



Horn of Africa Neonatal Development Services

1st Quarter 2014

Horn of Africa Neonatal Development Services (HANDS) is a non-profit organization dedicated to saving infants' lives in Ethiopia by facilitating the implementation of skilled medical care by the local medical professionals.

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Organizational Announcements

Our HANDS team has been busy this past quarter preparing for an eventful and successful 2014 for our organization, and we would like to begin by sharing a few important announcements.

Mimi Kebede Zerihun has assumed the role of Secretary in light of Twebesta “Toby” Shifarrow’s departure. Ms. Zerihun will continue to perform her previous duties as the Public Relations Coordinator while we search for a replacement.

We have also welcomed Raymond Laberge to our executive committee as the head of our neonatal technology and equipment development division. Mr. Laberge is a neonatal respiratory therapist who travelled with other members of HANDS to Ethiopia in 2012.

Professor Abraham Hailamlak, Dean of the Jimma Medical School in Ethiopia, has been named the national Physician of the Year. As a proud partner to this organization and the reason that we began our work with the Jimma Health Science Center, we sincerely congratulate Professor Hailamlak on this award and thank him for his continued support.

UNICEF Data Suggests Improvements

We would like to take this opportunity to share some encouraging news from data released by the United Nations Children’s Fund (UNICEF) in December 2013. When considering factors that may directly affect the health of newborns, one can conclude that Ethiopia is showing significant signs of improvement in infant’s morbidity and mortality rates. While the full data table is viewable on UNICEF’s website, we have selected a few key points to analyze within this newsletter in hopes of prompting discussion and awareness.

Some of the major achievements that can be seen from this data are:

- Under-5 death rate has decreased by 67% from 1990 to 2012.
- Under-1 death rate has decreased by 64% from 1990 to 2012.
- Life expectancy has increased from approximately 43 years to 63 years of age over the last 40 years.
- Crude death rate of the general population has decreased by 63%.

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Ethiopian Health Statistics

Revised December 24, 2013

Basic Indicators	
Under-5 mortality rate (U5MR), 1990	204
Under-5 mortality rate (U5MR), 2012	68
Infant mortality rate (under 1), 1990	121
Infant mortality rate (under 1), 2012	47
Neonatal mortality rate 2012	29
Nutrition	
Low birthweight (%) 2008-2012*	20
Early initiation of breastfeeding (%), 2008-2012*	51.5
Exclusive breastfeeding <6 months (%), 2008-2012*	52
Health	
Use of improved drinking water sources (%) 2011	49
Immunization coverage (%) 2012, BCG	80
Immunization coverage (%) 2012, Newborns protected against tetanus	68
HIV/AIDS	
Adult HIV prevalence (%) 2012	1.3
Women living with HIV (thousands) 2012	380
Education	
Number per 100 population 2012, mobile phones	23.7
Number per 100 population 2012, Internet users	1.5
Demographic Indicators	
Population (thousands) 2012, total	91728.8
Population (thousands) 2012, under 5	14094.5
Population annual growth rate (%), 1990-2012	2.9
Crude death rate, 1970	21.3
Crude death rate, 2012	7.8
Life expectancy, 1970	42.9
Life expectancy, 2012	63
Women	
Life expectancy: females as a % of males 2012	105.2
Contraceptive prevalence (%) 2008-2012*	28.6
Antenatal care (%) 2008-2012*, At least one visit	42.5
Antenatal care (%) 2008-2012*, At least four visits	19.1
Delivery care (%) 2008-2012*, Skilled attendant at birth	10
Delivery care (%) 2008-2012*, C-section	1.5
Maternal mortality ratio , 2010, Adjusted	350
Maternal mortality ratio, 2010, Lifetime risk of maternal death (1 in:)	67
Disparities By Residence	
Skilled attendant at birth (%) 2008-2012*, urban	50.8
Skilled attendant at birth (%) 2008-2012*, rural	4

Now, let's analyze some of the data points that are directly or indirectly associated with the health status of newborns in Ethiopia.

Delivery Attendance

The percentage of skilled medical professionals attending deliveries has improved over the years, however that number is still low. We anticipate that the presence of health posts will assist with tackling this problem much more quickly. Generally speaking, most babies at birth need minimal resuscitation, including drying and keeping their body temperature within normal range. Of those who need further intervention, the majority can be managed if basic resuscitation is applied immediately at birth. This can be done even in the most remote areas of the country if the birth attendants are trained in an academic center with acceptable neonatal care. Currently, HANDS, in collaboration with the Jimma Medical School, is attempting to make significant strides towards accomplishing this goal.

