BIRTH CENTER: a working method for designing a maternity health care facility

by

Gale Beth Goldberg

B.Sc., in Landscape Architecture, University of Wisconsin at Madison
1972

submitted in partial fulfillment of the requirements for the degree of Master of Architecture at the

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

June, 1979

Signature of Author ........................................

Department of Architecture
May 11, 1979

Certified by ..................................................

Christie Coffin, Thesis Supervisor Visiting Assistant Professor of Architecture

Accepted by ..............................................

Imre Halasz, Chairman
Departmental Committee for Graduate Students

© Copyright 1979, Gale Beth Goldberg

AUG 14 1979
LIBRARIES
ABSTRACT

BIRTH CENTER: A working method for designing a maternity health care facility

Gale Beth Goldberg

Submitted to the Department of Architecture on May 11, 1979, in partial fulfillment of the requirements for the degree of Master of Architecture.

This thesis explores a variety of birth environments. It examines the birth place in both a historical and cross-cultural context. In different cultures people have sacred birth rites, rituals, customs, and ceremonies. In different parts of the world, midwives, doctors, and medical and non-medical personnel practice in hospitals, in homes, and a variety of other milieux. In America, the birth center is a safe, childbirth alternative to hospital and home.

The design of a birth center depends on many factors: how it works, where to have one, who staffs the facility, who comes here, what happens here, and what makes it a special place. A working method for designing a birth center considers these functional aspects of a birth center, the architectural program issues, and a range of architectural place-making intentions.

This collection of information about childbirth and birth places is intended to be a useful resource to anyone interested in designing a maternity health care facility using architectural expressions in imaginative ways.

Thesis Supervisor: Christie Coffin

Title: Visiting Assistant Professor of Architecture
ACKNOWLEDGMENTS

I am very grateful to the many people who were helpful and supportive in this thesis project:

To Christie Coffin, my thesis advisor, for sharing so many interesting and thoughtful ideas, and for her constant encouragement and enthusiasm.

To Ed Allen, a very special person, who has influenced my thinking in many wonderful ways throughout my education at M.I.T.

To other members of the M.I.T. family who so willingly gave me their help and insights: Paul Johnson, Darleen Powers, Robert Hughes, Lynn Converse, and Shun Kanda.

To my editor, Jessica Lipnack, who contributed much clear and concerned thinking.

To my composers, Lynn Schwartz and Barbara Scholl, without whose labor and patience this thesis would be considerably less than it is.

To my parents, Mike and Ethel Goldberg, and my brother, Larry, for their generous support in so many loving ways.

And to Shelly Davis, Joan Zimmerman, Dr. Shelley Kolton, Leslie Weisman, Helena McDonough, whose valuable contributions have encouraged me throughout.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>2</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>3</td>
</tr>
<tr>
<td>FOREWORD</td>
<td>5</td>
</tr>
<tr>
<td>PAST TRENDS AND PRESENT CHANGES</td>
<td>8</td>
</tr>
<tr>
<td>WHAT IS A BIRTH CENTER</td>
<td>19</td>
</tr>
<tr>
<td>A WORKING METHOD FOR DESIGNING A BIRTH CENTER</td>
<td>30</td>
</tr>
<tr>
<td>OTHER ISSUES FOR EXPLORATION</td>
<td>79</td>
</tr>
<tr>
<td>ILLUSTRATIONS</td>
<td>86</td>
</tr>
<tr>
<td>FOOTNOTES</td>
<td>87</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>89</td>
</tr>
<tr>
<td>APPENDICES</td>
<td></td>
</tr>
<tr>
<td>A: McTammany Associated Nurse-Midwifery Center, Reading, Pennsylvania</td>
<td></td>
</tr>
<tr>
<td>B: Birth Center Lucinia, Cottage Grove, Oregon</td>
<td></td>
</tr>
<tr>
<td>C: Birth Center Architecture Design Studio, University of Oregon,</td>
<td></td>
</tr>
<tr>
<td>Christie Coffin, Instructor</td>
<td></td>
</tr>
<tr>
<td>D: Chatham Family Birth Center, Chatham, North Carolina</td>
<td></td>
</tr>
<tr>
<td>E: Scheme for an In-Hospital Delivery Unit</td>
<td></td>
</tr>
<tr>
<td>F: Maternity Center Association, NYC: Conditions Precluding Management at Childbearing Center</td>
<td></td>
</tr>
<tr>
<td>G: Mt. Zion Hospital and Medical Center, San Francisco, California: Alternative Birth Center Policies and Procedures</td>
<td>4</td>
</tr>
</tbody>
</table>
"In the beginning..."
- The Bible

Giving birth is the most primitive and basic function of the origin of a new being. In the human species, the act of giving birth has very real and intense physical feelings intimately connected with many emotions.

The appearance of life is a central mystery of the universe. Throughout history, much magic and religion, some philosophy and speculation, have all been connected with birth. Family and community rituals find expression in ceremony and celebration. Because the psychosomatic aspects of pain flourish with fatigue, loneliness, fear, tension and body dysfunction,¹ it suggests that special qualities are needed for a supportive birth environment. The place where borning (birthing) occurs should be especially pleasant and relaxing, be familiar, and not be
frightful or alien. This 'healthy' environment depends as much upon the people as the place. Scientific studies reveal the sensitivity of the mammalian female to her environment and of the importance of the surroundings in childbirth.²

This thesis began with an interest in where and how and under what circumstances childbirth takes place. I became intrigued with the idea of a birth center as another choice for the childbearing populace. The concept of giving birth in a special place is an ancient and cultural practice. Peoples of the world prepare important places for their births. They may set aside a birth hut, as in the primitive culture of the New Guinea Arapesh, where the laboring woman goes and stays a few days, or for as long as it takes her to feel strong enough to leave. The father in the Arapesh culture has his own birth hut for this time period as well.³

The present-day American concept of birth center has its roots in wanting to enrich the cultural significance to the people who have the most care, love, affection for their children: the family. This social aspect of childbirth is interconnected with the physical place of childbirth. Jessica Lipnack, mother and author of a New Age magazine article entitled "...Birth," has said that the symbolic importance of the birth-place has diminished as cultures have evolved. Childbirth then became more decentralized and moved back into the home. Families created their own rituals. Once the place of hospitals became rooted in society, the location for childbirth returned to a distinct place of operation. The families were left at home. They instead bought into the notion of a safe, hospital birth, and were left out of the process. Only in recent years have some hospital policies been forced to change due to consumer pressure. Women and men have only recently raised serious objections to the "centralized, institutionalized, routinized childbirth (which has) become the norm... Birth has come to be seen as a (set of) risky, pathological procedure(s)."⁴ This is part of a process of professionalizing health and social services which is a larger trend in society.
Another response to consumer demand has been "alternative" birth centers. They have responded as free-standing, out-of-hospital birth places. They are found in both urban and rural situations.

But why would someone choose a birth center instead of a hospital or their own home for their birth experience? What is it about this place that would attract people to it? What qualities of size -- related to people, sense of place, efficiency of operation, economic trade-offs -- do you want in a birth center? Which hospital rituals should be absent? Which administrative, medical, and personnel policies need to be built into a birth center? What type of relationship will the birth center have to everyday life?

This collection of background information and current attitudes and ideas about childbirth and the birth place offers no firm solutions and leaves much to be explored, questioned, and answered. I can only hope that it will be a beginning...
"...sacredness is a way to communicate the extreme importance of a symbol to the society. When a symbol represents something considered essential to human experience, its preservation is of paramount importance. By deeming it sacred, a symbol becomes inviolable, insuring its survival through time."

- Lisa Heschong, "Thermal Delight in Architecture"

It is important to place the present-day concept of a birth center in its historical and cross-cultural context. Ancient childbirth practices in primitive societies centered around the family and other women healers in the community: witches, midwives (literally translated as 'with-women'), mothers, aunts, and grandmothers. Birth in this setting was very much a matter for magic, religious ceremony, rites and ritual. There was, and is, often a special birth hut or tent where the mother in labor would come to have her child. The women attendants would be present throughout all stages of labor and delivery to give the mother constant support and educated encouragement. The local village community took care of the birth process in very human terms by helping natural childbirth along, not only with their wisdom and constant emotional support, but also in creating a calm, secure, and trusting atmosphere, in a clean, comfortable and prepared environment.
Always there have been certain spiritual and religious traditions and ceremonies intimately associated with the experience of childbirth: the baptismal blessing of the newborn by water, the ritualistic bonding of a baby to his or her parents, the naming of the child, and the joyful birth-day celebration with special foods and drinks and people gathered together in a special place.

This protected environment must be made to include appropriate light, sounds, smells, ventilation, and thermal comfort to complement the sense of place and ritual. "Perhaps the provision of thermal comfort, and delight, is a way to emphasize the importance of the place for people...thermal qualities and others enrich one's experience of the place, thus increasing its value." ⁵

In the Islamic culture, the symbolic hearth-fire is rekindled on the special occasion of the birth of the new member of the household. ⁶ This domestic ceremony is very much a symbol of life, cycles, and rebirth. The fire is warmth and light, it consumes and leaves remains, it grows, it sparks magically,
until it is used up and exhausted. The flame goes out. The last coal turns cold.

Warmth is an essential thermal quality of comfort for childbirth. The Finnish culture placed great importance on the sauna, both in their routine life, and during the festivals of the Finns. The historian, Viherjuuri, tells about the sauna:

...that reference to the sauna is found in ancient folklore (and this) proves that it was generally known before the beginning of modern times...they went to the sauna every day to cleanse themselves; there they prepared for great festivals, and there they bathed for wedding ceremonies...many a child was born in the sauna, and many an old man and woman carried there to die.

While many of the old customs are no longer observed, the Finns continue to regard the sauna with a "certain reverence, a reflection of the ancient traditions."  

From Australia to China, from Africa to South America, women of different cultures have chosen a special place and a special
position for birth. A supportive environment will allow the mother to assume a position of comfort for her birth. Women in various cultures ritually gave birth in a squatting position, on the ground (humi positio). In a more remote past of the Greeks and Romans, certain birth goddess statues of Eileithia, Damia and Auxeia represented them on their knees in the position of a woman giving birth on the ground. In popular Egyptian texts of the time, the expression "to sit on the ground" meant to give birth.

