster: A content analysis of PMS articles in the popular press. *Women and Health, 16*(2): 89-104.

Cimons, M. F. (2008). The medicalization of menopause: Framing media messages in the twentieth century. Ph.D. dissertation, University of Maryland, College Park, United States -- Maryland.

Cline, R.J, & Young, H.N. (2004). Marketing drugs: Marketing health care relationships: A content analysis of visual cues in direct-to-consumer prescription drug advertising. *Health Communication,* 16(2): 131-157.

Clinkingbeard, C., Minton, B.A., Davis, J., & McDermott, K. (1999). Women's knowledge about menopause, hormone replacement therapy (hrt), and interactions with healthcare providers: an exploratory study. *Journal of Women's Health & Gender-Based Medicine,* 8(8): 1097-1102.

Coney, S. (1994). *The menopause industry: How the medical establishment exploits women.* Alameda, CA: Hunter House.

Conrad, P. (1975). The discovery of hyperkinesis: Notes on the medicalization of deviant behavior. *Social Problems,* 23: 12-21.

Conrad, P. (2007). *The medicalization of society*. Baltimore: The Johns Hopkins University Press.

Conrad, P. & Barker. K. (2010). The social construction of illness: Key insights and policy implications. *Journal of Health and Social Behavior,* 51(S): S67-S79.

Conrad, P. & Leiter, V. (2008). From Lydia pinkham to queen levitra: Direct-to-consumer advertising and medicalization. *Sociology of Health & Illness,* 30(6): 825-838.

Conrad, P & Potter, D. (2000). From hyperactive children to ADHD adults: Observations on the expansion of medical categories. *Social Problems,* 47: 559-582.

Conrad, P. & Schneider, J.W. (1992). *Deviance and medicalization: From Badness to sickness.* Philadelphia: Temple University Press.

Cortese, A.J. (2008). *Provoacateur: Images of women and minorities in advertising.* Lanham, MD: Rowman & Littlefield Publishers, Inc.

Creswell, J.W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches.* Thousand Oaks, CA: Sage.

Creswell, J.W. (2007). *Qualitative inquiry & research design: Choosing among five approaches.* Thousand Oaks, CA: Sage.

Davis, J.J., Cross, E., & Crowley, J. (2007). Pharmaceutical websites and the communication of risk information. *Journal of Health Communication,* 12: 29-39.

Denzin, N.K. & Lincoln, Y.S. (eds.). (1994). *Handbook of qualitative research.* Thousand Oaks, CA: Sage.

Derry, P.S. (2002). What do we mean by the 'biology of menopause'? *Sex Roles,* 46(1/2): 13-23.

Derry, P.S. (2004). Hormones, menopause, and heart disease: Making sense of the women's health initiative. *Women's Health Issues,* 14: 212-219.

Derry, P.S. (2006). A lifespan biological model of menopause. *Sex Roles,* 54(5/6): 393-399.

Derry, P.S. (2008). Update on hormones, menopause, and heart disease: Evaluating professional response to the women's health initiative. *Health Care for Women International,* 29: 720-737.

Dickson, G.L. (1993). Metaphors of menopause: The metalanguage of menopause research. In J.C. Callahan (Ed.), *Menopause: A midlife passage.* (pp. 36-38). Bloomington, IN: Indiana University Press.

Dillaway, H.E. (2005). Menopause is the "good old": Women's thoughts about reproductive aging. *Gender & Society,* 19(3): 398-417.

Dukes, M.N. (1997). The menopause and the pharmaceutical industry. *Journal of Psychosomatic Obstetrics and Gynaecology,* 18(2): 181-188.

Ferguson, S. J. & Parry, C. (1998). Rewriting menopause: Challenging the medical paradigm to reflect menopausal women's experiences. *Frontiers,* 19(1): 20-42.

Food and Drug Administration. (1999). Consumer directed broadcast advertisements: Guidance for industry. Online at: http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/ucm070065.pdf. Retrieved May 23, 2010.

