

# GLOBAL HEALTH

## Innovation Insight Series

*Maternova seeks to empower frontline health workers, as well as the organizations, policymakers, and individuals who support her*



Photo Midwives for Haiti, courtesy of Maternova

## MATERNOVA: Bringing Together Buyers and Sellers

RHODE ISLAND, USA

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MEG WIRTH, FOUNDER

### THE PROBLEM/SOLUTION SPACE

According to the World Health Organization (WHO), approximately 1,000 women die every day from preventable causes linked to pregnancy and childbirth. A full 99 percent of these deaths occur in developing countries, with women in poor, rural communities most at risk. Sub-Saharan Africa accounts for a staggering 50 percent of all maternal deaths, while another 33 percent of these deaths occur in South Asia.<sup>1</sup>

The majority of maternal deaths are caused by complications that affect the women during pregnancy or child birth. These include severe bleeding, infections, high blood pressure (pre-eclampsia) and related seizures (eclampsia), obstructed labor, and unsafe

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abortion. Most of these problems can be avoided through modern prenatal monitoring and/or skilled care during childbirth. Technologies and procedures exist to prevent or manage these complications. However, they are not widely available in the communities that need them most. For example, only 66 percent of women in developing countries give birth with the assistance of a trained midwife, nurse, or doctor.<sup>2</sup> Without the presence of a health care professional, too many women die from complications before they receive appropriate treatment.

The same complications that cause maternal deaths also put newborns at risk. Around the world more than 3 million newborn babies die every year.<sup>3</sup>

### ABOUT MATERNOVA

Prior to founding Maternova, Meg Wirth had a diverse career in women's health. Based on her many accomplishments in the field, which included work with the Rockefeller Foundation and with JSI's MotherCare project, she was asked in the early 2000s to co-author a United Nations Millennium Project report that proposed the most effective strategies for meeting the UN Millennium Development Goal (MDG) to improve child and maternal health around the world. Among other metrics, this MDG seeks to reduce maternal mortality by three-quarters between 1990 and 2015.<sup>4</sup>

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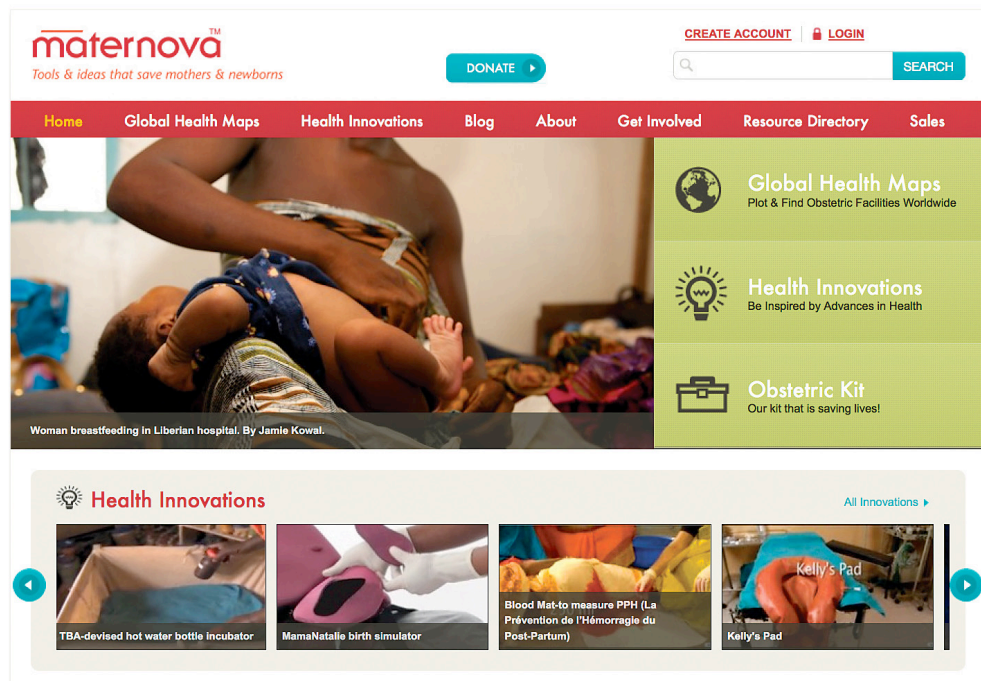
After the UN position, Wirth spent five years with Commons Capital, a social venture capital fund. With funding from the Bill and Melinda Gates Foundation, the Commons Capital team reviewed hundreds of technologies and invested in several companies with promising global health products. Through this research, Wirth identified challenges in the maternal health space that needed to be addressed. For instance, she perceived a gap in the ability of health care professionals to efficiently