In another culture on Fiji Island in the South Pacific, there is a modern version of earlier village customs. A collection of birthing rooms are arranged near the hospital and are connected with an open veranda. Each room contains the essential enclosures and openings, and all other things needed for the birth are brought here. The mother-to-be is responsible for getting other birth attendants together: a midwife, and other helpers and friends and family. They bring in the food, the clean linens, the warm blankets, and whatever else is necessary.
Once the child is born, rituals are performed and everyone joins the celebration.\textsuperscript{12}

In Mexico, too, birth is very much considered a pleasant social affair. "Pediatrician T. Berry Brazelton tells of witnessing a young girl's first delivery in Mexico along with some twenty or thirty of her family and friends. This concerned, involved group, which included the babies and children of the family, made up a moral support section for the young mother-to-be. They cheered her on through the entire labor and birth."\textsuperscript{13}

Worldwide childbirth practices have focused on the family and the immediate community. These are the people who will love and care for the child, and therefore it makes sense that they should be included in welcoming his or her arrival. The childbirth gestalt is at once very physical and very social.

In colonial America, childbirth was very much like it was in England at the same time. Midwives attended births at home. A network of experienced women provided a needed social structure around the birth.

The family prepared for the birth by purchasing childbed linen, if they could afford it. This was a layette, often so valuable that women bequeathed it...and it was used for successive births within the same family. In early colonial days the birth took place in the borning room, which was often a small room behind the central chimney, partitioned off from the living areas and shielded from drafts. In larger homes the master bedroom served this purpose. The borning room was also where the mother and child stayed during the lying-in period, away from the household bustle.

Colonial women probably labored in the most comfortable posture and place. For some, this perhaps was their beds. For others, the midwife brought along a collapsible "birth stool." This chair, used since medieval times, was designed to support the laboring woman's back, while at the same time, capitalizing on the force of gravity to assist in the birth. Another feature of the birth stool was that it had a cut-out seat designed for the midwife's access to the
birth canal. The midwife would assume a kneeling position to receive the baby from below. The mother wore long skirts that not only protected her modesty, but also kept her warm. As late as 1799, an adjustable version of the birth chair, the "portable ladies' solace" was used in Philadelphia.15

Some women preferred to use other people for physical support of their back and legs during the labor process. In the late 1880's on the frontier of the Midwest, there is mention of a husband substituting for the birth stool as he held the laboring mother on his lap. She sat there, and he pressed on her abdomen to ease the labor.16

Another culture rooted in the frontier plains of America, the Native American Indians, also selected a protected spot in the woods or a shelter for their births. A newborn Indian child is named after the first thing her parents see after looking up from the baby's delivery (hence, the names Running Bear, Swift Fox, Sparkling Brook).
In the more remote and rural parts of the nation, there was much need for adequate maternity health care. Where people could not pay for doctors and government funds were inadequate to do so, nurse-midwifery provided a much-needed and respected service in American medical care. Nurse-midwives emerged from the tradition of professional nursing rather than from the tradition of independent midwifery. One organization that sought to provide needed maternity care was founded in 1918 in New York City. The Maternity Center Association (MCA) provided prenatal care in poor, urban neighborhoods as well as in some poor rural communities in their outreach project. The MCA also brought knowledge and wisdom to uneducated mothers. Today, the MCA continues to train qualified public health nurses in midwifery. Since 1975, the MCA has been operating a childbearing center in their converted townhouse on the Upper East Side of New York.

Midwives practiced freely in American households until the nineteenth century. In 1925, Mary Breckinridge founded the Frontier Nursing Service.
Nursing Service (FNS) in Leslie County, Kentucky. She returned to her home state of Kentucky after having studied midwifery in London at the British Hospital for Mothers and Babies. She deliberately chose to work in this remote area of Appalachia, accessible only by horseback, where no trained doctors or midwives practiced. She wanted to provide help to mothers who had the most needs and the least care. Breckinridge trained her own nurse-midwives. In the ensuing years, the Frontier Nursing Service had community support to help build its headquarters, its hospital, and six outpost clinics up in the Kentucky hills. Ideationally, Breckinridge envisioned the FNS as part of a network of philanthropic services throughout remote areas. This did not develop because new roads and highways made it possible to gain access to centralized hospitals. Currently, FNS uses centralized hospitals for delivery of babies although the nurse-midwives still retain control over normal births. 18

By the end of the second decade of the twentieth century, a radical change had occurred: American medical colleges were
training young men to be obstetricians. This resulted in a movement against midwives practicing "legally" in the homes of women across the nation. When laboring women were moved into the new, male-conceived idea of hospitals (centralization of health care where women came to the place of the doctors), there came along other medicalized drugs, equipment, and routines of institutional flavor.

In contrast, for many years in Scandinavia, the United Kingdom, Germany, and the Netherlands, professional midwives have handled the majority of normal births. In Holland, greater than 70 percent of mothers have had their babies at home with midwives, while in England, most midwives now practice in hospitals. For the women choosing home birth in England, an excellent backup service is available at all times through the famed Flying Squads. They are specially equipped birth ambulances, including a doctor, so that the Flying Squad is essentially a mobile operating room for birth emergencies.

Since the American movement into hospitals for the labor and delivery of babies, there has been a lack of continuity and humanness in the experience of childbirth. Under the hierarchical rule of hospital procedures, women have been denied control over their own experiences. They have become alienated from their bodies, and thus from themselves. Many women in the United States who became mothers after World War II do not remember their birth experiences; how could, they when they were given drugs in early labor and woke up after the baby was born? Women became passive in this institutional atmosphere advertised as "safe, fast, easy, efficient, and scientific." Here, all too often, the pregnant woman has found herself in the midst of an unfamiliar and strange world. The life-saving knowledge of medical personnel is legitimately respected and essential to complications in birth (Caesarean, for example). Fortunately, there are women who have had good childbirth experiences in a hospital setting. They have had wonderfully personal and attentive care and treatment by the hospital staff, almost in spite of the physical place itself! The medical workers
who focus on individual patients and their specific needs, overcome the less positive aspects of the surrounding, neutral environment. What is objectionable about hospitals is that for generations, birthing women in America have been, at times, deceived and awed by the power of obstetrical science especially when its intentions are to "correct nature according to human design."
WHAT IS A BIRTH CENTER

"When people are moving so often and selecting their homes with so little relation to other people, it seems important to build new institutions in which women who are having babies at about the same time may keep in touch with each other and with the newest precepts from the clinic and consulting room. Where such a group is composed of relatives, old friends, or neighbors who know each other well, it resembles the reassuring circle that characterized primitive and village life."

- Margaret Mead quoted in Pregnancy, Birth, and the Newborn Baby

One only has to trace woman's changing role in American society to see the parallels in the women's movement and the health care movement. Colonial women were at home most of the time, and their borning rooms became the place to have babies. The family and other experienced women (midwives, mothers, aunts, grandmothers) were present in the home during birth. Up until the early 1900's, the birth was centered in the domestic household, and most of the traditional rituals and rites associated with birth (baptism, naming, and celebrating) all happened here. When the doctors grouped together with other support people, medical and non-medical, into a fully-equipped hospital, the pregnant mother of the early part of the twentieth century came to the doctors' place of business to give birth. Here, for some fifty or more years, women most frequently gave birth alone. During the laboring hours, fathers sat in the waiting room or paced the long corridors in anticipation.
Other siblings were absent. Baptism moved into the Church. "Baby-boy Johnson" was announced to the world as "Paul Brian Johnson, III" via the mail or by phone. If you wanted your child circumcised, you returned to the hospital or visited a doctor's office for this procedure. Medical practices in the hospital also fostered such routine, across-the-board procedures as general anesthesia, episiotomies, or separation of mother and child immediately following birth.

When parents began to challenge these practices, they sought to take back control of their childbirth experience. And if a family wanted to have the father present and hospital policy said no fathers in the delivery room, they were going to have their babies elsewhere. By about the late 1960's, home birth regained popularity. Once again, the family could decide who they wanted present at the birth: father, siblings, aunts, uncles, grandparents, a midwife and/or doctor. Because home was a familiar place with a congenial atmosphere, was a place where interpersonal sharing and celebration often occurred, and was a main focus for family --

parents opted for birth at home. Women choosing homebirths were satisfied with not having the ominous emergency equipment of hospitals present in their homes.

Some women are most uncomfortable with the idea of a homebirth and do not feel it is right for them. They have been socialized to think of medical practitioners as people whom you can trust to deliver good health care. This belief along with other justifiable needs and desires, will make some mothers insist on having their babies in hospitals.

Hospitals have been the birthplace of iatrogenesis: complications that are introduced by medical procedures.22 There are some instances where women have been used as guinea pigs in the testing ground of obstetrical medicine in hospitals. The cascade of interventions, not only in the use of drugs, but also in high-tech equipment of fetal monitors and the like, has made for unpleasantness and potentially harmful situations in hospital obstetrical wards. Birth in the hospital is treated like surgery, and delivery like an operation.
Here, the eight-hour staff shifts account for the lack of continuity of care.

Until recently, the mother giving birth in a hospital would find herself lying flat on her back on a delivery table that was equipped with stirrups and straps for her legs and arms. This dorsal position (also known as the "lithotomy" position), while making it easier for the doctor to sit on a low stool at the end of the table and monitor the mother's and baby's progress and to assist in the delivery, did not facilitate the mother's labor. This practice is symbolic of hospital thinking where problems are solved on the basis of the doctor's convenience.

