

Yayasan Bumi Sehat: Birthing Center for Indonesia's Working Poor

By Rajiv Arapurakal

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This past summer, for my global health elective, I had the great fortune of joining the team at Yayasan Bumi Sehat, literally translated to mean Mother Earth Foundation, in Indonesia. This non-profit birthing center was founded in 1995 by Robin Lim to provide high quality prenatal, postnatal and pediatric care for those who cannot pay for the cost of childbirth. Annually, the team delivers about 700 babies and provides over 17,000 health consultations for children and adults.¹ Their efforts are heartfelt and greatly valued by the local and international community.

Robin Lim was named last year's CNN Hero of the year; the honor came with a prize of \$300,000 toward building larger health clinics. She studied midwifery after her sister and another friend died during childbirth, despite access to western healthcare. Though we didn't explore details of the individual cases, it was clear that Robin wanted to preserve life, especially when it came to mothers in labor. Her commitment is unparalleled.

She has also grown the foundation's mission to include sites of unparalleled natural disaster. In Aceh and Haiti, after the recent tsunami and earthquake, the foundation set up prenatal and pediatric care for local families. She recruits globally trained midwives, and now doctors.

Indonesia has the fourth largest population in the world, right after the USA. It is a developing nation, and like many countries, it is still learning how to care for their economically challenged people. The 2012 CIA Factbook reports that Indonesia's maternal mortality at birth in Indonesia at 220 per 100,000 births, one of the highest in Asia.² Ibu Robin is translated to "Mother Robin." She and her team, along with business and community leaders, believed it was time to formalize their activities to create an institution to provide social services and health education, in order to improve the quality of health for mothers and children through prenatal

clinics, labor services and environmental programs for cleaner communities.³

In contrast, the CDC reported U.S. maternal mortality rate (MMR) at 21 per 100,000 in 2010.⁴ In a report sponsored by the UNFP, UNICEF, and the WHO, the MMR has increased (worsened) by 96% from 1990 to 2008, 12 per 1,000 to 24 per 1,000.⁵ This leaves the U.S. ranked 50th in the world. Greece had the best rate at 2 per 100,000. At Bumi Sehat, in 17,000 births there were two maternal fatalities, which might be extrapolated to 12 per 100,000.⁶ The details of those cases were not provided to me. Also, keep in mind that these figures do not include mothers who are transported to hospitals for high-risk deliveries. So these numbers are not all equivalent.

Currently in Indonesia, once a woman gives birth, she may ONLY take the child home AFTER the hospital bills are paid. Until that time, the new mother may visit the child for two feedings daily. A CNN article verifies this story.⁷ The Jakarta Post also corroborates this policy.⁸ As Robin learned of this, she felt even more compelled to step in by employing local midwives to provide free healthcare to expectant mothers and their children. They originally relied on donations from locals and over the years their network of donors has grown significantly. They expanded their offering to Aceh Indonesia after the devastating tsunami that claimed over 200,000 lives and they even developed a clinic in post-earthquake Haiti.

³ Jakarta Post, February 19, 2011, <http://www.thejakartapost.com/news/2009/02/19/robin-lim-gentle-birth-warrior-women-and-children.html>

⁴ CIA Factbook, January 1, 2012

⁵ Trends in Maternal Mortality: 1990-2008, © World Health Organization 2010

⁶ Yayasan Bumi Sehat, Self-reported, 2012

⁷ CNN, March 11, 2011, <http://www.cnn.com/2011/WORLD/asiapcf/03/10/cnnheroes.lim.midwife/index.html>

⁸ Jakarta Post, November 17, 2011, <http://www.thejakartapost.com/news/2011/11/17/robin-lim-campaigning-safe-birthing.html>

¹ Yayasan Bumi Sehat Materials www.bumisehatbali.org/

² CIA Factbook, January 1, 2012

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Mr. Rajiv Arapurakal is in the center of the picture in the black T-shirt. Ms. Robin Lim, founder of the birthing center, is to his left with long black hair, red blouse, and red necklace

My experience was eye-opening. Despite being a small operation, they have a relatively well-organized program for interns and visiting midwives. They also have local and international Obstetrician/Gynecologists available on-call. They help the foreign participants to navigate visa requirements from our local embassies and consulates. They also help provide housing by asking locals to rent rooms for modest prices. The team also strongly recommended that interns stay for three or more months to get a full experience. Language classes are available to learn Bahasa Indonesia; it is a relatively easy language to learn, considering that verbs do not require any conjugation. As I have family in the area, I was able to immerse myself in the community, and I was even able to take rudimentary histories from patients within two weeks, with intensive practice. The language barrier also compelled me to read the patient's body language more closely. Though it is

challenging to be efficient with few resources, the Bumi Sehat team provides a clean, dignified experience.

