

## **Abstract**

Health-care centers devoted specifically to treatment and care of women is a relatively new concept. A decade ago, women's centers were few in number, and most focused on reproductive issues such as birth control and pregnancy. In 1993, a survey conducted by the Jacobs Institute for Women's Health, Washington, D.C., estimated that 3,600 centers existed nationwide, with an annual increase of close to 20 percent. Of this 20 percent, women's centers dedicated to primary care were increasing at the fastest rate. Advertisement and the popularity of women's centers have forced health-care providers beyond of the traditional scope of reproductive care and into health maintenance and postmenopausal care (*Harvard Watch*, 1997).

The baby-boom population will begin to reach age 65 in 2011, and the majority of the population will be women—women who will demand quality health care and health-care environments.

Research conducted for the 1998-1999 *AIA/AHA Fellowship in Health Facility Planning and Design* resulted in the development of the "Supportive Design Model" described herein. The model allowed development of design guidelines illustrating humanistic elements that should be an integral to the design of screening and diagnostic breast-care centers. These design guidelines are organized under six different categories: nature, color, lighting, privacy, relationships, and the patient's control of her environment. The guidelines include suggested layout options in each category to facilitate inclusion of the supportive design model's physical, social, and cultural components.

Title: Future Trends and Issues in the  
Design of Women's Healthcare  
Facilities

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## Future Issues and Trends in the Design of Women's Healthcare Facilities



Photograph by Alyson Priestap  
Utro Design  
Dallas, Texas

### Women's Healthcare

The concept of women's health as its own entity, in terms of specific medical treatment and care, is relatively new. Demographics of the 21<sup>st</sup> century will affect health services for women. The elderly population is predicted to increase during the next two decades; women will make-up the majority of this population. This will result in a significant increase in the demand for healthcare and health maintenance programs for women. Advertisement and the popularity of woman's centers have forced healthcare providers out of the traditional reproductive scope and into health maintenance and care for the postmenopausal years (Harvard Watch, 1997).

The 1994 National Survey of Women's Health Centers defined five types of women's centers operating nationwide. Primary care centers accounted for 12% of all centers, 71% were reproductive health centers, 4% birth or childbearing centers, 6% breast care centers, and 6% were "other" types of primarily hospital-owned or

operated centers providing education and referral services, inpatient pavilions, or specialty outpatient services such as breast and bone imaging. These facilities in 1993 served an estimated 14.5 million women or 14 percent of the female population over the age of 15. Primary care centers and reproductive health centers report 7.8 million of these women relied on these facilities as their regular source of healthcare. Reproductive health centers are the original model for the women's health concept with 54 percent of the existing facilities being founded prior to 1974 and 14 percent after 1985.

As the millennium commences, new directions in women's healthcare are challenging the medical and design communities. The Census Bureau estimates that the Baby Boom population in 2011 will begin to hit the age of 65. As a result, the elderly population will grow at a rapid pace and the majority of the population will be women. This influx of women will demand quality healthcare and healthcare environments.

### Research on Women's Health

The research objective for the AIA/AHA Fellowship in Health Facility Planning and Design was to explore a lifetime of healthcare for women and the role architecture plays in creating positive healing environments.

The focal point of healthcare marketing in the twenty-first century will be the human experience. Advertising multidimensional care or technologically advanced equipment may not be enough to attract in new patients, nurses, doctors, support staff, and visitors who could spend part of their lives within a facility. A comfortable, secure, user-friendly environment will also be required. In order to achieve the human experience through design, healthcare administrators must first envision the image

they want associated with their medical care. This image must define a series of goals that can be marketable both now and in the future, yet, maintain a human quality. Architects will need to provide a competitive edge for their clients through implementation of supportive design elements to define the desired image and integrate the human experience within the layout of the healthcare facility.

### Supportive Design Model

Supportive design encompasses three main essentials within its definition; physical components, social components, and symbolic components. Each of these three components embodies elements that connect with the physical, emotional, and spiritual psyches of patients, nurses, doctors, support staff, and others who will spend time within the health environment.