The "lithotomy" position (developed first for the removal of bladder stones) for giving birth became popularized by Louis XIV. He desired to watch, hidden behind a curtain, as his mistresses gave birth. The lithotomy posture has been criticized by Dr. Roberto Caldeyro-Barcia, president of the International Foundation of Obstetricians and Gynecologists. He has written that the "only position that could be worse for a woman in labor would be to hang by her feet."23
The hospital environment can work against the essence of "natural" childbirth. A newborn baby enters into a temperature-controlled, sterile environment that is in direct contrast to the mother's womb from which he or she has exited. Frederick Leboyer, noted for his poetic and moving book, Birth Without Violence, recommends that a delivery room environment should simulate the womb: warm and dark. The baby should be placed into a warm bath whose temperature is akin to that of its mother's womb. However, for the first time, Leboyer is advocating this procedure for the baby's comfort. He gives no consideration to the father or mother in their participatory roles in childbirth.\(^\text{24}\)

On the other hand, childbirth expert Grantly Dick-Read, in his book Childbirth Without Fear, first published in the United States in 1944, advocates the importance of the father being in constant attendance during the birth. He recognized, through observance of a poor, London woman giving birth without pain, that when fear is absent, associated tensions of resistance will be minimized and
the baby will be born with more ease and comfort.

By the 1960's, health care consciousness was being raised with the help of the women's movement. American women were beginning to examine both the theory and practice of hospital birth. They questioned the medical community's insistence that women should give birth in the doctor's institution.

Hospital birth became a regime against which many women began a critical struggle, questioning the need for such extensive manipulation, questioning the safety of the procedures, and demanding that birth be an experience that permitted them a sense of self-fulfillment.

The costs of a typical hospital maternity stay of four days were already high, in a $500 to $700 range, and steadily rising. Today, an average maternity stay costs twice, even three times as much. Soon, all medical insurance policies will cover the cost of childbirth in third-party payments. No longer is the Colonial woman reaching into her apron to pay the local midwife for her services. (Might the anonymity of payment be associated with the anonymity of service?)
Recent innovations in current American birthing practice have come about through consumer demand for change. Women and men are exposing and effecting some measure of change in the way birthing facilities operate and how associated medical care is delivered. In the past few years, hospitals have responded to this consumer pressure by instituting "alternative birthing centers" which are little more than cosmetic solutions for a home-like environment in the hospital. Although, in concept, the mother is able to labor and deliver and recover in this room, the "birth room" is but a delivery room in disguise, with the emergency equipment hidden away out of sight. Regulations often require a laboring woman to move out of this room if she has been given any type of birth-augmentation. It can be argued that all hospital rooms should be like birth rooms; but pretty curtains, colored walls and pictures, throw rugs, and easy chairs alone do not make a good birth experience! Along with changing the immediate environment, change must be evident in the policies and procedures of the hospital administration and staff.

Estimated Percentages of Births Taking Place in Hospitals, 1930-1970

A growing number of women advocate the return to home birth, which offers families an alternative to a hospital birth. The choice of labor/delivery/recovery at home (with a midwife and others) is desirable for a number of reasons: there is familiarity of place, the family has control over who is present, and the cost is considerably less than a hospital birth.

Home birth has largely been the only choice available to poor women. The Amish and Christian Scientists, among others, who are non-believers of medicine, have opted for birth in the home. But for the indigenous population of mothers who do not feel secure in having their births at home, or who cannot find qualified attendants to assist at a home birth, what other alternatives to home or hospital do they have?

By the early 1970's, the notion of an independent birth center serving a wide range of economic classes of the populace was well underway. From Oregon and California, from Pennsylvania to New York, and places in between, birth centers were becoming a viable alternative for American mothers. Families were now able to seek out these community-service centers which provide the best of two worlds--the safety of the hospital, and the atmosphere of the home.

The alternative of a birth center was introduced as a type of "Maternity Hotel" by Lester Hazell in her book *Commonsense Childbirth*. These places would serve only as a maternity center. Marion Sousa gives a good description of the motel in her book *Childbirth at Home*:

A woman who visited the Maternity Motel would see one team of midwives, nurses, doctors, physiotherapists and mother's helpers. The team would get to know not only the expectant mother, but also her husband and children. The Maternity Motel's baby-sitting nursery would also care for her children during check-ups and later, when she went into labor.
When the mother checked into the Maternity Motel to have her baby, her husband could come right along with her and stay in her room. During early labor, the couple could order from the restaurant's menu or visit the cocktail lounge. Television lounges and game rooms would also help labor to pass quickly. When it was time for the baby to be born, the parents could return to their motel room, where the baby could be born in bed. If the delivery proceeded normally, it could be assisted by a nurse-midwife. After the birth, however, she would leave the family alone to enjoy the new baby together.

When the couple felt tired, the father could carry the baby down to the nursery for the night, so a nurse could watch him (or her). During the day, baby would return to the parents’ room; older brothers and sisters could visit him (or her) as much as they wished. Since the Maternity Motel functions like a luxury hotel, appointments with a masseuse and hairdresser could be scheduled when the mother (or partner) wants them. Because the Maternity Motel also provides the best obstetrical care, sessions with a physiotherapist would be scheduled so that the mother could get started on a postnatal exercise program.

The author of Commonsense Childbirth proposed this plan not just as a utopian pipe dream. As a cultural anthropologist, she studied childbirth customs all over the world. During her research, she collected the best features of many obstetrical hospitals from several countries. Then she incorporated these features into her description of the ideal Maternity Motel.

I can imagine a wonderful, charming, old Victorian style hotel being adapted for a maternity center similar to the one detailed above. I especially think the following features are worth reiterating:

- continuity of care
- child care provision
- concern for family-centered experience with immediate bonding after the baby's birth
- long-labor diversions
- separation of baby from parents only at night during which time, a nurse watches the baby
- sibling visitation
- the luxuries of an elegant hotel.

Although there isn't yet a Maternity Motel along every highway in America, there has been some progress in the realities of maternity centers:
From 1960 to 1970, the Catholic Maternity Institute in Sante Fe, New Mexico, operated a childbearing center called La Casita as an adjunct to its home birth service which had been operating for a quarter of a century. After ten years of operation, La Casita closed because of financial problems.

But it was only a short time before another center was opened. In 1972, Su Clinica Familia was opened near the Mexican border in Texas, providing a maternity center for the indigenous Chicana population. The center soon attracted the attention of white women in the vicinity who also use its services. In 1974, the Nachis Natural Childbirth Institute in Culver City, California, opened its doors and recently celebrated its 500th birth. In 1975, three more centers were opened, one in Oregon, one in New Mexico, and one in New York City. The greatly venerated Childbearing Center of Maternity Center Associates, an organization with 60 years experience in providing safe alternatives to childbearing women, is housed in a converted (turn-of-the century townhouse) brownstone on East 92nd Street in Manhattan and is the location of most of the significant data-gathering on the safety of out-of-hospital, non-physician-attended childbirth.

A few months ago (March 1979), I visited the Maternity Center Associates (MCA), and attended a parent orientation open-house session led by Betty Hosford, CNW (Certified Nurse-midwife). The MCA, located on the Upper East Side of New York, is 11 minutes away from its back-up hospital, Lenox Hill, where mothers and babies who need to be transferred are taken in emergencies. The MCA has been housed in this rowhouse since it founding in 1918. They renovated the "garden level," which is located one-half story below the street level, for their Childbearing Center.

At the garden level of the structure, there are two birthing rooms; one family room which can be converted into birthing rooms, if necessary; two exam rooms; two lavatories; one large dressing and two-person shower room that is equipped with safety hardware; a laboratory; centralized kitchen/supply/work area; clean and dirty storage areas; supply (dispensible and non-dispensible) storage; emergency equipment alcove; and a janitorial closet. The two birthing rooms (one is painted orange, and one is painted...
blue) each have a single bed with matching colored bedspreads, stainless steel countertops running all along two of the four walls of the room, a stainless steel sink, and a portable electric heater, which is used to raise the ambient room temperature immediately following the birth. The overhead lights are fluorescent. Floor lamps are used so the room can be darkened for the birth. There is one window that looks out into the well-tended garden area. Each room also has many storage cabinets, a lounge chair, and a throw rug on top of a linoleum floor. There is also an emergency exit at this level. The birth rooms must meet certain health regulations. Unfortunately, they are not as imaginatively designed as I had hoped. One-half level up from the street, the first floor of the building houses an administration/office area, a parlor: waiting and information area, a multipurpose room used for orientation classes and childcare, and one exam room with adjacent bath and dressing area. Betty Hosford, CNM, believes it would be better if there were one or two additional exam rooms. Climbing the elegant, curving staircase to the second floor, one has a visual connection to the parlor/waiting area. At this level are an elegant, large gathering space with a high-ceiling, floor-to-ceiling windows, wooden floor, and a fireplace, and a wood-paneled conference room located above the first floor classroom. The third floor has an extensive reference library and four administrative offices. On the fourth floor of the house, there are more offices for general MCA use. On the fifth floor is an apartment for the resident on-call, nurse-midwife. It is all very comfortable and spacious and designed to accommodate the parents' needs.

On of the objectives of MCA is to remove the medical mystique about childbirth and to help parents gain confidence about their medical and health needs. During pregnancy, clients are carefully screened for certain risk-factors which would not allow them to use the center for their birth experience. The center is for women who are expected to have 'normal' childbirth experiences. Women with complications are referred to an obstetrician who is affiliated with the MCA.
All births take place either in the birthing rooms or, in the case of simultaneous birth, in a convertible family room that can accommodate the birth. Attendants at the birth are decided upon according to the wants and desires of the family. There is a baby-sitter available for young siblings.

There is emergency equipment available: oxygen, blood volume expanders, intravenous equipment, emergency drugs, a portable stretcher, and an isolette (portable enclosed newborn environment) for emergency resuscitation and/or transferral of the newborn, if necessary.

