

A LOOK AT INNOVATIONS IN MATERNAL HEALTH

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High maternal/newborn mortality and morbidity rates in less developed countries (LDCs) have become a higher priority for NGOs, international health organizations, and indigenous ministries of health in the last couple of decades. As such, we find variety of solutions being offered and approaches being tried. Some are truly innovative; others are merely the application of western medical theory and practice (which has dominated international health organizations and health-related NGOs since their inception).

In some cases, a western-style approach to childbirth is promoted and implemented. However, not only does this type of care usually place it out of reach for most of the indigenous population (being highly technological and expensive) but it may not offer better outcomes than more "natural" approaches. In my opinion — after having researched this topic for decades as the mother of four children and one who has served as a pregnancy and childbirth mentor to other women — what we don't want to see happen is that the almost century-long American approach to childbirth and infant care becomes the "gold standard" in other countries.

For example, the Pakistani Ministry of Health has a presentation posted online¹ that shows a continuum of care from "poorly developed" (no birth attendant) to "well developed" (which it characterizes as birth with an attending OB-GYN). In reality, the presence of an OB-GYN is completely unnecessary at most births. It would be like hiring a tax attorney to file a simple 1040. With all the years of medical training in specialized techniques for emergency births and other complications, the temptation to speed things up or intervene is too great to resist for most obstetricians (which often creates some of the very birth complications which the doctors then "solve").

Not surprisingly, a 1996 Netherlands study published in JAMA revealed that when comparing the outcomes of two groups of Dutch women with low-risk pregnancies: (1) a group that chose to give birth at home with a trained attendant versus (2) a group that gave birth in a hospital, the home births led to fewer problems and birth injuries for both mothers and babies. Specifically, "perinatal outcome was significantly better for planned home births than for planned hospital births, with or without control for background variables ... The outcome of planned home births is at least as good as that of planned hospital births in women at low risk receiving midwifery care in the Netherlands."²

In reality, childbirth and infant care are two health arenas that benefit from as holistic, simple, and natural an approach as possible. Therefore, innovation in this era of high-tech, high-speed, or highly chemical approaches to problems actually means a return to certain commonsense basics. And it is from that perspective that I am reviewing the innovative approach to maternal and infant health that is being used increasingly in various parts of the world with the promotion and support of such stellar humanitarian organizations as The Bill & Melinda Gates Foundation and others.

1 <http://www.hrresourcecenter.org/node/1968> (accessed February 3, 2011).

2 <http://www.bmj.com/content/313/7068/1309.abstract> (accessed January 28, 2011).

But first, for the purpose of this paper, I define innovation as the creative recombination of existing ideas and practices in a way that proves to be effective for solving a problem. As Professor Kaapema Yelapaala puts it: "Innovation is a form of creation. Like any creative endeavor, innovation emerges from the structural tension between current reality — the way things are — and a vision for the way we'd like things to be."³ Additionally, a lot of innovation is simply how we incorporate and harmonize different ways of thinking with the different stakeholders involved — and how we get them to work together.

Skills used in the process of innovation include associating (creative recombinations), questioning (why why not? what if?), observing, experimenting, and networking.⁴ But it is the attributes of innovation, however ...

- Simplicity (actual or perceived)
- Ability to pilot before large-scale investments
- Can see results quickly
- Perceived by users to be relatively better than the current approach

that shed light on why what I will call the "commonsense approach" is finding favor with key funders like the Gates Foundation — because the commonsense approach to maternal and infant health is simple to teach and implement, can be tested on a very small level yet scaled up easily, produces results quickly, and finds great favor with the end users.

The Gates Foundation website features "The Living Proof Project," which is "... a multimedia initiative intended to highlight successes of U.S.-funded global health initiatives [and] ... reframe the current global health conversation. Millions of lives have already been transformed and saved with effective, affordable solutions."⁵

It is that emphasis on effective and affordable solutions that makes the maternal-infant health philosophy, approaches, and techniques funded by USAID and Save the Children, and promoted by the Gates Foundation, so innovative — because they incorporate natural, biologically innate processes of birth and infant feeding with 21st-century knowledge about hygiene and nutrition. Simple interventions in maternal/neonatal health make a big difference.

In LDCs, a woman generally gives birth at home — often without a trained birth attendant. Nonetheless, most maternal and newborn deaths in these situations can be prevented. The Living Proof Project states that up to 70 percent of newborns can be saved with access to inexpensive tools such as:

- Antibiotics for infections
- Sterile blades to cut umbilical cords

3 Class notes, Practical Applications in Global Health, Josef Korbel School of International Studies, University of Denver, Winter Quarter 2011.

