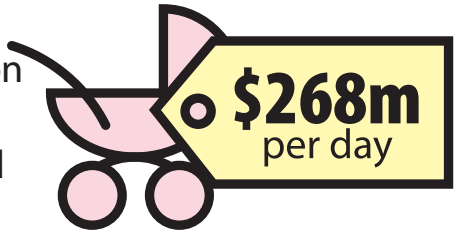
Lucina Health Foundation and the VMC Foundation

DELIVERING BETTER

A SOLUTION TO THE U.S MATERNAL HEALTH CRISIS

With over 4 million women giving birth each year in the U.S, at a total cost of $98billion (over $268million per day), childbirth and newborn care is by far the most common and expensive reason for hospitalization.



Medicaid covers 41% of all annual births for a total annual cost $20.5 billion while the high cost of this care drives up premiums for businesses and families.

Despite this expense, the United States has one of the highest rates of both infant and maternal death among industrialized nations.

Why is this and what are the issues?

1. Unnecessary interventions: high rate of C-sections (national rate is 33%, WHO recommended rate is 15%) frequency of inductions and other interventions.

2. Social Factors: mothers are now older, are having fertility treatments resulting in higher risk multiples.

3. Health Factors: increased prevalence of obesity, type 2 diabetes and hypertension.

4. Lack of integrated prenatal care: Fewer pregnancy complications and better birth outcomes could be achieved if prenatal care was more fully integrated (between all providers from the earliest stage)

5. Technology-intensive Care: Results in maternal care being the most costly medical condition for both Medicaid and private insurers. Evidence does not support that this style of care increases safety. We are doing more and accomplishing less

6. Lack of public awareness: Women do not have an understanding of the association of interventions on maternal mortality and morbidity.

According to a recent study by Merck for Mothers, only 11% of Americans surveyed had heard or read anything about maternal mortality in the US in the past year.

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Numbers you need to know

49 Countries that have lower mortality ratios than the US

US cesarean rate in 2009

32.9%

An all-time heigh following a 13 consecutive year rise.

12.7 Deaths per 100,000 live births in the US. 3 times as high as the governments Healthy People 2010 target.

2x

The risk of maternal death in high-poverty areas is 2x that in low-poverty areas.

21% In states with cesarean rates higher than 33%, the risk of maternal death is 31% higher than in states with cesarean rates lower than 33%.

34,000

The number of women each year who nearly die from pregnancy-related complications - *one every 15 minutes.*

#1 Care for childbearing women and newborns is number one reason for hospialization in the US

Maternal mortality per 100,00 live births

- **34** non-Hispanic black
- **169** American Indian / Alaska Native
- **11** Asian / Pacific Islander
- **10.4** non-Hispanic white
- **9.6** Hispanic

Source: Amnesty International

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The good news is that there are many ways to reduce spending on maternal health care that actually benefit patients. Even small improvements can result in large savings.

The place to start is with the most common hospital procedure in America -- the Cesarean section. A C-section is a surgical delivery of a baby, rather than a normal, vaginal delivery. Not only does a C-section typically cost twice as much as a vaginal delivery, it is more likely to result in infections, injuries and other complications for both mothers and babies.

Yet today, nearly one-third of all babies in the country are delivered by C-section. Fifteen years ago, C-section delivered only 20 percent of babies, and in the 1960s the C-section rate was less than 5 percent.

A major reason the rate of C-sections is high and growing is not because they're necessary but because they're convenient. Babies often take longer to arrive than their mothers or doctors might like. Yet that temporary convenience can harm both babies and mothers, sometimes permanently.

C-sections are particularly problematic when they're used to deliver babies too early. The desire for convenience has resulted in a growing number of cases in which doctors' uses drugs or procedures to induce labor rather than let the pregnancy take its natural course. About one-fourth of deliveries are now electively induced before the baby has reached full term

(39 weeks). Yet research has shown that even babies born a few days too early are more likely to have problems such as developmental delays. Moreover, labor inductions before 39 weeks are more likely to result in expensive and risky C-sections, and the baby is more likely to spend time in an expensive neonatal intensive care unit.

Lucina Maternity and the VMC Foundation are taking steps to reverse these trends.

For example, our collaborative care model of midwives and physicians at Bay Area Midwifery (with deliveries at El Camino Hospital Los Gatos) has achieved a primary cesarean section rate of 6% versus the national average of 33%. While this practice has a low risk population of women, numerous studies have reported similar findings in women with selected risk factors.

Other practice data from our pilot project for the year 2012 shows no induction, no prematurity and a patient satisfaction rate of over 98%.

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What Lucina & VMC Foundation propose, is an integrated and collaborative model of physician and midwife, treating birth as a normal life event with minimal intervention.

Inspired by the success of the Lucina Maternity's pilot program at Bay Area Maternity, Valley Medical Center Foundation is bringing this model to Santa Clara Valley Medical Center to improve infant morbidity and mortality rates and reduce costs to public and private payers.

This model demonstrated profitability and positive outcomes within six months of implementation. It was developed by the Lucina Health Foundation, and is led by the Chief of Obstetrics, of SCVMC, Dr. James Byrne. Dr. Byrne is on the faculty at Stanford and is a member of the California Quality Maternal Care Consortium.

We are committed to establishing Lucina Maternity as the core element of an evolving mother-child service line for VMC that will drive up patient satisfaction, add more private insurance to the payer mix and increase VMC's status within the community

Though VMC is already a local and state leader in low C-section and intervention rates, we are committed to further reducing these as well as rates of pre-term delivery while providing a more satisfying birth experience for Moms and their babies at a lower cost to the health care system.