The charges of the Childbearing Center for its services are $885.00, which include the cost of all laboratory tests routinely given to all mothers and two home visits by the Visiting Nurse Service, as well as professional services. The classes offered by the MCA include nutrition, exercise, early pregnancy changes, and self-care to assess pregnancy progress. The medical personnel include two pediatric consultants, three registered obstetricians/gynecologists, and four full-time, one part-time certified nurse-midwives. Since its opening, the Childbearing Center has averaged about 250 births annually, although they have the capacity to have up to 500 annual births. A strong social network has developed and parent groups meet together regularly. To get an idea of the screening procedures at the Childbearing Center, refer to Appendix F.
A WORKING METHOD FOR DESIGNING A BIRTH CENTER

The following collection of design information is intended for people who are not necessarily familiar with the process of architectural design. Any individual or group of people who is interested in developing a birth center could use the workbook and kit of parts to aid them in making spatial decisions for their ideal birth center. There are drawings, descriptions, and a sample model based on the architecture program which follows. The design activity outlined in the instructions will hopefully be both enjoyable and educational for all participants.

ARCHITECTURE PROGRAM FOR A BIRTH CENTER

(This program is based on an architectural design studio exercise given at the University of Oregon, Christie Coffin, professor.)

1. GENERAL REQUIREMENTS:

The birth center would be a community or neighborhood facility, perhaps attracting people from other nearby regions. The center should accommodate diversified lifestyles and birthing techniques. It should be approachable, welcoming, accommodating, comfortable, functional, secure but open, and fit well within the surrounding environment.

2. SPATIAL REQUIREMENTS:

a. CLINIC SPACES

| Reception/Waiting/Children's Play Area | 350 sq. ft. |
| Business Office | 180 sq. ft. |
| Staff Office | 325 sq. ft. |
| Director's Office | 120 sq. ft. |
| Workroom | 80 sq. ft. |
| Pharmacy | 40 sq. ft. |
| Exam Rooms (2-4) | each 100 sq. ft. |
| Consultation Rooms (1-2) | each 100 sq. ft. |
| Lavatories, as needed | each 55 sq. ft. |
| Lounge Area | 80 sq. ft. |
• Be sure to include necessary storage spaces for medical and office supplies, special equipment, and housekeeping materials.

• The staff office will be used by 2-4 nurse-midwives, a consulting obstetrician, a pediatrician, a nutritionist, a physical therapist, and other nurse aides. Not all of these people are at the center on a full-time basis and may share desk areas.

• All spaces should be barrier-free, accessible by handicapped persons.

b. EDUCATION SPACES

Classroom Area
Exercise Area

240 sq. ft.
240 sq. ft.

• These activities could take place in one large room.

• There should be adequate seating for 10-20 people.

• Local community groups may use this space for meetings.

• Storage areas should include places for chairs, table(s), exercise mats, audio-visual equipment and demonstration materials.

c. BIRTH SPACES

Birth Rooms (2-3)
Kitchen/Family Areas (2-3)
Resting Room (1-2)
Utility and Housekeeping
Emergency Equipment Storage
Baths (2-3)

each 240 sq. ft.
each 250 sq. ft.
each 100 sq. ft.
80 sq. ft.
100 sq. ft.
each 65 sq. ft.

• Provide storage for linens, towels, other materials.

• Don't forget outside access!

d. COMPUTING GROSS AREA (TOTAL BUILDING AREA)

1. Add together the NET areas for above.

2. For circulation and thickness of walls, add 25% - 50% of the computed NET area.

3. Add another 20% - 25% of the NET area for storage.

4. Add totals from Steps 1, 2, and 3, to get estimate of GROSS AREA.
3. FUNCTIONAL RELATIONSHIPS

- The CLINIC, EDUCATION, and BIRTH spaces will be used largely by the same staff.
- There should be privacy considerations given to the BIRTH spaces according to the desires of the family.
- The medical staff should be able to monitor activities in the BIRTH area with relative ease.
INTRODUCTION TO THE WORKBOOK

For purposes of this study, I have broken down the larger concept of a birth center into smaller pieces. This is an artificial division to aid in understanding the parts and the whole, and need not be visible in the actual building. There are three inter-connected Domains:

- **CLINIC**, including medical and administrative areas
- **EDUCATION**, including childbirth and exercise classroom areas, and space for community orientations, conferences, and outreach programs
- **BIRTH**, including birthing rooms and family areas

These domains are not necessarily spatially distinct. There are possibilities of one or more domains to overlap (CLINIC and EDUCATION, for example) and/or to interpenetrate each other (CLINIC and BIRTH, for example).

Each Domain is made up of Places where a particular activity situation occurs. There are specific Places contained within each Domain. For instance, in the CLINIC, the WAITING/RECEPTION/CHILD'S PLAY AREA is a Place where people come and go, people wait, people make appointments, people refer to childbirth information, and children may play quietly together or separately with supervision close-by.

A Territory is a collection of Places. For example, a private Territory in the BIRTH Domain could include the birthing rooms, a bath suite, and a family area. This grouping of rooms would function well together, spatially and socially.

On the following page is a diagram of the CLINIC, EDUCATION AND BIRTH Domains. This drawing shows relative positions of areas, places, and territories. Important consideration was given to the logical and desired movement from one place to another, and to particular adjacency requirements (a birth room and bath suite close to housekeeping and emergency equipment storage). This diagram should not dictate an only solution, rather it is one suggested arrangement.
INSTRUCTIONS FOR USING THE WORKBOOK

1. Decide on the domain you wish to begin designing: CLINIC, EDUCATION, or BIRTH.

2. Study (and discuss) the diagrammed relationships drawn at 1/16" scale. Pay particular attention to the specifics of the domain you are designing.

3. Imagine these spaces in use:

   - Who uses each place? (mothers, pregnant women, mates, children, babies, visitors, friends, and others, certified nurse-midwives, nurse attendants, aides, administrative and housekeeping personnel, doctors, nutritionist, pharmacist, body movement instructors)
   - What are they doing?
   - How do they come into a particular place?
   - How do they move through the space?
   - Could a handicapped person move about without encountering any architectural barriers?
   - What is happening in this place?
   - How and when do the players interact with one another?
   - What additional support spaces should be close-by?
   - What is the sequence of events here?
   - Where do these events take place?

   (For this part of the exercise, refer to 1/2" scale plans and axonometric drawings, activity/time charts, and behavior maps.)

4. Perhaps each person present can take on the role of one of the players, and then walk-through and act-out various scenarios for a specific time period:

   A prenatal visit: including a mother, her 2½-year-old child, a certified nurse-midwife, and administrative personnel.

   A labor-delivery in progress at the birth center: mother, father, 7-year-old sibling, grandmother and uncle, certified nurse-midwife, and other close friends.

   A childbirth education class on a weekday evening: 8 mothers, 8 support-persons, an instructor, and an assistant.
5. Read the paragraphs next to the 1/4" scale plans on each page, and answer the following questions:

- What activities happen here?
- What type of character do you want this place to have?
- What architectural devices will you employ?
  
a. How do you want to use windows: for views, for light, to catch a cool, summer breeze?
  
b. What qualities of light do you want in a room: do you want natural light into it from the side, from above? Where will interior light sources originate?
  
c. What colors will make a person feel good to be here? What colors will you use to make a warm and cozy place? A cool place? A bright and cheerful place?
  
d. What types of finish materials will be durable, as well as easy to clean and maintain? What finish materials will give a sense of warmth and comfort?
  
e. How do you want to use plants?

For outside gardens:
  - symbolically and ritually in plantings?
  - in an enclosed garden?
  - in a half-hidden garden?
  - in an annual garden?
  - as a green-screen/trellis?

For the inside:
  - special groupings to separate and screen adjacent activity areas?
  - hanging window plants?
  - to help create a pleasant atmosphere

f. What materials of construction will you use to give desired acoustics in each room?

- absorptive materials such as wood, brick, heavy fabrics (bed spreads, quilts, pillows), carpeting, soft cushiony furniture, acoustical ceiling tiles?

- wall insulation? insulation around windows, doors, electrical outlets in an exterior wall, heating and cooling equipment?
• audio devices: stereos, radios, communications systems? will there be individual room control?

6. What types of residential-scale furniture will you use in contrast to the usual institutional variety?

7. Make a checklist of those characteristics you want to include from Step 6. Refer to it often as you are designing specific places. Free associate. Be imaginative.

8. Now you are ready to construct a 1/2" scale model. Pick up furniture pieces and place them into position. Add 1/2" scale people (refer to Step 4).

9. Add other furnishings (carpets and other floor coverings, wall hangings and other decoration, and plants).

10. Define the perimeters of territories and places by determining wall heights and their location. Cut pieces of corrugated cardboard to represent wall definitions and enclosures. Use pins and glue to secure the pieces to a homasote baseboard.

11. Place indoor places so they set up desired relationships with outdoor spaces by locating windows along south-facing walls, or where they can face onto interior courtyards or onto more open gardens. Place openings where you want views and/or ventilation.

12. Remember to include special spaces such as niches, alcoves, and bay windows.

13. Add any necessary storage places.

14. How might the ceilings and roofs be?
   • How high is the ceiling or roof?
   • Do you want different ceiling heights in special places?
   • What shape is the ceiling or roof? Flat? Domed? Sloped?

15. You may find that certain design decisions may not work as well as you intended. The process of design is not linear, therefore, make any necessary adjustments and modify arrangements.
A BIRTH CENTER WORKBOOK

APRIL 10, 1979.
by
G A L E  G O L D B E R G
M.ARCH. THESIS
M.I.T.

(revised, May 9, 1979)
Activities: arrival, waiting, appointments, filling out medical information, children's quiet play, reference library, orientation to rest of building.