4 "The Innovator's DNA," *Harvard Business Review*, December 2009, pp. 61-80.

5 *Ibid.* <http://www.gatesfoundation.org/livingproofproject/Pages/what-is-living-proof-project.aspx> (accessed January 28, 2011).

- Immediate, exclusive breastfeeding.⁶

Greg Mortenson, renowned humanitarian and author, said recently, "I think ... of Aziza Hussain. After graduating from a CAI [Central Asia Institute] school in the isolated Charpurson Valley, she went on to study midwifery. Since her 2000 return to her valley — where about 20 women a year traditionally perished in childbirth — not a single woman has died giving birth."⁷

Skin-to-skin contact after birth is essential also. For example, a very simple solution is helping to reduce the number of pre-term babies in Malawi who die due to low birth weight. "The Kangaroo Mother Care program, supported by [USAID](#) and Save the Children, teaches mothers how to increase the body temperatures of their newborns by wrapping the babies to their bare chests. Skin-to-skin contact promotes easy access to heat, breastfeeding, and love, all key to the growth and development of low birth-weight babies."⁸

Another aspect of The Living Proof Project promotes the unique benefits of breastfeeding to both mother and child:

"PERFECT FOOD: Breast milk is a perfect food that cannot be duplicated. It actually alters in composition to meet the changing needs of the growing infant.

ONE HOUR: Skin-to-skin contact between mother and newborn, within the first hour of birth, helps prevent nutrient loss, encourages bonding ... helps establish a routine [and helps to keep the baby's temperature stable].

SMARTER KIDS: Premature babies fed breast milk show higher developmental scores as toddlers and higher IQs as children than those not fed breast milk.

HEALTHY MOMS: Breastfeeding reduces the mother's risks of fatal postpartum hemorrhage, as well as of breast and ovarian cancer later in life."⁹

Even the World Health Organization now recommends total breast feeding (where the infant is given nothing but breast milk until he is interested and able to eat solid food) for at least the first six months.¹⁰ This protocol has changed practices at the Osu Maternity Home in Accra, Ghana, because "[i]n the past, many women did not feed babies breast milk exclusively. Instead, a baby's diet was supplemented with water, sugar water, or other herbal concoctions, causing diarrhea and other problems."¹¹

6 The Bill & Melinda Gates Foundation. <http://www.gatesfoundation.org/maternalnewbornandchildhealth/Pages/overview.aspx>

7 *Parade* Magazine. <http://www.parade.com/news/2009/11/22-fighting-terrorism-with-schools.html>

8 *Ibid.* <http://www.gatesfoundation.org/livingproofproject/Pages/photo-galleries.aspx#gallery=/maternalnewbornandchildhealth/Pages/kangaroo-care.aspx&image=0&pager=0> (accessed February 1, 2011)

9 *Ibid.* <http://www.gatesfoundation.org/livingproofproject/Pages/benefitsofbreastfeeding.aspx>, accessed February 1, 2011)

10 "The World Health Organization recommends initiating breastfeeding within one hour of birth and giving only breast milk for the first six months of an infant's life."

<http://www.gatesfoundation.org/livingproofproject/Pages/photo-galleries.aspx#gallery=/livingproofproject/Pages/breastfeeding-education-in-ghana.aspx&image=7&pager=0&filter=undefined> (accessed February 1, 2011).

11 *Ibid.* <http://www.gatesfoundation.org/livingproofproject/Pages/photo-galleries.aspx#gallery=/livingproofproject/Pages/breastfeeding-education-in-ghana.aspx&image=1&pager=0&filter=undefined> (accessed February 1, 2011).

In conclusion, by implementing proven, inexpensive, simple, and scalable solutions such as ...

- Simple nutritional and hygiene education delivered by frontline health workers (even just a woman trained in each community)
- Access to family planning services
- Access to sterile razor blades and antibiotics
- Total breast feeding

... we can greatly reduce maternal and infant mortality and morbidity in less developed countries. As Melinda French Gates has said:

"The main reason for my enthusiasm has been that we already have many of the key tools to save the lives of mothers and their newborns. Now, I have another reason for optimism — new research proves that countries can integrate these tools into their existing health systems and save lives at a large scale without using new technology."¹²

12 "Groundbreaking Research Proves We Can Save Newborn Lives at Scale." The Bill & Melinda Gates Foundation. <http://www.gatesfoundation.org/foundationnotes/Pages/melinda-gates-saving-newborn-lives-110125.aspx> (accessed January 28, 2011).