Antenatal Care

Only 19% of mothers have at least four visits during their pregnancy. Most neonatal problems encountered at delivery or within the first few days of life can be anticipated, or even prevented, if the mother would have had proper antenatal care during the pregnancy. For example, multiple pregnancies (i.e. twins or triplets) pose a significant risk to the mother and newborns as well. Having antenatal care would allow a health practitioner to plan accordingly for the delivery of these high-risk pregnancies.

Breast Feeding

Approximately half of babies born in Ethiopia are initiated with breast feeding, and only half of those babies have been exclusively breast fed by their first 6 months of life. These numbers should be increased due to the multiple advantages of breast feeding for both the baby and mother. It is sterile and contributes to the baby's natural immunity from diseases like gastroenteritis. The constituents of breast milk are conducive to absorption by the baby, thus promoting the infant's growth. Furthermore, breast feeding has been known to lead to less emotional lability during the post-partum period, including a lower incidence of post-partum depression, and lowers a mother's chance of having breast or ovarian cancers. Financially, breast feeding is also the cheaper alternative.

Clean Water Supply

Ethiopia has taken large strides in tackling the problem of water supply, with 49% of the population now having the use of an improved water source. The advantages of having a clean water supply are obvious, yet means of dispensing that water for use must still be explored. Though it may look simple, methods involving barrels with a water tap on the bottom could prevent cross-contamination. Experts in this area would likely be able to suggest even better ideas.

Immunization

One of the leading causes of infant mortality and morbidities in Ethiopia is tetanus, for which only 68% of newborns have been immunized. Not only do



Baby mannequins used in neonatal resuscitation classes.



Teaching a new mother feeding skills.

infants require immunizations, but women of childbearing age should also be protected. One of Ethiopia's significant achievements has been the creation of health posts throughout every corner of the nation. Using these health posts, one has a much better chance of addressing this need in women during pregnancy and at the time of delivery. Current CDC guidelines in the United States suggest the following:

- Healthcare personnel should administer a dose of Tdap (Tetanus-Diphtheria-Pertussis) during each pregnancy irrespective of the patient's prior history of receiving Tdap.
- For maximum maternal antibody response and passive antibody transfer to the infant, optimal timing for Tdap administration is between 27 and 36 weeks of gestation.
- Women who were not previously vaccinated with Tdap prior to or during the pregnancy should receive the vaccine immediately post-partum.

Human Immunodeficiency Virus (HIV)

The prevalence of HIV in the adult population of Ethiopia is 1.3%. HIV transmission from mother to child during pregnancy, labor and delivery, or breastfeeding is known as perinatal transmission and is the most common route of HIV infection in children. The largest success in the management of HIV infections has been seen to be prevention of this perinatal transmission. With the right steps the risk of transmission can be lowered from 20% to less than 2% if the mother receives antiretroviral drugs, the baby is delivered via cesarean-section, and breastfeeding is avoided. Newborn babies born to HIV-infected mothers are also given medicine to protect them against infection.

Communication Technology

Recent data suggests that 23.7 per 100-population utilizes mobile phones and 1.5 per 100-population uses the Internet. These numbers are very exciting and are only expected to increase with time. Using these communication technologies, we hope that knowledge and experiences will be shared throughout the country, as well as globally. To do our part, HANDS will continue using its website and Facebook page to achieve this goal.

Next Steps

We believe strongly that the involvement of multiple organizations comprised of a variety of specialties or professions, both medical and non-medical, is needed to address these issues. This will require the involvement of local Ethiopian professionals and orchestration by the Ethiopian Ministry of Health.

We hope the above analysis will trigger thought and discussion among individuals and organizations residing in the developed world. We are willing to work with local Ethiopian professionals towards the common goal of upgrading neonatal care in Ethiopia through the exchange of combined knowledge and experiences.

-HANDS Team

How You Can Help

Would you like to get involved with HANDS by volunteering your time and talents?

We have volunteer opportunities for skilled, talented and dedicated people in the following areas:

Clinical Staff

- Neonatologist
- Neonatal Nurses
- Neonatal Respiratory Therapists
- Pharmacists

Non-Clinical Staff

- Administrative Assistance
- Fundraising
- Marketing
- Shipment
- Travel Arrangements
- Website Maintenance

We welcome monetary donations in any amount. Your contributions will enable us to continue our work to improve neonatal health care facilities and the delivery of medical care to newborn babies in Ethiopia.

To volunteer or make a donation, please contact us at:

Horn of Africa Neonatal Development Services, Inc.

16501 Shady Grove Road
PO Box 10002
Gaithersburg, MD 20898

Email:
info@handsforbabies.org

Website:
handsforbabies.org

Facebook:
facebook.com/handsforbabies

Twitter:
@handsforbabies