Location:
easily reached from street
entry central in building

Character of place:
friendly, warm, inviting, welcoming, comfortable, centered, encourage socialness.
Architectural Intentions:

- Generous in size to accommodate families, friends, visitors, staff
- Physically related as 'control point' and near center of building mass
- Well-ordered path system leading to and from core with visible signs directing user to activity
- Openness, yet range of sitting nooks
- Hearth as focus
- Lots of natural light
- Relationship to outside should be very visible and easily recognizable, closely linked to parking, perhaps a children's outdoor play area is directly accessible from entry place.
Architectural Intentions:

- plenty of work surfaces
- copying machine
- pin-up boards
- lots of supply and records storage
Activities:
- billing, information gathering
- record keeping
- scheduling
- telephoning
- copying, filing, typing

Character of Place:
- well-ordered and organized
- easy access to records
- pleasant place to conduct business
Activities:
- individual desk work
- low-level volume person-to-person and telephone conversations
- filing and typing
- group meetings
- material and office supply storage

Character of Place:
- work space: privacies
- well-ordered and organized
- control of noise and light

Architectural Intentions:
- lots of work corners
- partial wall definitions for privacy; integrated with shelving and storage
- group meeting place: tables, chairs
- work space: each with a view
- plenty of surfaces for working
- task spaces
- greenery
- perhaps outdoor deck area, next group meeting area
- size will vary depending on #s of workers

• may need 2nd staff office, if there is a large staff group
Architectural Intentions:

- soft, cushiony furniture
- grouped sitting areas
- large windows
- carpeting and warm, earthy colors
- locate along passages and as termini at end of walkway
LOUNGE AREA

Activities:
- sitting, resting, conversation, passing of time
- quiet reading
- looking, resting, waiting
- listening to music
- place for family to spend time during labor
- visitation by friends and relatives
- staff supervision

Character of Place:
- comfortable and cozy
- promote social interaction
- cheerful, bright, colorful
- repose, quiet, peaceful

80 ft²
Architectural Intentions:

- conversation nook for 2 to 4 persons
- desk and chair
- shelving and cabinet storage
- view into outdoors
Activities:
- meetings
- consultation
- writing communication
- telephoning

Character of Place:
- comforting and pleasant
- quiet and private
- sunny and friendly
- professional
Architectural Intentions:

- chair-table arrangement to facilitate conversation
- writing surface for practitioner
- counter-top display for education materials
- association with outdoor room
Activities:
- discussion with 2 to 5 people in attendance (mother, mate, nurse-midwife, nutritionist, etc.)
- conversation and information exchange
- writing-up of medical report for records

Character of Place:
- sitting-room atmosphere
- display of reference materials (posters, fetal model, books, magazines, printed handouts)
- unimposing
- secure and reassuring

CONSULTATION ROOM

100 ft²
Architectural Intentions:

- Elevated exam table with easy access (stool, or on a raised platform with steps)
- Screened area for dressing and clothes
- Seat and stool for conversation
- Sink for clean-up
- Clean table-top surfaces for necessary instruments, medical supplies, and equipment
- Open- and closed-shelf storage
- Facing onto courtyard
- Windows to surrounds
Activities:
- ob/gyn examinations by practitioners and aides
- clean-up sink area
- use and disposal of materials and supplies

Character of Place:
- secure and private place where procedures can be conducted without interruption
- well-lit by both natural and high-intensity lamp
- friendly and personal
- non-threatening
Architectural Intentions:

- accessible to all persons, including handicapped
- bright colors
- easy-to-clean surfaces
- view to outside
- adequate ventilation
Barrier-Free Lavatories

Activities:
- cleansing and washing
- toilet accessibility
- diaper-changing surfaces

Character of Place:
- easily cleaned surfaces
- airy and light
- safe and private
WORKROOM

Architectural intentions:
- lots of counterspace
- closed & open shelving
- refrigerated storage
- soiled & clean areas
- observation window along passage
- natural light into space

PHARMACY

Architectural intentions:
- dispensing through a window or chute-door
  (If not dispensing directly, optional as a drug storage area)
- locked space
- bulk storage
- locked narcotics cabinet.
Activities:
- washing and drying of instruments and equipment
- storage of materials and supplies and equipment in a clean place
- separation of soiled and clean
- refrigeration of blood and medications
- baby weighing
- filling out medical information records

Character of Place:
- easy to clean
- arranged for efficient functioning
- room to move around with supplies

Activities:
- medications delivered and dispensed
- locked prescription storage
- bulk storage of items that are non-prescription such as disposable wear, sterile pads, etc.

Character of Place:
- secure entry
- clean, orderly operation
Activities:
- audio-visual slide and film presentations
- group discussion for 10 to 15 persons
- prenatal and post natal classes and demonstrations; body movement
- visitor orientation

Character of Place:
- spacious
- good acoustical environment to support education activities
- need a good view of demonstration
Architectural Intentions:

- room able to be darkened for projector presentations
- display areas and tack boards
- mats and cushions for body movement during classes
- table for 10 to 15 to sit around for discussions
- places to store extra chairs, audio-visual equipment, models, charts
- acoustical control using absorbing materials on ceiling, walls, floor
- centrally focused raised demonstration area
- direct access to outdoor room
Architectural Intentions:

- U-shaped food prep area
- Breakfast nook eating area
- Change of ceiling height over eating area
- Windows over sink, next to eating area
- Adjacent family space with fireplace and rocking chairs
Activities:
- Food preparation - during labor for support persons and mother (fluids);
  after birth celebration
- Sharing of meals
- Siblings' play space

Character of Place:
- Country-kitchen image
- Sharing of family unit
- Spacious and cheerful
Architectural Intentions:

- double bed and lots of pillows
- emergency equipment out-of-sight
- rocker and other comfortable chair
- large-view window
- washable surfaces most everywhere
- bath suite integral
- well-related to outside surrounds
- radiant warmer above bed area with control at bedside
Birthing Room 131 RTH

Activities:
- Labor and delivery and bonding
- Celebration of birth
- Recovery period

Character of Place:
- Primarily home-like and family-centered
- Protective and non-threatening
- Positively reinforcing experience
- Splendid, delightful, comforting

240 ft²
16 ft
15 ft
0 4 8 ft
Architectural Intentions:

- accessible to all persons, including handicapped
- roomy for pregnant women + partner
- easy-to-clean surfaces
- safe
- adequate ventilation
- view/connection w/ outdoors, perhaps leading to a sauna in a garden
Activities:
- toilet and sink used frequently during labor
- cleaning and washing
- diaper-changing surfaces

Character of Place:
- dry and light
- safe and private
- cheerful and filled w/ greenery
Architectural Intentions:

- easy to remove equipment from storage
- thick wall as storage
- room to maneuver about
EMERGENCY EQUIPMENT STORAGE

Activities:

- easy access to emergency back-up equipment
- storage of portable furniture for emergency

100 ft²
Architectural Intentions:

- cushions on lounge/beds that are convertible
- lots of absorptive materials
- internal temperature control
- close by to birth rooms
Activities:
- sleeping, napping, resting
- place to get away from it all
- available to father, staff, relatives

Character of Place:
- quiet and restful
- peaceful
- somewhat remote
- private
Architectural Intentions:

- arrange wash/dry/fold areas in sequence to facilitate process
- sink for hand-wash and bleaching
- lots of storage for detergents, linens, etc.
- closets for cleaning and vacuuming equipment
Activities:

* wash/dry/fold of linens and other fabrics
* getting supplies from storage moved to other areas for their use

Character of Place:

* relieve tediousness of housekeeping chores
* bright, airy, cheerful

80 ft²
KIT OF PARTS

USING THE WORKBOOK

½" SCALE PEOPLE

EXAM ROOM MODEL
3 schemes for reception/waiting/children's play

Plan with enclosure
OTHER ISSUES FOR EXPLORATION

"... midway between the expensive, heavily equipped hospital, ready for every emergency, and the normal household, capable of handling minor illnesses, but without the space or equipment for handling childbirth... such a solution would be in the nature of a small nursing home: established as an integral part of a unit, say, two hundred and fifty to five hundred families; attached perhaps to a local medical clinic, which needs so many of the same facilities. Confined in such a place, a mother would have access to her other children, could be visited easily by her husband, and could be looked after by relatives or neighbors, except where special care was required: an important economy. Such a solution would restore the missing human element, an element lost through what Dr. Richardson, the Victorian hygienist, once mordantly described as the 'warehousing of disease'."

- Lewis Mumford in The Urban Prospect

There has been less resistance to the concept of a birth center in the parts of the United States where there is not adequate service of the medical profession to the more rural and remote communities. In general, the medical practitioners who have been educated and trained in a hospital-based medical philosophy have not been enthusiastic in their support of the birth center concept. Doctors are conservative and have a certain amount of fear that they will be driven out of business by this alternative. They are not made terribly welcome here, where they serve mostly as backup consultants to the midwives. They are dubious about the safety of operation in the facility which, they fear, will house an incomplete "medical equipment arsenal," that may prevent certain emergency procedures like Caesarean sections or blood transfusions from being performed in birth centers. Proponents of the birth center concept contend that the potential risks could be minimized by including a careful
screening procedure which would exclude high-risk mothers from admission to an alternative birth center. (See Appendix for Policies and Procedures for an Alternative Birth Center, Mount Zion Hospital and Medical Center, San Francisco, California; and "Conditions precluding management in the Childbearing Center," Maternity Center Association, New York, New York.) When a birth center is deciding where to locate, one important consideration is proximity to a backup hospital for emergency cases. (Criteria include a maximum travel distance of 5-10 minutes.)

Understandably, the hospitals are feeling somewhat threatened by the introduction of birth centers. The birth rate has been decreasing and the larger maternity wards built during the post-World War II, baby-boom 1950's, are not being utilized to their full capacity. As a result, hospitals are competing with each other for pregnant mothers. In the Boston area alone, such major metropolitan hospitals as Boston Hospital for Women, Beth Israel Hospital, Mount Auburn Hospital, and New England Memorial Hospital, and other institutions, have chosen to renovate labor rooms into one or more "birthing rooms." The author's contention is that this is more of an ad hoc solution, rather than evidence of an emerging, changing approach to overall obstetrical/gynecological hospital practice.

These rooms are "designed" by interior specialists to create a more home-like atmosphere. They may add color to the room with paint, wallpaper, and pictures on the wall, bring in a comfortable lounge chair and rocker, add a rug, and maybe a plant or two. There is usually some attempt to conceal medical equipment in storage closets or built-in units. These efforts by the hospital to change a few rooms are indicative of two things: first, that hospitals are converting their childbirth places; and second, that the primary reason for this change in attitude has been consumers' demanding a less hostile, sterile, and interventive environment during their childbirth experience. Economically, it is necessary for hospitals to institute this more humanizing approach into their otherwise less personalized and more institutionalized environments. Some consumers choosing to
have their babies in a hospital setting are using the option of the birthing room, if it is available. They not only want to use the room for their labor and delivery, but they also want familiar faces to be present rather than strange medical personnel, and mothers want their babies bonding with them immediately after birth. Mothers don't want to be moved from labor bed to delivery table, from labor room to delivery (operating) room to recovery (lying-in) room.