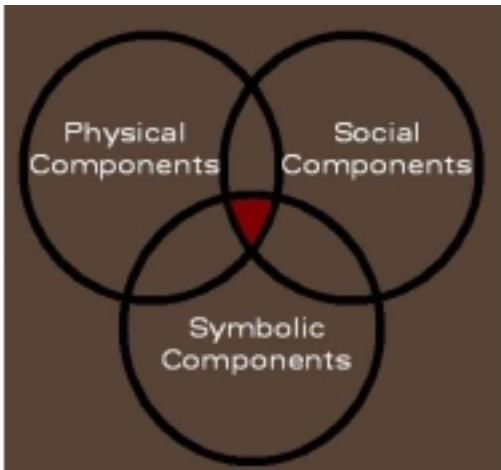


Diagram of Supportive Design Model  
Author

Humanistic elements should be an integral part of the design process in women's healthcare institutions. These elements create an atmosphere where patients and staff feel comfortable, secure, and confident. An important consideration in creating a humanistic healthcare environment is the growing multicultural population in the United States. Customs and beliefs can have a direct effect on the

attainment of medical care for the women in cultural societies. Healthcare institutions must accommodate the cultural customs and beliefs of their population through facility design and medical treatment.

### Design Guidelines

The design guidelines for Breast Care Centers were developed to illustrate the integration of humanistic elements in the healthcare design process. They are organized under six different categories; nature, color, lighting, privacy, relationships, and the patients control of her environment. The guidelines include suggested layout options in each category for facilitating the physical, social, and cultural components of the supportive design model. These guidelines are based on data gathered from a review of scientific studies, interviews with healthcare professionals, architects, and women.

Breast cancer is the most commonly occurring female cancer. In 1994, an estimated 1.5 million biopsies were performed with 182,000 of these women being diagnosed with invasive breast cancer and 25,000 in situ breast cancer. Judy C. Kneece in the article, "A comprehensive center for the diagnosis and treatment of breast cancer", states that "Breast cancer requires the most diagnostic x-rays, the most diagnostic biopsies, the most chemotherapy treatments, the most radiation therapy treatments, and the most hormonal therapies of any cancer. It also requires the most physician visits. Obviously breast cancer is a large revenue generating disease (<http://www.cancerhelp.com/ed/support.html>).

In the last decade, breast care has undergone radical changes and advances in the areas of diagnosis, surgery, and treatment. With the creation of new diagnostic, surgical or treatment equipment, special attention needs to be given to the psychological and emotional issues of the

female patient, as well as, the physical layout of the various procedure rooms.

### Nature



#### Sketch of a Mammography Room

Soft color scheme, warm materials, and dim lighting are important factors in these room types. Artwork of nature scenes should be placed in direct view of women undergoing an imaging procedure. (Author).

- Plants and flowers in the interior of the building must be as real as those on the outside (van Dijk, Pace, Westlake, & Partners, 1995).
- Views should be provided to landscape architecture for therapeutic effects of nature (Burnett, 1997).
- Play music that has 60 beats per minute, the same as the human heart rate (Stichler, 1998).
- Artwork of nature scenes should be placed in direct view of women undergoing an imaging procedure (author).
- Artwork should not contain bright or over-stimulating colors (author).

### Color



#### Sketch of a toilet room.

Sketch of a toilet room illustrating design guidelines that could be applied in a Medical Office Building. The concentration should be on materials, lighting, and color scheme. (Author).

- Soft colors are less stimulating than bright, saturated colors (Kleenman, 1981).
- A soft color palette with minimal pattern should be used to promote a relaxing atmosphere (Stichler, 1998).
- Skillful use of color and texture in selected finishes, artwork and accessories should be applied throughout imaging and support spaces to relax patients (Malkin, 1992).
- Absence of color (white) can cause stress (Stichler, 1998).
- Wall coverings, chair rails, wainscots, moldings, etc. can help calm with the familiar, by creating the sense of a “non-sterile” environment (author).

## Lighting

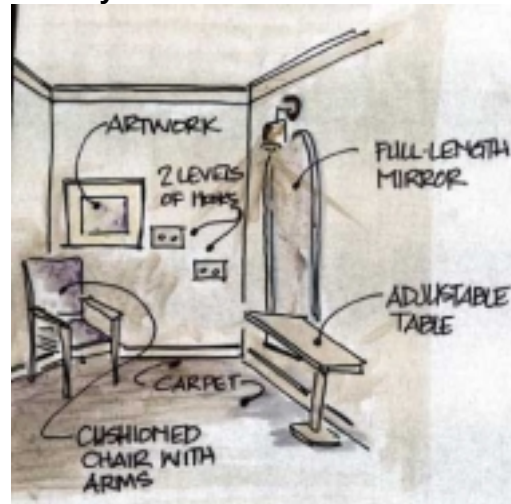


### Sketch of Waiting Area

An example of how natural lighting can create a more humanistic environment within a waiting area. (Author)

- Natural lighting should be available to create a welcoming atmosphere (van Dijk, Pace, Westlake, & Partners, 1995).
- A dimmer lighting system should be installed in all women's imaging rooms (author).
- Indirect perimeter lighting systems create a pleasant ambience for the patient in imaging rooms (Malkin, 1992).