Food and Drug Administration. (2003). FDA updates hormone therapy information for post menopausal women. Online at: http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/2004/ucm108243.htm. Retrieved May 23, 2010.

Food and Drug Administration. (2004). Brief summary: Disclosing risk information in consumer-direct print advertisements. Online at: http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/ucm069984.pdf. Retrieved May 23, 2010.

Food and Drug Administration. (2008a). Estrogen and estrogen with progestin therapies for postmenopausal women. Online at: http://www.fda.gov/cder/drug/infopage/estrogens_progestins/default.htm. Retrieved April 6, 2009.

Food and Drug Administration. (2008b). Questions and answers for estrogen and estrogen with progestin therapies for postmenopausal women. Online at:

http://www.fda.gov/cder/drug/infopage/estrogens_progestins/Q&A.htm. Retrieved April 6, 2009.

Food and Drug Administration. (2009). Menopause and hormones. Online at: http://www.fda.gov/ForConsumers/ByAudience/ForWomen/ucm118624.htm. Retrieved March 29, 2010.

Food and Drug Administration. (2010). Drug advertising: A glossary of terms. Online at: http://www.fda.gov/Drugs/ResourcesForYou/Consumers/PrescriptionDrugAdvertising/ucm072025.htm. Retrieved March 29, 2010.

Fox S. & L. Rainie. (2002). Vital decisions: How internet users decide what information to trust when they or their loved ones are sick. Pew Internet & American Life Project. Online at: http://www.pewinternet.org/~/media//Files/Reports/2002/PIP_Vital_Decisions_May2002.pdf.pdf. Retrieved April 24, 2009.

Fox, N., Ward, K., & O'Rourke, A. (2006). A sociology of technology governance for the information age: The case of pharmaceuticals, consumer advertising, and the internet. *Sociology,* 40(20): 315-334.

Freidson, E. (1970). *The profession of medicine*. Chicago: University of Chicago Press.

Gannon, L. & Stevens, J. (1998). Portraits of menopause in the mass media. *Women & Health,* 27(3): 1-15.

Gawley. A.M. (2007). “Depression is a medical condition”: Exploring the medicalization of depression on SSRI websites. MA thesis, University of Waterloo, Ontario, Canada.

Gelland, Z.F. & Lyles, K.W. (2007). Direct-to-consumer advertising of pharmaceuticals. *The American Journal of Medicine,* 120: 475-480.

Goffman, E. (1979). *Gender advertisements.* Cambridge, MA: Harvard University Press.

Gundersen, L. (1998). The complex process of naming drugs. *Annals of Internal Medicine,* 129(8): 677-678.

Hollon, M.F. (2005). Direct-to-consumer advertising: A haphazard approach to health promotion. *Journal of the American Medical Association,* 293(16): 2030-2033.

Holtz, W.E. (1998). Consumer-directed prescription drug advertising: Effects on public health. *Journal of Law and Health,* 13(2): 199-218.

Huh, J. & Cude, B.J. (2004). Is the information “fair and balanced” in direct-to-consumer prescription drug web sites? *Journal of Health Communication,* 9: 529-540.

Huh, J. & Langteau, R. (2007). Presumed influence of DTC prescription drug advertising: Do experts and novices think differently? *Communication Research,* 34(1): 25-52.

Hunter, M.S. & O'Dea, I. (1997). Menopause: Bodily changes and multiple meanings. In J. Ussher (Ed.), *Body talk: The material and discursive regulation of sexuality, madness, and reproduction* (pp. 199-222). New York, NY: Routledge.

Hust, S.J. & Andsager, J.L. (2003). Medicalization vs. adaptive models: Sense-making in magazine framing of menopause. *Women & Health,* 38(1): 101-122.

Kaiser Family Foundation (2001, November). *Understanding the effects of direct-to-consumer prescription drug advertising* (Document No. 3197). Menlo Park, CA: Author.

Kars, K., Baker, L.M., & Wilson, F.L. (2008). *The Medical Library Association guide to health literacy.* New York: Neal-Schuman.

Katz, A. (2003). Observations and advertising: Controversies in the prescribing of hormone replacement therapy. *Health Care for Women International,* 24: 927-939.