The midwives themselves have independent spirits which are important, because in each given case, she might have to draw on her autonomy. There are tight guidelines on how each procedure must proceed, but each midwife must have the leeway to make crucial judgments in the moment. In off hours, they teach each other techniques from suturing to discussing how to handle emergent situations, like postpartum bleeding. In the West, many patients readily access information about their own diagnoses or about the basics of nutrition. These clinic patients are often not that fortunate. Much of the local knowledge fund is based on stories handed down by families. The mother-in-law plays a particularly powerful role when it comes to demanding how pregnant woman behave.

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Basic nutrition levels are poor, with many choosing ramen noodles with MSG and soy sauce as a staple. Even when access to fresh vegetables is made easy, cheap or free, the individual usually won't consider changing their diet. According to Bumi Sehat staff, over 90% of women have second or third-degree tear, which is primarily attributed to poor nutrition.

As this is the case, there must always be a senior midwife, defined by logging over 200 deliveries and extensive experience managing third and fourth-degree tears. As they are not a fully functioning hospital, they must have contingency plans in place for potential and eventual complications. The foundation has placed guidelines by which to decide when it is safe to transport patients who require more advanced technology and a wider range of services.

While I was with the team, there was a visiting Ob/Gyn from Italy who sub-specialized in maternal fetal medicine (MFM). He taught me how to use the ultrasound to evaluate both fetus and mother. Other unique experiences included, delivering a baby in a warm water bathtub. The idea is to minimize shock to the baby. Though there is a risk of aspiration, there have been no reports of infants aspirating water during water-births at Bumi. Babies are delivered at all hours, so we were sometimes called in overnight to assist in the delivery.

A few other variations in the culture of childbirth include:

- Skin-to-skin contact within seconds of delivery, before cleaning and drying the child, s/he is placed on mother's breast and nipple is introduced.
- In the first postpartum seconds, APGAR score, sex, airway are assessed.
- The umbilical cord is cut three hours postpartum. Therefore, the placenta is delivered while still attached to the child.
- Circumcisions are not performed. Families that require it will make arrangements elsewhere.
- All children are assumed to breastfeed; health benefits are provided in-person and written material.
- There is, unfortunately, almost NO discussion of HIV/AIDS, as people are reluctant to be tested and, therefore, no related protocol is carried out.
- Families are always welcome to stay for 24 hours and occasionally longer.

One particular variation is the delayed cord-clamping, which has been validated to some extent by a randomized controlled trial published in the BMJ. Infants whose umbilical cords were clamped after 180 seconds vs. <10 seconds, were noted to have higher ferritin levels, reduced incidence of iron deficiency anemia at four months and required less postpartum phototherapy.⁹ These children may be followed for further comparison over years and decades.

There are scores of other variations and subtleties. And some of our obstetricians/gynecologists from Robert Wood Johnson Medical School might shudder to observe this process. But I was pleasantly surprised at how my Ob/Gyn professor from Jersey Shore University Medical Center received my stories of the above details. Each culture must adapt to their audience while providing the best possible care. The Bumi Sehat program has evolved uniquely to provide dignity in care to mothers and young people of Indonesia. I am privileged to have joined them.

I thank Javier Escobar, MD, our associate dean for global health, for supporting my elective and serving as advisor for my independent project with this birthing center. I am sure I will visit with them again in the future. The leadership from Bumi Sehat is developing a framework for future medical student participation, so I hope other students will benefit from this experience.

⁹ *BMJ* 2011; 343 doi:
<http://dx.doi.org/10.1136/bmj.d7157> (Published 15
November 2011)