Issue 38 | Apr | 2015

Global Health link

ENCOURAGING ACTIVISM IN GLOBAL HEALTH THROUGH KNOWLEDGE, INNOVATION AND ENGAGEMENT

Essential Care for Every Baby — a New Curriculum from the AAP

Susan Niermeyer, M.D., M.P.H., F.A.A.P., Professor of Pediatrics in the Division of Neonatology in the School of Medicine at the University of Colorado Anschutz Medical Campus, is an architect of the Helping Babies Breathe® *neonatal resuscitation program.*

This highly regarded training now has a sister program called Essential Care for Every Baby. *Designed by Dr. Niermeyer and her colleagues at the American Academy of Pediatrics (AAP), Essential Care for Every Baby* (ECEB) *uses newly released guidelines from the World Health Organization to teach health care workers and parents around the world how to respond to some of the early dangers faced by babies in resource-constrained settings.*

Logically and chronologically, *Essential Care for Every Baby* (ECEB) is a natural evolution from the content taught in the *Helping Babies Breathe*® program (HBB).

Currently, 2.9 million babies die within the first month of life, accounting for 44 percent of all under-five mortality.[1] These statistics reveal the urgent need for action and education around newborn survival, a need to which ECEB is prepared to respond. The concepts taught in HBB and ECEB are chronologically progressive.

HBB training focuses on keeping babies alive through the first five minutes of life. ECEB picks up at minute six, and emphasizes the care that babies need throughout the first 24 hours.

"We knew when we started HBB that it would not be a standalone course, but we had to start with one [training]," Dr. Niermeyer explains. "When we developed *Helping Babies Breathe*®, there was no global program for neonatal resuscitation, which is why HBB took priority."

Coincidentally, just as past HBB trainees began requesting continued training in newborn care, the World Health Organization (WHO) released updated guidelines in this area, making ECEB a timely addition to the global neonatal care agenda.

The new WHO guidelines are set forth in the *Every Newborn Action Plan.* ECEB offers a technical approach to realizing part of the vision of that plan: a world in which there are no preventable deaths of newborns.

After the risks of intrapartum complications in the first five minutes of life have passed, there are several other risks that must be accounted for and mitigated.

A newborn's health is jeopardized by severe infections, pneumonia, sepsis, and tetanus. There are several clinical actions, however, than can diminish the likelihood that these dangers will become life-threatening.

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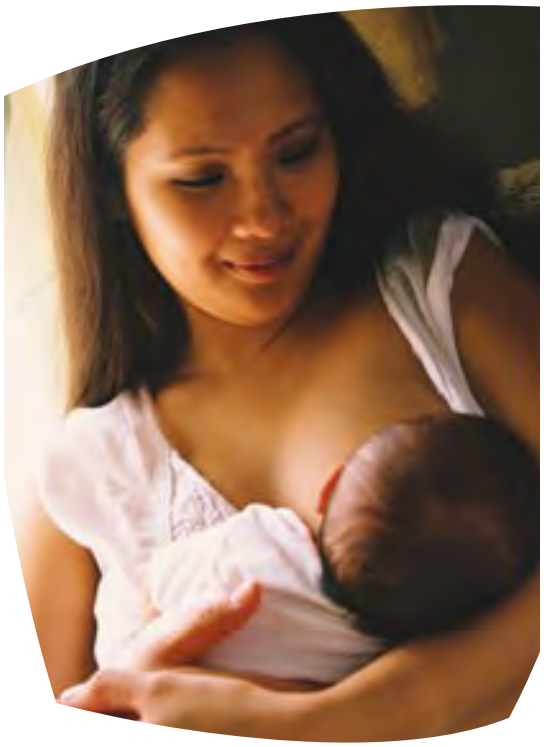
“Los Dos”: The Culture of Combination Breastfeeding in Latina Populations



Maya Bunik, M.D., M.S.P.H., is an Associate Professor of Pediatrics at the School of Medicine, University of Colorado Anschutz Medical Campus and an affiliated partner at the Center for Global Health, Colorado School of Public Health.