learn about and access new technologies that could help them achieve important results, such as those outlined in the MDGs. With new maternal health solutions coming out on a nearly continuous basis, midwives, nurses, and physicians working in developing countries needed a trusted source for staying abreast of the latest developments.

Wirth started Maternova in 2009 as a mission-driven for-profit organization with two main objectives. The primary objective was to provide an online knowledge platform that would allow health workers, innovators, organizations, policymakers, and individuals working in the field to track tools and protocols with the potential to save lives in childbirth. The second objective was to bundle and sell a select number of low-cost tools to equip frontline health workers to do their jobs more effectively.

### ONE CHALLENGE: EFFICIENTLY BRINGING TOGETHER BUYERS AND SELLERS

During the organization's first year, Maternova built an Innovation Index that tracked and covered more than 100 products—some of which were already on the market and others that were still in development. Thousands of users from more than 150 countries visited the site to learn about affordable maternal health innovations. As Wirth described, "We have gotten feedback supporting our hypothesis that this is quite useful to the field because it avoids duplication—a bright biomedicine team looking for a project can focus on



The Maternova homepage

Photo © Maternova

the areas where there are gaps and avoid reinventing the wheel. It is also helpful because clinicians learn about promising tools as they are being developed, offering to test them, find field sites, and then access them at the moment that they are available for sale.”<sup>5</sup>

Maternova also developed a few product bundles and made them available for sale. For example, Wirth and team created an Obstetric Kit with supplies needed to prevent post-partum hemorrhage. It included a wind-up mobile phone charger, a solar-powered headlamp, a calibrated drape to measure blood loss, and a WHO color scale and test strips to detect anemia.<sup>6</sup> Maternova sent prototypes of its kits into the field for testing through its network of connections. The earliest adopters were midwives, nurses, and “globetrotting physicians” who provide training overseas for health workers. “What we heard back,” said Wirth, “was that people liked the idea of bundling, but given resource constraints, they wanted to be able to pick and choose. So if they couldn’t afford the whole bundle, they wanted to take it apart and say, ‘I just want your solar-powered headlamp. I’ll deal with the other things I’m lacking in some other way.’ They also started to ask about other products. They’d read about something in the Innovation Index and then write in saying, ‘How can I get this product?’”<sup>7</sup> There did not seem to be a reliable, easy way for clinicians to get the materials and supplies they needed.

In parallel, Wirth began receiving emails from entrepreneurs and small companies looking for a mechanism to help them sell and distribute their products. Without the backing of a larger company with established distribution channels, it was incredibly difficult for innovators to get their solutions into the hands of the people who could benefit from them. Setting up a new sales and distribution channel to sell a single maternal health product was a daunting and expensive challenge for most young companies. They were eager to tap into a non-proprietary channel that could help them efficiently reach their target users.

At that point, Wirth and her team decided to focus on addressing a second major gap in the maternal health field: the need for a marketplace to efficiently bring together buyers and sellers of lifesaving solutions.

### THE SOLUTION: ESTABLISHING AN ONLINE MARKETPLACE AND CONSOLIDATING DEMAND

As Wirth put it, “We had people who needed these products and inventors trying to get them into the field, and they were both coming to the same place”—the Maternova platform. The team decided it could help address the needs of both audiences by expanding its site to become a more robust marketplace for maternal, newborn, and child health products.