Not only are the hospitals finding objections to the birth center idea, but so are the State Public Health agencies. There have been unsuccessful petitions to particular State Health Departments for licensure of birth centers. This may be seen as a symbolic gesture on the part of the governmental bureaucrats by denying a birth center the chance to serve as a "beacon of reform in the business of giving birth." In New York City, a major medical education center of the country, the Maternity Center Association, has met with considerable difficulty in a two-year battle to get permission to operate their Childbearing Center. Close by, in Englewood Cliffs, New Jersey, the certified nurse-midwife director of the Metropolitan Medical Associates Birth Clinic was denied privileges to deliver babies at the local hospital. However, there was no problem with establishing a birth clinic under the auspices of a doctors' group practice, since doctors in New Jersey and elsewhere are permitted considerable leeway in regard to what occurs in their own offices.

Unfortunately, these situations point to the difficulties in convincing Eastern metropolitan medical communities to give support to the birth center concept. Currently, in Boston, the Birth Center Task Force, which has been working together for a year, is preparing a report for submittal to the State Public Health agencies to establish whether an alternative birth center could be licensed as an ambulatory care facility, a medical clinic, or as a doctor's office. The Brookside Family Life Center, which is affiliated with the Boston Hospital for Women, is also going ahead with plans to submit a "certificate of need" proposal to the same agencies. The author can only speculate that two groups
will be competing for perhaps, initially, only one opportunity for a "model birth center" in the Boston area.

There is less opposition towards birth centers in the rural areas of the country because for a long time, formally trained midwives and lay practitioners have been welcome in doctor-less areas. In towns such as Raymondville, Texas, where the Su Clinica Familia services a largely poor, backwoods population, there is only one doctor and no hospital. There is easier acceptance here because the service is for the economically handicapped, and some type of health care is better than none at all. Laws are often less restrictive in these parts of the country. In Albuquerque, New Mexico, the single requirement for a maternity home is that it have five beds or fewer and pass a fire inspection. At the Southwest Maternity Center in Albuquerque, the State Health officials have also been helpful in expediting third-party Medicaid payments. 31

Perhaps one approach to counteract the opposition would be to point out the benefits that a birth center could bring into the community:

- a place with an important, healthful focus on childbirth in a neighborhood setting where cultural, ritual, and religious celebrations and events could occur;

- a resource and information center where people could become better educated about the range of childbirth alternatives;

- a place where family, friends, and neighbors, together with medical personnel, could share and be mutually supportive;

- a "swap shop" for mothers to exchange and recycle baby clothing and furniture. 31

People who choose the birth center as an alternative would do so because they could have connections to important and significant rites, traditions, and cycles of their life-experiences. How many people today actually return to their birthplace, or even think about it? They may have been born there,
but they don't have reasons to go back. If a family somehow "imprinted" this birthplace, maybe by planting a fruit tree, some flowers, or a garden, they would have left something there that they could watch grow and change over time. Perhaps there would annual birth-day parties and ceremonies associated with the birth center. These kinds of events, absent in a hospital situation, would help make the birth center an attractive, positive, and beneficial addition to any neighborhood or community.

Realistically, no matter how wonderful a place might be in its physical attributes, the building alone cannot assure a good birth experience. High-quality, personal, medical care and treatment, sound administrative and economic policies, and efficient facility operation all contribute to making a successful birth center. A good medical person can give good health care service almost in spite of the immediate environment, if need be. A well-thought-out, properly planned and prepared place will, of course, aid the situation. But, no matter how terrific a place might be, there need to be good people as well.

An insensitive, distant, and impersonal practitioner will not necessarily become a warm, friendly, trustful person merely by being put in a pleasant and supportive place. (Actually, it would be nice to think that architects and designers do influence a person's non-productive behavior. I would argue that if the type of design attitudes and architectural intentions this thesis suggests are conscientiously applied in the design development of a birth center, a better place will result. I believe the translation of design intentions could fit either in the adaptive re-use of an existing structure, or in the building of a new birth center from the ground up!)

The advantages of approaching birth as a "normal" event range from the psychological to the practical. Costs at birth centers range from one-half to two-thirds that of a hospital birth. Women who choose the birth center are surrounded by a more calm, confident, and self-controlled atmosphere that results in a less warranted medical interference.
In the urban and rural communities of America, and within the hospital system, there is growing support for this type of approachable and benevolent childbirth alternative. There is potential for the birth center to become a more legitimate alternative. But, if a hospital has control over the birth center, we must not allow the birth center to look like a hospital.

The idea of a birth center is an interesting architectural problem because it considers the introduction of a new building type. There are many problems with existing institutions, as I have discussed throughout this thesis. The birth center as a decentralized maternity health care facility can fit into an urban or rural context by implementing creative architectural decisions that include programmatic issues, as well as functional and aesthetic objectives. This collection of information on birth centers might be useful for a community task force or any interested health care activists.
Clinic Building, Wellesley Friendly Aid Association,
Wellesley Hills, Massachusetts
ILLUSTRATIONS

PAGE

8  Milinaire, Caterine, Birth Facts and Legends, p. 286.
9  Milinaire, Birth Facts and Legends, p. 286.
12 Arguelles, Miriam and Jose, The Feminine, spacious as the sky, p. 7.
15 Arms, Suzanne, Immaculate Deception, p. 244.
16 Arms, Immaculate Deception, p. 243.
21 Arms, Immaculate Deception, p. 61.
22 Arms, Immaculate Deception, p. 141.
23 Southmayd, Henry J. and Geddes Smith, Small Community Hospital, p. 181.
24 Wertz, Lying-In, p. 135.
84 Southmayd, Small Community Hospitals, p. 198.
84 Hopkins, Alfred, Prisons and Prison Building, p. 51.
85 Southmayd, Small Community Hospitals, p. 341.
FOOTNOTES

1 Dick-Read, Grantley, *Childbirth Without Fear*.

2 Eliade, Mircea, *The Sacred and the Profane*.


4 Ibid.


6 Ibid., p. 93.

7 Ibid., p. 73.

8 Vieherjuuri, H.J., *Sauna, the Finnish Bath*, p. 16.

9 Heschong, op. cit., p. 74.

10 Eliade, op. cit., p. 141.

11 Ibid.

12 Coffin, Christie, personal communication.

13 Sousa, Marion, *Childbirth at Home*, p. 15.


15 Ibid.

16 Ibid., p. 15.
17 Wertz, op. cit., p. 217.
19 Bean, Constance, *Methods of Childbirth*.
20 Arms, op. cit., p. 52.
21 Ibid.
22 Illich, Ivan, *Medical Nemesis*.
24 Ibid., p. 39.
26 Sousa, op. cit., p. 76, 77.
27 Lipnack, "Some Thoughts...on Birth Centers," op. cit., p. 2.
29 Ibid., p. 89.
30 Ibid., p. 92.
31 Ibid.
BIBLIOGRAPHY


Brichita, Dale. "Parents Find New Maternity Room Has All the Comforts of Home." Health Care Week 1 (1) (July 11, 1977).

Byrne, Michael. "European Labor - Delivery Bed Popular in Connecticut Hospital." Ob Gyn News, 10 (11) (June 1, 1975).


"Guidelines for Use of the Alternative Birth Center." San Francisco Medical Center, Alternative Birth Center, October 1976.


"Home-Like Birth Center: Medical Care Policies." Booth Memorial Hospital, Cleveland, Ohio, unpublished, August 1977.


APPENDIX A

McTAMMANY ASSOCIATED NURSE-MIDWIFERY CENTER
READING, PENNSYLVANIA

INTRODUCTION:
In response to an increasing number of childbearing families requesting an alternative to
traditional maternity care, in 1977 McTammany Associated expanded its obstetric gynecologic
practice to include nurse-midwifery services. Today, we are pleased to welcome you to the
opening of the Nurse-Midwifery Center.

FACILITY:
The Nurse-Midwifery Center will house the professional offices of the nurse-midwifery
practice; a home-like birth unit for low risk mothers seeking a home and family-oriented
setting for childbirth; a conference room and library for nurse-midwifery students, nurses
and childbirth education.

STAFF:
The nurse-midwives of McTammany Associates are registered professional nurses graduated
from a program of study in one of the fourteen universities offering nurse-midwifery education.
They are certified by the American College of Nurse-Midwives by national examination and
licenses to practice in the Commonwealth of Pennsylvania by examination by the Board of
Medical Education and Licensure. They have been approved for staff privileges to practice
nurse-midwifery at Community General Hospital by the Medical Staff and the Board of Trus-
tees.

MEMBERS OF THE STAFF:
Myra Farr, CNM
Esther Mack, CNM
Sandra Perkins, CNM
Allison Seward, Registrar

J. Robert McTammany, M.D.
Thomas M. Ebersole, M.D.
Eunice K. Ernst, CNM Consultant

SERVICES:
Pregnancy testing, Prenatal care, Childbirth education, Post-partum care, Newborn care,
Family planning, Attendance of families registered for care at home, at the center, or in the
hospital, Gynecologic exam and pap test, Counseling for women's health.
All women registered for prenatal care are seen at least once by the physician. Medical complications are referred to the obstetrician/gynecologist for diagnosis and treatment. Other social, economic and family problems are referred to the counseling services of McTammany Associated or other appropriate agencies or organizations in the community.

PHILOSOPHY OF CARE:

The philosophy of the Nurse-Midwifery Division of McTammany Associates embodies the following benefits:

1. The childbearing families have a right to comprehensive maternity care.

2. That women have a right to seek care that not only is medically safe for themselves and their baby, but that fits their life-style and recognizes and respects their individual, social, spiritual, and economic needs.

3. That because the family is the cornerstone of our social structure, maternity care must support and promote unity within the family.