After completing medical school at the University of Minnesota and her Pediatric Residency in Colorado, Dr. Bunik worked in Oakland, California for 11 years. She returned to Colorado in 2003 to pursue primary care a research fellowship that included a Masters of Sciences and Public Health from the University of Colorado. Maya specializes in lactation and breast-feeding management and published her book “Breastfeeding Telephone Triage and Advice” with the American Academy of Pediatrics.

Maya’s lactation outreach programs have expanded nationally and internationally, primarily targeting Latina populations. Her current research focuses on the use of mobile technology to improve rates of breastfeeding exclusivity, and the use of phone calls and text messages to troubleshoot breastfeeding and solve problems for new mothers.

The culture of exclusive breastfeeding in the United States is still not an accepted norm. The 2014 Breastfeeding Report by the Centers for Disease Control (CDC) indicated that in the United States, while 79.2% of mothers breastfed at some point, only 18.8% of mothers exclusively breastfeed at six months.

Trends in breastfeeding fluctuate over time, but the pendulum is beginning to shift towards supporting exclusive breastfeeding without additional supplements. Ultimately, the overall attitude towards breastfeeding is heavily influenced by the culture of a given population.

Dr. Maya Bunik chose to specialize in pediatrics because she was drawn to treating patients with diseases that are not initiated from bad habits, smoking, or drug use. She also liked that parents become great advocates for their children, usually complying with suggested treatments.

Her interest in breastfeeding support stems in part from her own experience as a mother, “I found that breastfeeding my own three children was one of the most enjoyable and rewarding parts of motherhood, and I want to give mothers that chance to enjoy breastfeeding, and to meet their feeding goals. I found as a working mother that others could love and care for my babies but I had the unique and intimate relationship with them through nursing.”

> “I want all the home visitors to routinely observe a breastfeeding session when checking mothers postpartum at their homes. They should ensure that the baby is latching on to the nipple and that nursing is happening.”
>
> **Maya Bunik, M.D., M.S.P.H. speaking about the traditional birth attendants home visits in the Trifinio of Guatemala**

Dr. Bunik believes that mothers, in both U.S. and Latin America, have trouble sustaining breastfeeding due to an insufficient support system, physical difficulties with breastfeeding, and/or time management issues related to the return to work or school.

Nonetheless, the benefits of breastfeeding, as stated by the 2014 Surgeon General’s Report, cannot be ignored. Breastfeeding decreases the risk of maternal breast and ovarian cancers, as well as cardiac disease in mothers.

The benefits to infants are equally important; breastfeeding reduces the risk of Sudden Infant Death Syndrome (SIDS), lowers the likelihood of childhood obesity, and protects against asthma and infections such as diarrhea, ear infections, and pneumonia.

The largest infant nutrition program is the Women, Infants, and Children (WIC) federal/state program. WIC supports half of infants in the U.S. with formula but has made efforts to undo the perception that it is mostly a formula distribution program.

Mothers can now receive more food for themselves when they choose breastfeeding. Peer counseling is also available for support, and in some areas, an International Board Certified Lactation Consultant (IBCLC), like Dr. Bunik, may assist with any problems.

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For instance, delayed cord clamping affords many advantages to a newborn. In resource-limited settings where blood transfusions carry the risk of transmitting infection, delayed cord clamping allows more of the mother's placental blood to reach the baby.

This provides better protection from iron deficiency and anemia. Dr. Niermeyer describes this in more detail: "There is a surge of placental blood to the baby when they cry for the very first time and the lungs expand. Research from the developing world showed that delayed cord clamping imparts better iron status and better responsiveness to breastfeeding. This is something we [western biomedical doctors] have 'learned back' from the developing world."