The first step was to decide on a slightly more extensive set of products to offer. “We’re working with entrepreneurs who have done a pilot, or they have a publication—they’re pretty far along but they don’t know how to get their products out into the world,” Wirth said. Maternova’s plan was to start small—with 10 core products—and expand gradually as the organization developed experience and momentum.

Wirth set up a relationship with a fulfillment house and began carrying small quantities of inventory. Maternova promoted its new offerings primarily through social media. “It’s so much more cost effective than running a print ad,” she noted. Physicians, nongovernmental organizations, and overseas health workers began placing orders, which the company filled via direct mail. For example, recalled Wirth, “We’ve had multiple orders from groups in India or Uganda. They’ll place the order online and pay through PayPal,

and then we just send it out.” Another common scenario was that globetrotting physicians would have the supplies shipped to their U.S. addresses and then carry them overseas on their next visit.

Regardless of how the order was fulfilled, “We always ask for very, very detailed feedback,” Wirth

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added. The idea was to enhance the value of Maternova’s knowledgebase by including input from practitioners about products on the site and how they perform in the field. “That feedback can be as powerful as of all the experiments and research that entrepreneurs conduct. So that’s where our platform comes back in. We hope that we can use that to report on results. We want to be about products, but also about outcomes,” she said.

The next step was to begin building sales volume so that the model would become self-sustaining. “We’re looking to build it up with much larger volume,” Wirth explained, “and that requires approaching governments and getting into their systems.” For instance, Maternova was contacted by representatives from Honduras for a bid to supply 7,000 community health centers. “We didn’t expect that, but it happens because of the online search—everybody is working online,” she explained.

As another strategy for increasing its sales volume, Maternova began experimenting with demand aggregation. “One of the problems we found is that manufacturers will only produce products in runs of 5,000 or 10,000. But there are very few customers who want

to buy 5,000 before they've ever tried something," Wirth said. While a handful of international agencies might place an order of this size, most health clinics and hospitals in developing countries were resource constrained and wanted much smaller quantities to address their immediate needs. "So what we're doing is pulling together NGOs and other smaller organizations who want to buy something. If it's something new that nobody has ever tried before, we combine their orders to unlock the minimum quantity. And I'm pretty excited about that because I think that's where a lot of innovators get stuck. They have this great idea that they've tested using prototypes they've made themselves. But then, when it's time to start manufacturing the product, nobody can actually try it because manufacturers won't produce less than 5,000 units." Maternova intended to leverage its network of contacts and its online platform as a mechanism for overcoming this barrier. "One group may need 100 units, and another one needs 30, and another one needs 500. When you put them all together, you're getting closer to the minimums," Wirth said. "And one of these groups might write to someone else and say 'Do you want some too? If we can get the rest of the people, then we can make it happen.'"

Maternova's marketplace model was just getting off the ground, but Wirth and her team were encouraged by their early results. "We're learning a lot as we go. And I think that if entrepreneurs can tap into that experience it will be a value-add," she said. ♦

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#### NOTES

- 1 "Maternal Mortality," World Health Organization, November 2010, <http://www.who.int/mediacentre/factsheets/fs348/en/index.html> (April 2, 2012).
- 2 Ibid.
- 3 Ibid.
- 4 "Who's Got the Power? Transforming Health Systems for Women and Children," Child Health and Maternal Health Task Force, UN Millennium Project, 2005, <http://www.unmillenniumproject.org/documents/TF4Childandmaternalhealth.pdf> (April 2, 2012).
- 5 "Maternova: Creating an Online Portal for Life Saving Maternal Technologies," *WHCC Health Innovations*, April 30, 2011.
- 6 See <http://maternova.net/ob-kit> (April 2, 2012).
- 7 All quotations are from an interview with Meg Wirth conducted by the authors in February 2012 unless otherwise cited.