The model is already being implemented within VMC on a small scale now. As soon as we can, we'll scale up within the existing structure to provide a fully integrated team of physicians, certified nurse-midwives (CMNs) and nurse practitioners. These highly trained professionals will share decision-making, placing the patient at the center of care. In a general population, most pregnancies are uncomplicated and have reassuring risk assessment as the pregnancy progresses through gestational stages. The Lucina team, in partnership with the woman, assesses the woman's individual health status, plan her care needs, and appropriately intervene when indicated to improve outcomes. We want to replicate the success of the pilot project at VMC and ultimately nationally.

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How+Why+Where+When

Patient Base

Over a 3-year period, the clinic will serve 3,300 patients (1,800 Medicaid and 500 privately insured) using 4 certified nurse-midwives and 2 obstetricians in an integrated and collaborative outpatient clinical practice at Santa Clara Valley Medical Center with deliveries at SCVMC.

The target population will include pregnant women with a variety of risk factors. These include risk factors for preterm birth and other pregnancy complications such as low socioeconomic status, domestic violence, and racial characteristics linked to health care disparities.

Pregnant women who enter prenatal care in our safety-net health system will be identified and routed into this program at the time they contact the patient call center seeking an initial obstetrics prenatal care visit. Patients will be screened and evaluated by nurse-midwife and physician provider staff for risk factors using well-established national criteria published by the American Academy of Pediatrics and the American College of Obstetrics and Gynecology in the Guidelines for Perinatal Care.

Program Elements

1. Patient centered care and coordination with a multi-disciplinary group of providers (nurse-midwives, obstetricians, perinatologists) and staff (registered nurses, health educators, social workers, nutritionists)
2. Integrated and collaborative care of patients based on shared decision-making with the patient as part of the team.
3. Evidence-based clinical guidelines and clinical decision support tools by all providers and staff.
4. Collection of HIPPA compliant process- of care outcomes data for quality improvement and to guide best practices

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Cost of Developing Lucina Maternity at VMC

Personnel	1,296,048
Fringe	488,565
Equipment	175,000
Construction	80,000
Marketing/PR	75,000
Supplies	17,000
TOTAL	2,131,613

AMOUNT WE NEED TO RAISE
$2.2 Million

Total one-time investment, program will be cash-flow positive in six months and fully self sustaining from that time onward.

USE OF FUNDS
Funds will be used to build and staff the outpatient clinic and to provide full scope maternity care and support services that are evidence based and individualized to the health status and psychosocial needs of the woman and her family.

STAFFING THE CLINIC
10 full time (FTE) direct staff for the Lucina Maternity model

3 Medical Assistants
2 Health Education Specialists
1 Clinical Nurse II at (6 FTE)
1 Maternal-Fetal Medicine Specialist (. 4FTE),
1 Obstetrician (.6 FTE)
4 Certified Nurse Midwives (CNM) (at 3 FTE)

6 in-kind with SCVMC and VMC Foundation including a Health Center Manager, three Health Services Representatives (one senior), financial manager and business developer.

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Midwives/physicians in collaborative teams

One factor that has helped keep costs down in other developed countries is the extensive use of midwives, who perform the bulk of prenatal examinations and even simple deliveries; obstetricians are regarded as specialists who step in only when there is risk or need. 68% of births are attended by a midwife in Britain and 45% in the Netherlands, compared with 8% in the United States. When utilized correctly, interventions go down, costs decline and patient satisfaction increases. Utilizing this model of care will save $1.7 million dollars for every 1,000 births.

Dr. James D.Byrne is a Maternal Fetal Medicine physician who leads the OB/Gyn program at Santa Clara Valley Medical Center, one of the largest and most respected county hospitals in the United States. The Department annually produces over 4,500 births, 120,000 annual clinic visits, and $30m in revenue with services provided by over 55 physicians and nurse practitioners at seven regional sites.

Dr. Byrne is a clinical associate professor with Stanford School of Medicine and serves on several state/national leadership teams and advisory boards including the March of Dimes California Chapter.

Dr. Byrne has a track record of innovation and increasing productivity. Moving from the public sector to the public hospital setting of VMC in 2001, his intention was to improve maternity care for a large population of women by implementing better business models and developing high performance teams. In a rapid turnaround, the VMC program has grown in performance and is now recognized nationally for both clinical care and research. In addition, he has led clinic research as the site principle investigator in several FDA-monitored trials.

In collaboration with Stanford, the NIH has recently added Stanford/VMC to its elite network of national obstetrics research centers, the first California sites to gain this designation.

Dr. Leslie Cragin, CNM, Ph.D, FACNM is a certified nurse midwife and Fellow in the American College of Nurse-Midwives (ACNM). Currently retired, as the Director of the Nurse-Midwives of San Francisco at San Francisco General Hospital and Clinical Professor at the University of California, San Francisco Department of OB/GYN she was responsible for a large academic practice and was active in teaching medical students, residents and nurse-midwifery students. Her research has examined the outcomes of midwifery care to women from vulnerable populations in California and Mexico.

She is active in midwifery at the state and federal levels, participating in the California Maternal Quality Care Collaborative on the Executive Committee, and has served on of the BOD of the California Nurse-Midwives Association.

Leslie's experience as a practicing midwife and researcher lend an important perspective to Lucina. Her work has led her to believe that integrated and collaborative models of maternity care will be the best future for women and families' health. Her research experience will assist Lucina in the effort to measure outcomes, in order to guide the foundation in refining the "best practice" approach utilized in this model of care.

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Important links

Lucina Health Foundation and its awareness programs

www.lucinamaternity.org

www.maternitycrisis.com

www.saveamotherslife.com

www.unexpectedconference.org

www.facebook.com/usmaternitycrisis

Valley Medical Center Foundation

www.vmcfoundation.org

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