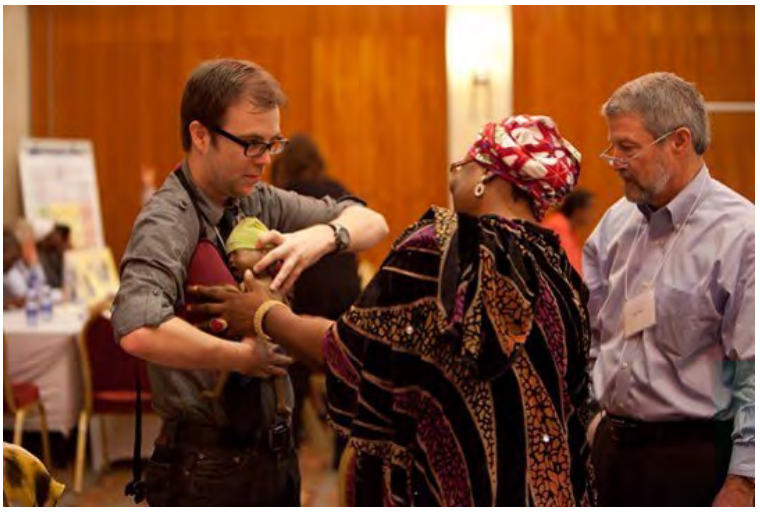
ECEB also teaches the importance of thermal care. In resource limited settings, where two dry, clean cloths are a rare luxury, keeping the baby warm through skin-to-skin contact is essential.

"Skin-to-skin thermal care is so important because of the baby's wetness. However, among informally trained healthcare workers, this kind of warming is not intuitive, and is met with some resistance," comments Dr. Niermeyer. "When babies are taken away from their mothers and put in a 'newborn corner' there is almost always immediate cord clamping and late breastfeeding. This elevates the risk of hypothermia and feeding problems."

Dr. Niermeyer describes these problems as "simple, but oddly invisible," meaning there are fairly low-tech solutions to the issues, but identifying them within a short period of time can be challenging.

For this reason, ECEB teaches that a complete assessment of the babe within 90 minutes of birth is critical. The assessment includes a physical exam, measured temperature, measured weight, a classification of the baby and corresponding plan.

The *Essential Care for Every Baby* education takes place over roughly two days. "Like *Helping Babies Breathe*®, the learning model used in ECEB involves pairs acting as mothers and birth attendants. There can also be triplet work, where one participant acts as a care provider while the other two role play as 'mother,' as well as a 'father,' or 'sister,' or 'friend.'



Essential Care for Every Baby Field Testing with the World Health Organization in Addis Abbaba, Ethiopia in May 2014

"It's a pretty new concept in the developing world for parents to learn from a birth attendant, but the curriculum highlights direct public health education for parents through interaction about hygiene, neonatal danger signs, immunizations, and mothers' healthy breastfeeding."

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Susan Niermeyer, M.D., M.P.H., F.A.A.P.
Professor of Pediatrics, Division of Neonatology in the School of Medicine, University of Colorado Anschutz Medical Campus

Another development in the ECEB curriculum relates to quality improvement. According to Dr. Niermeyer, "This component explicitly says 'Now you have the knowledge and skills [to provide care], but that's not enough. To see the benefit of this approach, you are going to have to make changes in your health facility.' We ask them at the end of the course, 'What new things did you learn that you want to put into practice in your health facility? What things are you no longer going to do?'"

Successful early newborn care results in a baby free of infection, with a normal temperature, who is breastfeeding. Though these objectives seem straightforward, it may require adjusted behaviors in hospital administrators, doctors, birth attendants, pharmacists, and families. An ECEB trainee can help to catalyze changes among these stakeholders, and part of the training is discussing how to do just that.

Although the ECEB training is open to all kinds of practitioners, people already teaching the *Helping Babies Breathe*® curriculum in-country will be the initial target audience for the ECEB trainings.

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Ideally, trainees will work in first level health facilities where births take place. Beyond this, the Global Development Alliance determines priority locations. According to the *Every Newborn Action Plan*, two-thirds of newborn mortality happens in just 12 countries: India, Nigeria, Pakistan, China, Democratic Republic of the Congo, Ethiopia, Bangladesh, Indonesia, Angola, Kenya, United Republic of Tanzania, and Afghanistan.[1]

The very first ECEB course occurred in May 2014 in Addis Ababa; the program is now being rolled out in cities around the world.

A third training, *Essential Care for Small Babies*, will complete the triad of programs composing *Helping Babies Survive* (HBS).

Essential Care for Small Babies has an expanded set of considerations for babies born under 2500 grams, with temperature and feeding problems. The goal of this program is to maintain the wellness of a small baby that is born fairly healthy.

