



Article III: Antepartum Spaces

Design considerations to address the unique needs of expectant mothers

Introduction

The antepartum unit is the area of a hospital in which expectant mothers are admitted for the monitoring and/or treatment of pregnancy complications or high-risk conditions. There are many factors that make the antepartum area unique. This space (which may flex with postpartum space) is strategically located adjacent to the labor and delivery unit in order to facilitate quick and seamless transfers in the event of imminent labor or an emergency Cesarean (C) section. Activities for patients in the antepartum unit are quite different from those in other obstetrical units. Unlike the rigorous sequence of events experienced by patients in labor, or the recovery and simultaneous introduction to motherhood experienced by postpartum patients, antepartum patients have a subdued stay, in which activities are often restricted. The unique conditions, restrictions and emotions experienced by these patients should be carefully considered by designers creating environments in which these patients receive care.

ANTEPARTUM PATIENT CARE

The antepartum unit normally houses women greater than 20 weeks and less than 37 weeks pregnant (McFarling, 2010). This area is generally grouped with other obstetrical services within a hospital or medical center. Obstetricians and other specialists, such as perinatologists, admit patients to this department. Some

Learning Objectives:

After reviewing this lesson, readers should be able to:

1. Identify the physical relationship/adjacency of antepartum units to other obstetrical units.
2. Identify the patient-specific concerns that should influence design decisions.
3. List design strategies for engaging patients with activity restrictions, such as bed rest.
4. Discuss design solutions to promote minimally interrupted sleep cycles for antepartum patients.

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of the more common reasons that women are admitted to the antepartum unit include “premature rupture of membranes, premature labor, pre-eclampsia, placenta previa, very high blood pressure and protein in the urine (Curtis & Schuler, 2008, p. 427).” In addition, many women are treated and observed for cervical shortening, hyperemesis (problems keeping down nutrients), abnormal bleeding, multiple gestations, diabetes or to monitor fetal heart rate and uterine contractions. The average antepartum stay is one to two weeks, although some patients have remained in the antepartum unit as long as twelve weeks (McFarling).

Caregiver’s goals

In many cases, the goal of the admitting physician is to prolong pregnancy, allowing more fetal development and/or to monitor the health of the mother and the baby in utero during the pregnancy. For various reasons, such as those previously listed, physicians are concerned about the development and the safety of the unborn child, monitoring heart rates and checking his position by ultrasound imaging. They are also concerned about the effect that the pregnancy has on the mother. Conditions that may develop during pregnancy, such as gestational diabetes, hypertension and hyperemesis, not only cause concern for the

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Patient-Centered Design is a principle that should be in the forefront of any health facility project. It is a philosophy by which building owners and their design teams create and develop spaces to be used by patients. This principle takes into account the needs of patients and their families, and methods for delivering the best care to them.

Often, designers find themselves working with limited information about patients. This series will offer new lessons regularly that explain the commonly overlooked details of seeking medical treatment and how these factors may be influenced by the built environment. Written by designers and for designers, the lessons include valuable input from interviews with patients and clinicians. For more information, please visit www.patientcentereddesign.org



child; but, they can also threaten the wellness of the mother. In these cases, it may be more beneficial for the mother’s health to induce labor, ending the pregnancy; however, this must be carefully weighed against the potential health concerns of a premature baby. Some of the common concerns for premature babies are breathing problems, inability to regulate temperature and feeding problems (McFarling). In addition, there may be other physical and developmental problems associated with preterm delivery. Although 90% of babies born at 28 weeks survive (March of Dimes, 2007), the neonatal intensive care unit (NICU) cannot perfectly recreate the intrauterine environment for the baby. Some common environmental concerns in a NICU include infection prevention, noise and lighting.

Other pregnancy complications, like a prematurely dilated cervix and the premature rupture of membranes, may limit a mother's ability to maintain the pregnancy to term and may require induced labor. Antepartum caregivers are essentially caring for at least two patients (mother and baby – or multiple babies), recognizing that the condition of one significantly affects the plan of care for all. As a result of these delicate circumstances, activity restrictions are often placed on antepartum patients. Many conditions are treated with bed rest. Some patients (such as one with a prematurely dilated cervix) are monitored in the hospital as opposed to at-home bed rest in order ensure that they are nearby obstetrical services in the event of imminent delivery (McFarling).

Fall prevention

As important as fall prevention is for the overall patient population, some would argue that it is even more important for antepartum patients, due to the delicate nature of their pregnancies and their restricted activity. The room should have a clearly defined path of circulation from anywhere that a patient might travel to the bed and the bathroom. Any railing added to assist patients should be carefully placed in areas where patients would feasibly move. Accommodations should be made for the neat arrangement of equipment and their cords to eliminate circulation obstacles and tripping hazards. Flooring material should also be selected to prevent slipping.

PATIENT CONCERNS

Patients may enter the antepartum unit with a host of concerns for the health of their babies as well as the ability to maintain pregnancy. This is sometimes the first inpatient experience for many patients, who were otherwise healthy before becoming pregnant. It is likely that patients admitted unexpectedly were forced to leave a long list of unfinished tasks behind. Most women admitted to the antepartum unit are in the third trimester of their pregnancies. This is the time when many women finalize preparations for the baby at home, such as

clothes, supplies and living accommodations. In addition, many women attempt to work as long as possible to allow more time for maternity leave from employment after the baby is born. Some women have other children at home that need care and guidance. Hospital stays may require their spouses to take time away from work earlier than anticipated to manage the care of the other children and to be available in the hospital to support them. With all of these concerns and subsequent feelings of guilt and inadequacy, these patients may cope with a number of stressors during antepartum care (Richter, Parkes, & Chaw-Kant, 2007, p. 315). In addition to the stressful factors mentioned, antepartum patients may also experience difficulty sleeping, limited family interaction, loss of control, restlessness, boredom and physical discomfort. The informed designer should be aware of the unique challenges faced by antepartum patients in order to develop creative solutions for facilitating a comfortable and successful hospital stay.

Sufficient Sleep

In an article published in *Medical News Today*, Jodi A. Mindell, Ph.D., of St. Joseph's University in Philadelphia, stressed the importance of a good night's sleep for pregnant women; however, they are likely to face a reduction in sleep time. According to the article, this is often attributed to frequent nighttime trips to the bathroom, difficulty finding a comfortable sleeping position, heartburn, back pain, leg cramping, restless