## Privacy



### Sketch of a Dressing Room

The sketch illustrates a combination of design guidelines important within the layout of a woman's imaging center dressing room. (Author).

- Use comfortable seating, a magazine rack, a place to hang or secure clothes, and attractive finishes on the floor and wall in changing rooms (Malkin, 1992).
- Carpeting the changing rooms tends to be warmer for patients who have taken off their shoes (Carpman & Grant, 1993).
- Provide a mirror that can be seen by short, tall, and wheelchair persons (Carpman & Grant, 1993).
- Provide a shelf to place a make-up bag underneath or near the mirror for women to freshen up after the exam or procedure (author).
- Provide comfortable chairs and a small stool, bench, or other piece of furniture that will help those who may have difficulty bending over to tie their shoes (Lindheim, 1971; Burgun, 1976).



## Relationships



### Sketch of a Large Multipurpose/Conference Room

Concentration on outdoor/ indoor lighting systems, soft color scheme, materials, and access nature.

- Provide inviting waiting rooms with areas supplied with juices, coffee, magazines, and phones in a sophisticated, comfortable and warm décor (Pinkerton, 1996).
  - Seating arrangements in waiting areas should have options for more private seating (sociofrugal), more social seating (sociopetal), and for children (Shepley, Fournier, & McDougal, 1998).
  - If the women's center is to welcome children, set a special play space aside for them in the waiting and resource center areas (Hardigan, 1993).
  - Concentrate on details such as the doors at the main entry, resource center, child's play, etc. (author).
  - Personalize patient toilets and changing rooms with toiletries, baskets, fragrances, and fixtures (author).
- Works of art should reflect the cultures represented in the population the facility services (author).

## Control



### Sketch of a Resource Center

Resource centers could include computer work stations, worktables and a children's play area for use by women and their families. (Author).

- Breast cancer is a frightening and very emotional disease for women. To avoid a clinical looking setting, use therapeutic color schemes, furniture, artwork, and other décor to reduce the stress (Stichler, 1998).
- Include a learning resource library where videotapes, books, articles, and reference materials are available for use by the patient (Hardigan, 1993).
- A large multipurpose room should be provided for seminars and group sessions (Hardigan, 1993).

## Conclusion

With the growth of technology and expanding medical, environmental, and psychological research, the quality of health-care settings will be as important to patients in the 21st century as was the

experience and reputation of their physicians in the 20th century.

Women's health-care architecture is not just about the number of specific room types, spatial dimensions, or material selection prescribed by building and life-safety codes. It is about promotion of wellness throughout all the cycles of a woman's life. For instance, environments that support adolescent females when they visit their physicians might encourage them to establish healthy lifestyle habits based on educated decisions. This kind of learned behavior will be especially important in the future, as researchers believe that a baby girl born today is expected to be active and vigorous well into her 80s and beyond (Kantrowitz, 1999). With the predicted substantial growth of the over-65 population, the overall health of older citizens must be one of the top priorities of the twenty-first century.

Services for older women, wellness, and disease prevention will be the important research and design issues for the new millennium. The development of birthing centers and maternity hospitals containing labor-delivery-recovery rooms has drastically improved the birthing experience for women and their families; the leap now must be to improve the overall health-care environment for older women. Designers and health-care professionals working together, can create quality environments that are both cost-efficient and beneficial to the health and wellbeing of women.

Concentration specifically on services for older women, wellness, and prevention will be the important research and design issues for the new millennium. The development of birthing centers and maternity hospitals containing LDRs and LDRPs has drastically improved the birthing experience for women and their families. The leap now must be made to improve the overall quality environment for older women and their life-changing needs. With designers and healthcare professionals working together, quality environments can

be achieved that are both cost efficient and beneficial to the health and well-being of women.

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