The curriculum teaches how babies between 1500-2500 grams can be supported with antenatal corticosteroids (for improved breathing), and cup feeding or nasogastric tube feeding. The *Small Baby* program will make its debut in Dhaka, Bangladesh in April 2015.

Helping Babies Survive is a technical approach to address the "unfinished agenda" of the Millennium Development Goals for women and children.

This high-impact intervention will improve the visibility and urgency of newborn mortality. *Helping Babies Survive* employs low-tech, high fidelity simulations of real-life births. Where other essential care programs have utilized complex, high-tech didactic materials, *Helping Babies Survive (HBS)* applies hands-on work in pairs, along with simple visual guides.

Dr. Niermeyer explains, "We have tried to shape the material in a way that is more accessible and usable to learners. An important theme of HBS courses is that we listen to participants in order to understand the cultural wisdom of each area. We will encourage countries to make safe adaptations to the course because the resulting sense of ownership is important to its success. *Essential Care for Every Baby* will be the first course released digitally, which will allow countries to make their culturally-specific modifications more easily."

By encouraging stakeholders to first adopt, then adapt HBS programs, Dr. Niermeyer hopes to achieve saturated coverage of high quality neonatal care. "The causes that mediate older child mortality (acute respiratory infection, diarrhea, malaria) are really different from neonatal mortality. There is a very short window of time to respond to a sick newborn. Someone needs to be on-location with proper equipment at the time of birth."

By chronologically following the guidelines set forth by *Helping Babies Survive*, this short period of response time becomes the window of opportunity rather than a postponement of inevitable fate.

1. Every Newborn: an Action Plan to End Preventable Deaths. World Health Organization. June 2014. http://www.everynewborn.org/Documents/Full-action-plan-EN.pdf

To learn more about Dr. Niermeyer and her work, contact her at susan.niermeyer@ucdenver.edu.

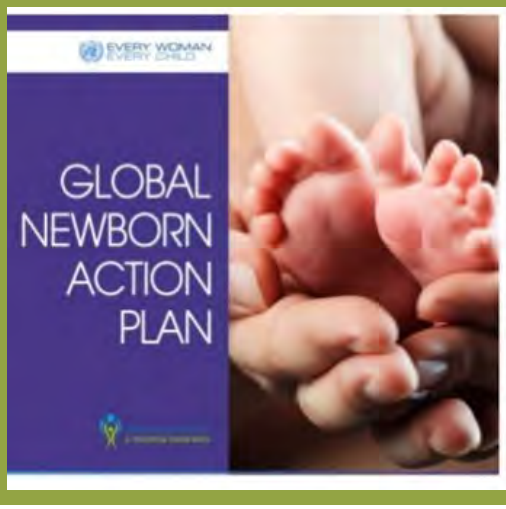
To learn more about Essential Care for Every Baby, go to the AAP website at: https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/global/Pages/eceb.aspx

Want to sign up for an Essential Care for Every Baby Course? See page 7 of this newsletter for more information on a course being held on the University of Colorado Anschutz Medical Campus this fall..

By Molly Terhune

Helping Babies Survive

Ending preventable newborn deaths: GNAP Strategic Approaches



1. Leadership and political commitment: country and global
2. Focus on high impact interventions
3. Move towards universal coverage of essential maternal and newborn care
4. Address the gap in quality of care
5. Create a supportive environment
6. Ensure mutual accountability

"Los Dos": The Culture of Combination Breastfeeding in Latina Populations

(Continued from page 2)

Even though this new policy is moving in the right direction, Dr. Bunik believes there is still a need for more breast pumps and lactation expertise at WIC sites.

Breastfeeding Culture in Latina Populations

The national recommendation by the World Health Organization (WHO), the American Academy of Pediatrics (AAP), and the Academy of Breastfeeding Medicine (ABM) is exclusive breastfeeding until six months of age followed by progressively adding solids from six months to a year while continuing to breastfeed.

Ideally, the first introduced foods should include meats as they are composed of high levels of zinc and iron. In her research studies at Denver Health, Dr. Bunik found that if mothers give their child 3+ bottles of formula by the fourth day postpartum, their rate of breastfeeding declines exponentially.