Kaufert, P.A. (1996). The social and cultural context of menopause. *Maturitas,* 23: 169-180.

Kaufert, P.A. & Lock, M. (1997). Medicalization of women's third age. *Journal of* Psychosomatic *Obstetrics and Gynecology,* 18: 81-86.

Kaufert, P.A. & Gilbert, P. (1986). Women, menopause, and medicalization. *Culture, Medicine, and Psychiatry,* 10: 7-21.

Kenagy, J.W. & Stein, G.C. (2001). Naming, labeling, and packaging of pharmaceuticals. American *Journal* of *Health-System Pharmacy,* 58(1): 2033-2041.

Khim, V. (2009). Pharmaceutical direct-to-consumer advertising and print media. Online at: http://digitalcommons.calpoly.edu/grcsp/9/. Retrieved: October 3, 2010.

Kress, G. & Van Leeuwen, T. (2002). Colour as a semiotic mode: Notes for a grammar of colour. *Visual Communication*, 1(3): 343-368.

Lorber, J. (1997) *Gender and the social construction of illness.* Thousand Oaks: Sage.

Lorence D. & Churchill, R. (2007). A study of the web as DTC drug marketing agent. *Journal of Medical Systems,* 31: 551-556.

Lupton, D. (1996). Constructing the menopausal body: The discourses on hormone replacement therapy. *Body & Society,* 2(1): 91-97.

Lyons, A.C. & Griffin, C. (2003) Managing menopause: A qualitative analysis of self-help literature for women at midlife. *Social Science & Medicine,* 56: 1629-1642.

Mansfield, P.K. & Voda, A.M. (1994). Hormone use among middle-aged women: Results of a three-year study. *Menopause: The Journal of the North American Menopause Society,* 1(2): 99-108.

Mansfield, P.K. & Voda, A.M. (1997). Woman-centered information on menopause for health care providers: Findings from the midlife women's health survey. *Health Care for Women International,* 18: 55-72.

McCrea, F.B. (1983). The politics of menopause: The "discovery" of a deficiency disease. *Social Problems,* 31(1): 111-123.

Meyer, V.F. (2001). The medicalization of menopause: Critique and consequences. *International Journal of Health Services,* 31(4): 769-792.

Mintzes, B. (2006). Disease mongering in drug promotion: Do governments have a regulatory role?. *PLoS Medicine,* 3(4): 0461-0465.

Moore, P.A. & Newton, M.D. (1998). Prescription drug advertising on the internet: A proposal for regulation. *West Virginia Journal of Law and Technology*, 2(1). Retrieved from: http://www.wvjolt.wvu.edu

Moynihan, R & Cassels, A. (2005). *Selling sickness: How the world's biggest pharmaceutical companies are turning us all into patients.* New York: Nation Books.

Moynihan, R., Heath, I., & Henry, D. (2002). Selling sickness: The pharmaceutical industry and disease mongering. *BMJ,* 324(7342): 886–891.

National Institute on Aging. (2009). Hormones and menopause. Online at: http://www.nia.nih.gov/HealthInformation/Publications/hormones.htm. Retrieved April 6, 2009.

Oakley, A. (1984). *The captured womb: A history of the medical care of pregnant women*. Oxford: Blackwell.

Paganini-Hill, A. & Henderson, V.W. (1994). Estrogen deficiency and risk of alzheimer's disease in women. *American Journal of Epidemiology,* 140(3): 256-261.

Palmlund, I. (1997). The marketing of estrogens for menopausal and postmenopausal women. *Journal of Psychosomatic Obstetrics and Gynaecology,* 18: 138-164.

Palmlund, I. (1997). The social construction of menopause as risk. *Journal of Psychosomatic Obstetrics and Gynaecology,* 18: 87-94.

Perri, M, Shinde, S, & Banavali, R. (1999). The past, present, and future of direct-to-consumer prescription drug advertising. *Clinical Therapeutics,* 21(10): 1798-1810.