4. That childbirth is a peak life experience. It is viewed as a healthy process. Confidence is the physiologic function of the body to cope with childbirth is promoted in all aspects of care.

5. That childbirth is a critical period in the initiation of positive family-child relationship. Separation of family members, therefore, is to be avoided unless medical intervention is indicated.

6. That nurse-midwives have a responsibility to inform women and childbearing families of their options in the form of care plans, all procedures, and treatments. The family has the responsibility to make informed decisions about their care.

7. That education is an essential, integral part of midwifery care and the childbearing families are able to assume responsibility for health maintenance and effective utilization of medical care.

8. And that maternity care should be provided at cost.
Note: 3rd Floor has 5 bedrooms, 1 CNM lives here. (Based on sketch made by Jessica Lipnick)
BIRTH CENTER - LUCINIA
A HOME NEXT TO THE POST OFFICE
COTTAGE GROVE, OREGON

(from "Birth-Centers: Exercises in Architectural Programming")
BIRTH CENTER - LUCINIA
COTTAGE GROVE, OREGON
APPENDIX C

Cerro Gordo Ranch will be the home of a new team that will eventually have 2,500 people. The goal of the community is to make a place to live, to work, to play, and to live a healthy life. The community does not intend to be an economic unit, but rather a social and economic community that will be part of the natural environment. The ranch will be a place where the whole family, both large and small, will live.

I. A MALT ON THE LAND

The project's terraces and land will be utilized to create a park that is part of the community. The park will be designed to provide a natural environment for the community and for the people who live there. It will also serve as a place for recreation and education. The park will be designed to be a place where people can come to relax, to enjoy the beauty of nature, and to learn about the importance of conservation.

II. A KITTS HACK

The buildings will be designed to be energy-efficient, to use natural light, to be built with locally available materials, and to be designed to last. The buildings will be designed to be a place where people can come to work, to play, and to live a healthy life. The buildings will be designed to be a place where people can come to learn about the importance of conservation.

III. SITE PLAN

The site plan shows the layout of the community. The buildings will be located in a way that maximizes the use of natural light, and the land will be used in a way that maximizes the use of natural resources.

IV. THE HEALTH CONCEPT

Our culture has a long tradition of valuing health, and we have a strong commitment to maintaining health. The building will be designed to provide a place where people can come to learn about the importance of health and to care for themselves.

V. OUR PROGRAM

A Health building for everyone

Entrance Route
- Reception
- Toilets: male and female
- Waiting room
- Elevator to next level

Examination Room
- Two examination rooms
- Three exam rooms, one designated for gynecologists
- Two exam rooms, one designated for children
- Two exam rooms, one designated for other
- Two exam rooms, one designated for other
- Two exam rooms, one designated for other

Exercise Room
- One family room with a pool, one designated for children
- Two family rooms, one designated for children
- One family room, one designated for children

Nutritional Services
- One dietary kitchen
- One dietary kitchen
- One dietary kitchen

Conservation
- One conservatory
- One conservatory
- One conservatory

Conservation
- One conservatory
- One conservatory
- One conservatory

Note: The plan is not to scale and is not intended to be a detailed representation of the expected final design.
Exhibit 12: Schematic Design: **Chatham Family Birth Center**
Second floor plan juxtaposed with existing plan layout
(courtesy of Jeanine Weller, architect)
Exhibit 11: Schematic Design: Chatham Family Birth Center
First floor plan layout juxtaposed with existing plan layout
APPENDIX E

COMMON EXISTING PRACTICE, OB/GYN UNIT

SCHEME FOR A DELIVERY UNIT (IN-HOSPITAL), 1964
UNITED STATES PUBLIC HEALTH SERVICE
APPENDIX F

Maternity Center Association

Demonstration Project in Out-of-Hospital Maternity Care

Conditions precluding management at Childbearing Center

The following Criteria will be applied to all women by professional staff during the antepartum, intrapartum and postpartum periods.

A cumulative score of 2 points on the Initial Score Sheet indicates the women is at a risk incompatible for project care. Accepted women will be continuously evaluated for presence of any listed antepartum, intrapartum or postpartum criteria and be referred or transferred to the back-up facility or physician.

Developed by the Medical Team Staff of the Childbearing Center; originally approved for distribution by the Medical Advisory Board of Maternity Center Association, November 15, 1976. Subject to change based on experience.

Revised 11/22/77
<table>
<thead>
<tr>
<th>Score</th>
<th>Problem Description</th>
<th>Score</th>
<th>Problem Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td><strong>Initial Data Base</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Socio-Demographic Factors</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. Chronological Age: 35 &amp; over primigravida</td>
<td>2</td>
<td>16. Thyroid disease</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>a. History of thyroid surgery</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td>b. Enlarged thyroid gland with symptoms of thyroid</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>disease based on T3 or T4</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td>c. Current use of thyroid related medications</td>
</tr>
<tr>
<td></td>
<td>2. Permanent residence outside specified target area</td>
<td>1</td>
<td>E-Respiratory</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>17. Asthma and/or chronic bronchitis within the last 5 years</td>
</tr>
<tr>
<td></td>
<td>Documented Problems in Maternal Medical History</td>
<td>2</td>
<td>F-Other Systems</td>
</tr>
<tr>
<td></td>
<td>A-Cardio-vascular</td>
<td></td>
<td>18. Bleeding disorder and/or hemolytic disease</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td>19. Sensitivity to local anesthetics (&quot;caines&quot;)</td>
</tr>
<tr>
<td></td>
<td>3. Chronic Hypertension</td>
<td>2</td>
<td>20. Previous radical breast surgery</td>
</tr>
<tr>
<td></td>
<td>4. Heart Disease</td>
<td></td>
<td>21. Other serious medical problems</td>
</tr>
<tr>
<td></td>
<td>5. Pulmonary Embolus</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B-Urinary System</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Renal disease moderate to severe including nephritis or 1 episode of chronic renal disease</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. One episode of pylonephritis prior to this pregnancy</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8. Two episodes of cystitis prior to this pregnancy and evidence of asymptomatic bacteruria (≥ 100,000 colony count)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C-Psycho-Neurological</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td>22. EDC less than 12 months from date of previous delivery</td>
</tr>
<tr>
<td></td>
<td>9. Previous psychotic episode adjudged by psychiatric evaluation</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10. Current mental health problem adjudged significant by psychiatric evaluation and/or required use of drugs related to its management</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11. Epilepsy or seizures</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12. Required use of anticonvulsant drugs</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13. Drug addiction (heroin, barbiturates, alcohol etc.), current use of addicting drugs, or current therapy related to these additions</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14. Severe recurring migraines</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D-Endocrine</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>15. Diabetes Mellitus and/or gestational diabetes</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>23. Previous Rh sensitization</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>24. Parity of 4 or more</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25. Infertility problems</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>a. Workup and counseling more than 3 years prior to this pregnancy</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>b. Use of fertility drugs to achieve this preg.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>26. Previous abortions:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>a. 3 or more spontaneous (&lt; 28 weeks)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>b. 1 septic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>27. Previous uterine surgery including C-section and cone biopsy (if previous tubal pregnancy &amp; enrollment before 16 weeks accept conditionally)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>28. Previous placenta abruptio</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>29. Previous placenta previa and/or significant third trimester bleeding</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>30. Severe hypertensive disorder during previous preg.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>31. Postpartum hemorrhage apparently unrelated to management</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>32. History of prolonged labor:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>a. Primipara-Stage 1 &gt; 24 hrs; Stage 2 &gt; 3 hrs; and/or Stage 3 &gt; 1 hour.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>b. Multipara-Stage 1 ≥ 18 hrs; Stage 2 ≥ 2 hrs, and/or Stage 3 &gt; 1 hr.</td>
</tr>
</tbody>
</table>