Mothers who depend on large amounts of formula initially and who do not continue to extract milk at the same time find that their bodies cease to make milk because of the increased production of inhibitory hormones. To avoid this problem, 3-4 weeks should be allowed for full milk development.

"Combination feeding is an unfortunate result of acculturation," stated Dr. Bunik. Latina mothers typically use "los dos," combination feeding (breast milk and formula), immediately after birth. In contrast, most African American mothers rarely begin breastfeeding.

Nonetheless, some barriers to breastfeeding are cross-cultural: sometimes, mothers will breastfeed in the hospital but not continue once they return home. Sickness, of the mother or baby, will often interrupt breastfeeding.

However, not all Latin countries are alike: in Colombia, a mother needs a doctor's order to get formula. In Guatemala, Dr. Bunik found that at times mothers have commonly returned to their homes while their infant is still in the hospital located an hour away. During these separations, it is not customary for mothers to manually express milk to maintain their supply.

Dr. Bunik recalled a patient who delivered her first child in Mexico by C-section. This mother needed antibiotics afterward, and consequently was incorrectly told to not breastfeed her baby. Immigration status, years of acculturation, home country traditions, and socioeconomic status all come into play to determine breastfeeding patterns among Latina populations in the U.S.

While working in Guatemala last summer, Dr. Bunik found that mothers often face breastfeeding challenges. Trifinio is a small area outside of Coatepeque that consists of 13 communities comprised of approximately 25,000 people. Many of the families earn their living working at the Banasa Banana Farm and make approximately $10 USD per day.

Maya (middle front row) posing with traditional birth attendants in the Trifinio of Guatemala who are proudly displaying their certificates of completion from a breastfeeding lactation course Maya administered.

After having a baby, these women follow a "cuarentena" and do not leave their house for forty days for fear of infection. Many mothers believe that if the *cuarentena* is violated, they will irreversibly lose the ability to produce milk.

Additionally, many mothers don't breastfeed because "No Tengo Leche"—insufficient milk supply. However, less than 5% of mothers actually encounter this problem. Unfortunately, when this happens, formula is the solution.

Many mothers also have difficulty believing that breast milk alone can supply the baby with enough nutrition and water. However, with 80% water content, breast milk is the best solution for children's nutrition. Many mothers will supplement breastfeeding with water, yet in regions such as Trifinio, the water is unclean and often leads to diarrhea and dehydration—concerns that further stress the importance of proper nutrition through breastfeeding.

Dr. Bunik donated a Medela Symphony pump to the local hospital to help local mothers learn how to and begin pumping, and conducted multiple lactation workshops in Trifinio. She is returning in the near future to focus attention on the need for breast pumping when babies are sick or born premature as breast milk will significantly aid in child growth during these times.

Dr. Bunik comments that, "I want all the home visitors [traditional birth attendants from the community] to routinely observe a breastfeeding session when checking mothers postpartum. They should ensure that the baby is latching on to the nipple and that nursing is happening."

Until she returns, Dr. Bunik will hold weekly telemedicine video conversations with the traditional birth attendants to review breastfeeding topics from her book.

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"Los Dos": The Culture of Combination Breastfeeding in Latina Populations

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Dr. Bunik found that mothers who are successful in sustaining breastfeeding were empowered enough to tell family members why breastfeeding was important.

Nonetheless, this culture still prioritizes combination feeding even though, as demonstrated through focus groups, it is understood that breastfeeding alone is optimal for infant nutrition.

Ongoing Research and Intervention

Dr. Bunik found that prenatal intervention is the most effective way to increase breastfeeding.

In a recent abstract, Dr. Bunik stated that, "Use of social media to affect health behavior change is growing, but there is little evidence that this results in positive changes in behavior or health. We sought to explore benefits of using a mobile phone application (app) to effectively and conveniently support new mothers with breastfeeding."

This new mode of communication is available when mothers are in need of support, commonly late at night, and is expected to improve self-efficacy and breastfeeding rates among participants. Eventually, Dr. Bunik hopes to develop a secured bilingual video communication application to support mothers through a visual medium.

Dr. Bunik is hopeful for a change in breastfeeding culture. Under the Affordable Care Act all insurances must provide mothers with a breast pump. Despite this enactment, mothers receiving Medicaid still have trouble gaining access to pumps, as WIC remains the main supplier of breast pumps, which are in short supply.