Perz, J., & Ussher, J. M. (2008). 'The horror of this living decay': Women's negotiation and resistance of medical discourses around menopause and midlife. *Women's Studies International Forum, 31*(4): 293-299.

Pew Research Center Internet & American Life Project (2010). Demographics of internet users. Online at: http://www.pewinternet.org/Trend-Data/Whos-Online.aspx. Retrieved: September 29, 2010.

Posner, J. (1979). It's all in your head: Feminist and medical models of menopause (strange bedfellows). *Sex Roles,* 5(2): 179-190.

Richter, B.A. (2002). Selling the menopausal body: A critical analysis of physician targeted HRT advertising. MA thesis, Simon Fraser University, British Columbia, Canada.

Rees, M. (2005). Unraveling the confusion about hrt in women. *Journal of Men's Health and Gender,* 2(3): 287-291.

Riessman, C.K. (1983). Women and medicalization: A new perspective. *Social Policy,* 14(1): 3-18.

Riska, E. (2003). Gendering the medicalization thesis. *Advances in Gender Research,* 7: 61-89.

Rossouw J.E. *et al.* (2002, July 17). Risks and benefits of estrogen plus progestin in healthy postmenopausal women: Principal results from the women's health initiative randomized controlled trial. *JAMA,* 288(3), 321-33.

Rostosky, S.S. & Travis, C.B. (1996). Menopause research and the dominance of the biomedical model 1984-1994. *Psychology of Women Quarterly,* 20: 285-312.

Shoebridge, A. & Steed, L. (1999). Discourse about menopause in selected print media. *Australian and New Zealand Journal of Public Health,* 23(5): 475-481.

Sommers et al. (1999). Attitudes toward menopause and aging across ethnic/racial groups. *Psychosomatic Medicine,* 61: 868-875.

Timmermans, S. & Haas, S. (2008). Towards a sociology of disease. *Sociology of Health and Illness,* 30: 659-676.

University of Texas at Austin. (2010). TxReadability: A multi-language readability tool. Online at: http://webapps.lib.utexas.edu/TxReadability/app?service=page/Home. Retrieved: March 29, 2010.

U.S. Department of Education, National Center for Education Statistics, National Adult Literacy Survey, 1992.

U.S. Department of Health and Human Services (2010). Understanding menopause: Treatment and talking to your doctor. Online at:

http://www.womenshealth.gov/menopause/treatment. Retrieved: January 24, 2010

U.S. Department of Health and Human Services (2010). Menopause and menopause treatments. Online at: http://www.womenshealth.gov/faq/menopause-treatment.cfm. Retrieved: January 24, 2010

Vance, D.A. (2007). PREMARIN: The intriguing history of a controversial drug. *International Journal of Pharmaceutical Compounding,* 11(4): 282-286.

Voda, A.M. (1992). Menopause: A normal view. *Clinical Obstetrics and Gynecology,* 35(4): 923-933.

Voda, A.M. (1997). *Menopause, me, and you: The sound of women pausing.* New York, NY: Haworth Press.

Voda, A.M. & Ashton, C.A. (2006). Fallout from the women's health study: A short-lived vindication for feminist and the resurrection of hormone therapies. *Sex Roles,* 54: 401-411.

Watkins, E.S. (2007). *The estrogen elixir: A history of hormone replacement therapy in america*. Baltimore: The Johns Hopkins University Press.

Whittaker, R. (1998). Re-framing the representation of women in advertisements for hormone replacement therapy. *Nursing Inquiry,* 5: 77-86.

Williamson, J. (2002). *Decoding advertisements: Ideology and meaning in advertising.* London: Marion Boyars.

Wilson, R. (1966). *Feminine forever.* New York: M. Evans and Company.

Women's Health Initiative (2009). Participant website: Findings. Online at: http://www.whi.org/findings. Retrieved March 29, 2010.

Woodlock, D. (2005). Virtual pushers: Antidepressant internet marketing and women. *Women's Studies International Forum, 28*(4): 304-314.

Woods, N.F. (1998). Menopause: Models, medicine, and midlife. *Frontiers,* 19(1): 5-20.