106
<table>
<thead>
<tr>
<th>Score</th>
<th>Documented Problems in Previous Infants</th>
<th>Score</th>
<th>Problem Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>33. Stillbirth (&gt;28 weeks gestation)</td>
<td>2</td>
<td>54. Symptoms of gestational diabetes affirmed by abnormal glucose tolerance curve</td>
</tr>
<tr>
<td>1</td>
<td>34. Birthweight:</td>
<td>2</td>
<td>55. Development of unexplained vaginal bleeding</td>
</tr>
<tr>
<td>1</td>
<td>a. &lt; 2500 grams</td>
<td>1</td>
<td>56. Abnormal weight gain (&lt;12 or &gt;50 lbs.)</td>
</tr>
<tr>
<td>1</td>
<td>b. &gt;4000 grams</td>
<td>1</td>
<td>57. Non-vertex presentation persisting past 37th week of gestation</td>
</tr>
<tr>
<td>2</td>
<td>35. Major congenital malformations</td>
<td>2</td>
<td>58. Laboratory evidence of sensitization in Rh negative women</td>
</tr>
<tr>
<td>2</td>
<td>36. Genetic/metabolic disorder</td>
<td>2</td>
<td>59. Postmaturity (42 weeks/294 days gestation)</td>
</tr>
<tr>
<td>2</td>
<td>Maternal Physical Findings</td>
<td>2</td>
<td>60. Development of any other severe obstetrical, medical and/or surgical problem</td>
</tr>
<tr>
<td>2</td>
<td>37. Gestation more than 22 weeks</td>
<td>2</td>
<td>61. Development of genital herpes affirmed by culture</td>
</tr>
<tr>
<td>2</td>
<td>38. Weight for height outside intervals on attached chart</td>
<td>2</td>
<td>62. Circumstantial factors: Medical Team Staff decision, after taking into account</td>
</tr>
<tr>
<td>2</td>
<td>39. Clinical evidence of uterine myoma or malformations,</td>
<td>2</td>
<td>and review of all of the family circumstances, including make-up, general physical</td>
</tr>
<tr>
<td>2</td>
<td>abdominal or adnexal masses</td>
<td>2</td>
<td>condition, and total situation, that the childbearing in this case would be best</td>
</tr>
<tr>
<td>2</td>
<td>40. Polyhydramnios or oligohydramnios</td>
<td>2</td>
<td>accomplished under the supervision of a physician in a more traditional medical</td>
</tr>
<tr>
<td>2</td>
<td>41. Cardiac diastolic murmur, systolic murmur grade III or above</td>
<td>2</td>
<td>setting, i.e.,</td>
</tr>
<tr>
<td>2</td>
<td>and/or cardiac enlargement</td>
<td>2</td>
<td>a. Lack of available support person to be in the home during the first 3 postpartum</td>
</tr>
<tr>
<td>2</td>
<td>42. Pelvimetry indicative of inadequacy to deliver an infant of</td>
<td>2</td>
<td>days</td>
</tr>
<tr>
<td></td>
<td>3100 gm.</td>
<td>2</td>
<td>b. Lack of source of pediatric and/or obstetrical follow-up after 28 weeks of</td>
</tr>
<tr>
<td></td>
<td>Laboratory/Radiologic Findings</td>
<td>2</td>
<td>gestation</td>
</tr>
<tr>
<td></td>
<td>43. a. Hct less than 31%</td>
<td>2</td>
<td>c. Consistent non-attendance at classes and/or office hours</td>
</tr>
<tr>
<td></td>
<td>b. Hct less than 28%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>44. SS Hemoglobin</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>45. Pap smear class 3 or greater with positive colposcopy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>46. Evidence of active tuberculosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II.</td>
<td>Antepartum Referral Factors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>47. Hct less than 34% if entering the 37th week of gestation</td>
<td>2</td>
<td>63. Premature labor (less than 37 weeks gestation)</td>
</tr>
<tr>
<td></td>
<td>48. Multiple gestations affirmed by monogram</td>
<td>2</td>
<td>64. Premature rupture of membranes (greater than 12 hours before onset of regular</td>
</tr>
<tr>
<td></td>
<td>49. Evidence of fetal chromosomal disorder in amniotic fluid</td>
<td>2</td>
<td>contractions)</td>
</tr>
<tr>
<td>2</td>
<td>50. Development of symptoms of pre-eclampsia</td>
<td>2</td>
<td>65. Non-vertex presentation</td>
</tr>
<tr>
<td>2</td>
<td>51. Intrauterine growth retardation</td>
<td>2</td>
<td>66. Evidence of fetal distress</td>
</tr>
<tr>
<td>2</td>
<td>52. Thrombophlebitis</td>
<td></td>
<td>a. Abnormal heart tones</td>
</tr>
<tr>
<td>2</td>
<td>53. Pylonephritis</td>
<td></td>
<td>b. Meconium staining</td>
</tr>
<tr>
<td></td>
<td>54. Symptoms of gestational diabetes affirmed by abnormal glucose tolerance curve</td>
<td></td>
<td>67. Estimated fetal weight less than 2500 gm. or greater than 4000 gms.</td>
</tr>
<tr>
<td></td>
<td>55. Development of unexplained vaginal bleeding</td>
<td></td>
<td>68. Development of hypertension</td>
</tr>
<tr>
<td></td>
<td>56. Abnormal weight gain (&lt;12 or &gt;50 lbs.)</td>
<td></td>
<td>69. Failure to progress in labor:</td>
</tr>
<tr>
<td></td>
<td>57. Non-vertex presentation persisting past 37th week of gestation</td>
<td></td>
<td>a. First stage: Lack of steady progress in dilatation and descent (Friedman graph)</td>
</tr>
<tr>
<td></td>
<td>58. Laboratory evidence of sensitization in Rh negative women</td>
<td></td>
<td>after 24 hours in primipara &amp; 18 hours in multipara.</td>
</tr>
<tr>
<td></td>
<td>59. Postmaturity (42 weeks/294 days gestation)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>60. Development of any other severe obstetrical, medical and/or surgical problem</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>61. Development of genital herpes affirmed by culture</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>62. Circumstantial factors: Medical Team Staff decision, after</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>taking into account and review of all of the family circumstances,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>including make-up, general physical condition, and total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>situation, that the childbearing in this case would be best</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>accomplished under the supervision of a physician in a more</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>traditional medical setting, i.e.,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Lack of available support person to be in the home during</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>the first 3 postpartum days</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Lack of source of pediatric and/or obstetrical follow-up</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>after 28 weeks of gestation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Consistent non-attendance at classes and/or office hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>III. Intrapartum/Postpartum Transfer Factors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>63. Premature labor (less than 37 weeks gestation)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>64. Premature rupture of membranes (greater than 12 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>before onset of regular contractions)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>65. Non-vertex presentation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>66. Evidence of fetal distress</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Abnormal heart tones</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Meconium staining</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>67. Estimated fetal weight less than 2500 gm. or greater than</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>4000 gms.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>68. Development of hypertension</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>69. Failure to progress in labor:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. First stage: Lack of steady progress in dilatation and</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>descent (Friedman graph) after 24 hours in primipara &amp; 18 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>in multipara.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Problem Description

- **2.** Second stage: more than 2 hours without progress in descent
- **2.** Third stage: more than 1 hour
- **70.** Prolapse of cord
- **71.** Soft tissue problems
  - a. Severe vulvar varicosities
  - b. Marked edema of cervix
- **72.** Intrapartum blood loss greater than 500 cc and/or postpartum hemorrhage
- **73.** Development of other severe medical/surgical problem
- **74.** Evidence of active infectious process
- **75.** Any condition requiring more than 12 hours of postpartum observation

### Infant Transfer Factors

- **76.** Apgar score less than 7 at 5 minutes
- **77.** Signs of pre or post maturity
- **78.** Weight between 2200 and 2499 grams (Pediatrician to determine whether hospitalization is necessary)
- **79.** Respiratory problem
- **80.** Jaundice
- **81.** Persistent hypothermia (less than 97°F, rectal after 2 hours of life)
- **82.** Exaggerated tremors
- **83.** Major congenital anomaly
- **84.** Any condition requiring more than 12 hours observation post-delivery

### Acceptable Weights for Women Over 25* at LMP

<table>
<thead>
<tr>
<th>Type of Frame</th>
<th>Height without Shoes</th>
<th>Small</th>
<th>Medium</th>
<th>Large</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight</td>
<td>92-98</td>
<td>96-107</td>
<td>104-119</td>
<td></td>
</tr>
<tr>
<td>Overweight</td>
<td>94-101</td>
<td>98-110</td>
<td>106-122</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>96-104</td>
<td>101-113</td>
<td>109-125</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>99-107</td>
<td>104-116</td>
<td>112-128</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>102-110</td>
<td>107-119</td>
<td>115-131</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>105-113</td>
<td>110-122</td>
<td>118-134</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>108-116</td>
<td>113-126</td>
<td>121-138</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>111-119</td>
<td>116-130</td>
<td>125-142</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>114-123</td>
<td>120-135</td>
<td>129-146</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>118-127</td>
<td>124-139</td>
<td>133-150</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>122-131</td>
<td>128-143</td>
<td>137-154</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>126-135</td>
<td>132-147</td>
<td>141-158</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>130-140</td>
<td>136-151</td>
<td>145-163</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>134-144</td>
<td>140-155</td>
<td>149-168</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>138-148</td>
<td>144-159</td>
<td>153-173</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>142-152</td>
<td>148-163</td>
<td>157-177</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>146-156</td>
<td>152-167</td>
<td>161-181</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>150-160</td>
<td>156-171</td>
<td>165-185</td>
<td></td>
</tr>
</tbody>
</table>

*For women less than 25, subtract 1 pound for each year under 25

Underweight - prepregnant weight 10% or more below standard weight for height and age+

Overweight - prepregnant weight 20% or more above standard weight for height and age+

APPENDIX G

DEPARTMENTS OF OBSTETRICS
AND PEDIATRICS

CRITERIA FOR ADMISSION

1. All patients must have prenatal supervision by a licensed physician, either a private attending obstetrician, clinic physician, or nurse midwife under a physician's supervision.

2. No findings suggestive of increased risk of complications during labor, delivery or immediate postpartum period should be present.

3. All patients must attend some type of prepared childbirth classes (Lamaze, Bradley, etc.)

4. All patients should participate in the orientation program provided by the Mount Zion staff for use of the Alternative Birth Center.

5. All patients must understand that if their labor status changes to one of high risk, transfer to the regular labor and delivery area will be necessary.
6. All mothers who wish to use the Center are expected to be accompanied by a support person.

7. All patients must sign an informed consent form accepting the risks involved in delivering in the Alternative Birth Center prior to admission to the Center.

8. A specific plan for family participation, if desired, must be agreed upon in advance.

9. The infant's pediatrician must be agreeable to the criteria for care of the newborn.

HIGH RISK FACTORS EXCLUDING ADMISSION TO THE ALTERNATIVE BIRTH CENTER

Social factors:

< 3 prenatal visits  
Maternal age: Primipara > 35 years or Multipara > 40 years

Pre-existing Maternal Disease

Chronic hypertension  
Moderate ➔ severe renal disease  
Heart disease Class II-IV  
History of toxemia with seizures  
Diabetes  
* Anemia - Hgb ≤ 9.5 gm  
Tuberculosis  
Chronic or acute pulmonary problem  
Psychiatric disease requiring major tranquilizer

Previous Obstetric History

Previous stillbirth  
Previous Cesarean section  
Rh sensitization  
* Multiparity > 5  
Previous infant with RDS at same gestation
Present Pregnancy

Toxemia
Gestational age < 37 weeks or > 42 weeks
Multiple pregnancy
Abnormal presentation (Primipara with a floating head will need evaluation by her obstetrician)
3rd trimester bleeding or known placenta previa
Prolonged ruptured membranes > 24 hours
EFW < 5 lb or > 9 lb.
Contracted pelvis, any plane
Pelvic pathology
  Adenexal masses
  Uterine malformation
  Polyhydramnios
  Pelvic tumors
  Genital herpes
  Treatment with Reserpine, Lithium or Magnesium
Induction
Spinal or epidural anesthesia
Any other acute or chronic maternal illness, which, in the opinion of the medical staff would increase the risk to the mother or infant.

*May use Center with I.V. during labor

4/76