In another recent shift, the CDC and the National Institute for Children's Health Quality (NICHQ) has begun to support

Maya, while working in the Trifinio, getting a ride to do home visits.

"baby friendly" birth centers that support exclusive breastfeeding.

In Colorado alone, there are 55 birth centers, yet only 3 are truly "baby friendly." Dr. Bunik stated, "Instead of formula as a solution, we need to give the strong message to mothers that we want to help if they are having pain or problems or are lacking confidence in their milk supply when they are at home in the first days and weeks."

Additionally, Dr. Bunik anticipates change in media representation of breastfeeding to help desensitize the idea of women breastfeeding in public. She believes that targeting these cultural attitudes of breastfeeding during prenatal stages will be most effective in improving the habit of exclusive breastfeeding.

With all that is known about the benefits of breastfeeding for mother and child, it is hopeful that the upward trend will continue to rise.

To learn more about Dr. Bunik and her work, contact her at maya.bunik@childrenscolorado.org.

Dr. Maya Bunik, Medical Director of the Child Health Clinic is a recipient of the **2015 Outstanding Service Award.** Children's Hospital Colorado Medical Staff nominate potential recipients; here are a couple of the comments submitted on behalf of Maya and her work.

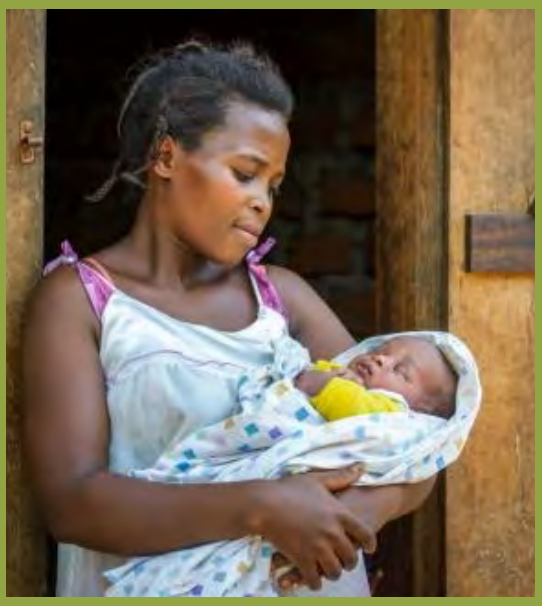
"As Medical Director of the Child Health Clinic, Dr. Bunik has spearheaded the complete redesign of the clinic's model, which now provides top notch pediatric primary care, delivers continuity for both the patients and the medical trainees, and offers comprehensive integrated wrap-around services (CLIMB, lactation, mental health) that is a model nationally."

"The Child Health Clinic was recently visited by a group from UCSF who compiled a report about "High Performing Teaching Clinics in Primary Care" for both child and adult health. The Clinic was chosen as one of just two pediatric programs, and one of 12 total nationally, to receive this comprehensive review and site visit. Dr. Bunik should be commended for building an efficient and effective primary care delivery system that has become a national model for excellence."

Congratulations Maya!!

Save the Date!!

Essential Care for Every Baby Course



When: October 1-2, 2015
Where: University of Colorado Anschutz Medical Campus

Registration will open this summer.
(Registration Fees will be announced at that time.)

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Questions? Contact Michelle Shiver at michelle.shiver@ucdenver.edu

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Don't miss the last lectures for Spring 2015!!

April 8, 2015, 12 — 1 p.m.
Education Building 2 North, Room 1202, Anschutz Medical Campus
Mohammed Shaheen, Associate Professor of Public Health, Former Dean of School of Public Health, Al Quds University, Palestine
Topic: Health in the Context of Political and Economic Exclusion: The Palestinian Case

April 22, 2015, 12 — 1 p.m.
Education Building 2 North, Room 1202, Anschutz Medical Campus
Ed Havranek, M.D., Professor of Medicine, Division of Cardiology, School of Medicine, University of Colorado Anschutz Medical Campus
Topic: Meeting the Challenge of Cardiovascular Disease in Africa

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