Worcester, N. (2004). Hormone replacement therapy (hrt): Getting to the heart of the politics of women's health? *NWSA Journal,* 16(3): 56-69.

Worcester, N. & Whatley, M.H. (1992). The selling of HRT: Playing on the fear factor. *Feminist Review,* 41: 1-26.

Zita, J.N. (1993). Hersey in the female body: The rhetorics of menopause. In J.C. Callahan (Ed.), *Menopause: A midlife passage.* (pp. 59-78). Bloomington, IN: Indiana University Press.

Zola, I. (1983). *Socio-medical inquiries.* Philadelphia: Temple University Press.

Zola, I.K. (1991). The medicalization of aging and disability. In: G. Albrecht & J. Levy *(Eds.), Advances in Medical Sociology.* (pp. 299-315). Greenwich, Connecticut: JAI Press.

ABSTRACT

**MANUFACTURING MENOPAUSE:
AN ANALYSIS OF THE PORTRAYAL OF MENOPAUSE AND
INFORMATION CONTENT ON PHARMACEUTICAL WEB SITES**

by

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Consumer-targeted prescription drug advertising serves as an interesting lens through which we can examine the portrayal of menopause in online drug advertisements. The aim of this study was to explore the portrayal of menopause on web sites sponsored by pharmaceutical companies for hormone therapies (HT). To unravel this question, a qualitative content analysis of web sites for FDA-approved hormone therapies was employed. A total number of 608 printed pages of web site content from eight web sites (N=8) were analyzed. Key findings elucidated how menopause was portrayed on the pharmaceutical web sites. First, descriptions of menopause articulated a biomedical perspective of menopause. In adopting a biomedical perspective, menopause was described as a medical event requiring medical treatment. Second, the web sites employed

the terminology of illness, including the term “symptoms” which is a medically symbolic term. Women were told that their symptoms were to be assessed, tracked, and managed which related to a disease-like model of menopause. If left untreated, the web sites implied that symptoms could lead to hampered sex lives and a reduced sense of self. Third, the web sites were prescriptive and advocated consumer behaviors. Specifically, women were told to “ask” their health care provider about HT. Likewise, the “expert” role of the physician in providing a diagnosis was also reinforced. Fourth, another distinguishing characteristic was the lack of scientific evidence provided for consumers to support proclaimed benefits. The Women’s Health Initiative (WHI) was framed in a positive light and consumers were told that potential benefits of HT may outweigh the risks. Finally, the reading level of the pharmaceutical web sites far surpassed the reading level of the average adult in the United States. Overall, my findings reinforced the acceptance and dominance of the biomedical model of menopause in advertising. Additionally, one of the strengths of this study was the analysis of the reading level, online self-diagnosing symptom tools, and the framing of the WHI in online pharmaceutical advertisements. To this end, this research contributes to the existing body of literature to include analyses of representations of menopause on pharmaceutical web sites.

AUTOBIOGRAPHICAL STATEMENT

Deborah H. Charbonneau currently works as a Librarian at the Vera P. Shiffman Medical Library at Wayne State University in Detroit, Michigan, USA. She serves as Principal Investigator for the U.S. National Library of Medicine-funded Urban Health Partners program. She facilitates partnerships between the library and community agencies and has also developed training programs and online products to provide information to diverse populations. She holds a B.A. in English Literature and an M.L.S. from the University of Pittsburgh and is part-time faculty in the Wayne State University School of Library and Information Science. In addition, she was a distinguished fellow in the U.S. National Library of Medicine/Marine Biological Laboratory Medical Informatics program in 2001 and received a scholarship from the Association of Academic Health Sciences Libraries in 2003 to attend the Harvard Leadership Institute for Academic Librarians. Her publications have appeared in the *Journal of the Medical Library Association*, *Journal of Consumer Health on the Internet*, and the journal *Evidence Based Library and Information Practice*. She edited the book Global Information Inequalities: Bridging the Information Gap (2008) published by Chandos Publishing Limited. Her current research interests include health literacy and media representations of health, disease, and illness.