



Supporting
SAFE BIRTH

Educating Indigenous Midwives and Birth Attendants

Rotary
Club of Madison
West Towne-
Middleton



Global Grant
GG1876079

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- Why Guatemala?
- Statistics overview
- The midwives: *Las comadronas*
- Previous experiences
- Helping Mothers & Babies Survive
- Questions



Health in Guatemala:

Facts & Figures



- Population of Guatemala: >15 million; half are under age 22
- More than half of the population is indigenous & live on less than \$2 USD per day
- Every day, 2 women die in Guatemala giving birth

Most of these deaths are preventable.

The Midwives: *Las Comadronas*



- 24 indigenous languages -24,000 comadronas
- Trusted members of Mayan communities
- Limited education
- Training lacks cultural sensitivity
- Poverty & health disparities
- Government discrimination
- Lack of Ministry of Health resources & support
- Gender-based violence (UNICEF, 2015)

• Chary et al., 2013; UNICEF, 2015)

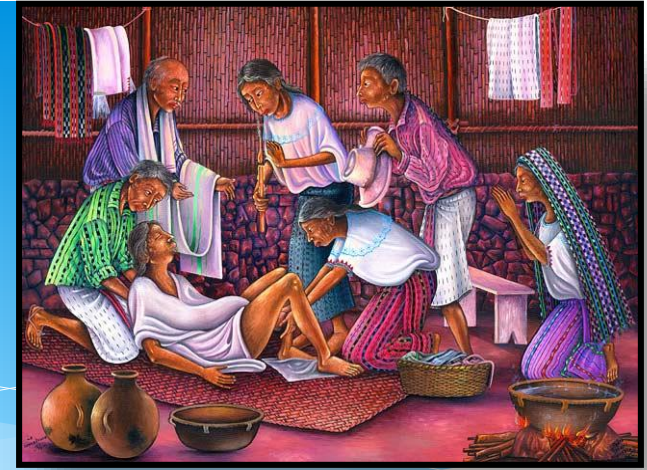


Lack of Pregnancy & Birth Health Care Options



Comello, N. 2008. Chiquimulilla Clinical de Salud, Guatemala; Comello, N. 2009. Roosevelt Hospital, Guatemala City, Guatemala

Current Government Training for Comadronas



Sistema Integral de Atención en Salud (SIAS) (Ministry of Health)

- Required training (lecture) occurs monthly lasting ~ 4 hours
- Basic hygienic practices for birth
- Encourage referral to health center for pregnancy care and vaccinations
- Training to recognize and refer high risk women & emergency cases to the nearest hospital
- Receive rudimentary birth kit

Midwives are not respected by government & medical systems

Often blamed for high infant & maternal mortality rates

Other factors:

- 1) Poor maternal nutrition
- 2) Lack of access to clean water/sewage handling
- 3) Too many pregnancies, too closely spaced
- 4) Lack of education
- 5) Overall high levels of poverty



Infant & Neonatal Mortality



- High maternal, infant, and neonatal mortality rates (United Nations, 2015)
- Millennium Development Goals Four and Five performance (UN, 2015)
- New Sustainable Development Goals (SDGs) Three & Five
 - **Infant mortality** (< 1 year) : **27/1000** live births (UNICEF, 2015)
 - USA: 6/1000; Sweden: 3/1000
 - More than half of infant deaths occur in the neonatal period
 - **Neonatal mortality** (< 6 weeks) : **15/1000** live births
 - USA: 4/1000; Sweden: 2/1000
 - $\frac{3}{4}$ of neonatal deaths occur during the 1st week of life
 - Almost 75% occur in the 1st 24 hours



Primary Causes of Death for Infants

- 1) Lack of appropriate newborn resuscitation
- 2) Congenital malformations
- 3) Diarrhea & other gastrointestinal problems



Maternal Mortality:

of deaths per 100,000 live births



- One of highest rates in Latin America
- **113/100,000** live births [**21 in U.S., 4 in Sweden**]
- **163/100,000** for **indigenous** vs **77/100,000** for non-indigenous

Primary Causes of Death for Mothers

- | | |
|----------------------------------|-----|
| 1) Postpartum hemorrhage | 41% |
| 2) Eclampsia | 25% |
| 3) Postpartum sepsis (infection) | 14% |

These deaths are preventable

Need improved access to high-quality obstetrical care



Prior Experiences in Guatemala



Lessons Learned Along the Way....



Comello, N. 2009. San Juan Tecuaco, Guatemala

Hilda's story



Innovative programs for low-resource countries



Helping Mothers Survive (HMS) & Helping Babies Survive (HBS)

- WHO, USAID, JHIEPGO, UNICEF, American Academy of Pediatrics collaboration (AAP, n.d.; Evans et al., 2014; Niermeyer, 2015)
- Improved knowledge and confidence (Evans et.al, 2014; Jhpiego, 2015)
- Low-dose, high-frequency simulated practice (Evans et al., 2014; Niermeyer, 2015).



Helping Mothers & Babies Survive

GOALS: To equip frontline health workers with knowledge & skills they need to prevent mothers & babies from dying on the day of birth & during the first postpartum weeks

Helping Mothers Survive

- Bleeding after birth
- Pre-eclampsia/Eclampsia
- Threatened Preterm Birth
- Essential Care for Labor & Birth
- Essential Care for Complicated Labor & Birth

Helping Babies Survive

- Helping Babies Breathe
- Essential Care for Every Baby
- Essential Care for Small Babies

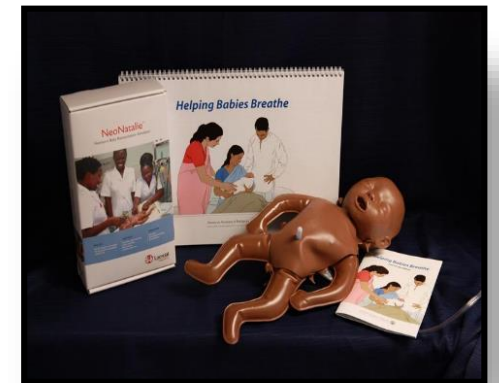
Helping Mothers & Babies Survive

Clinical simulations with mannequins

Helping Mothers Survive: Mama Natalie



Helping Babies Breathe: Neo Natalie & Preemie Natalie

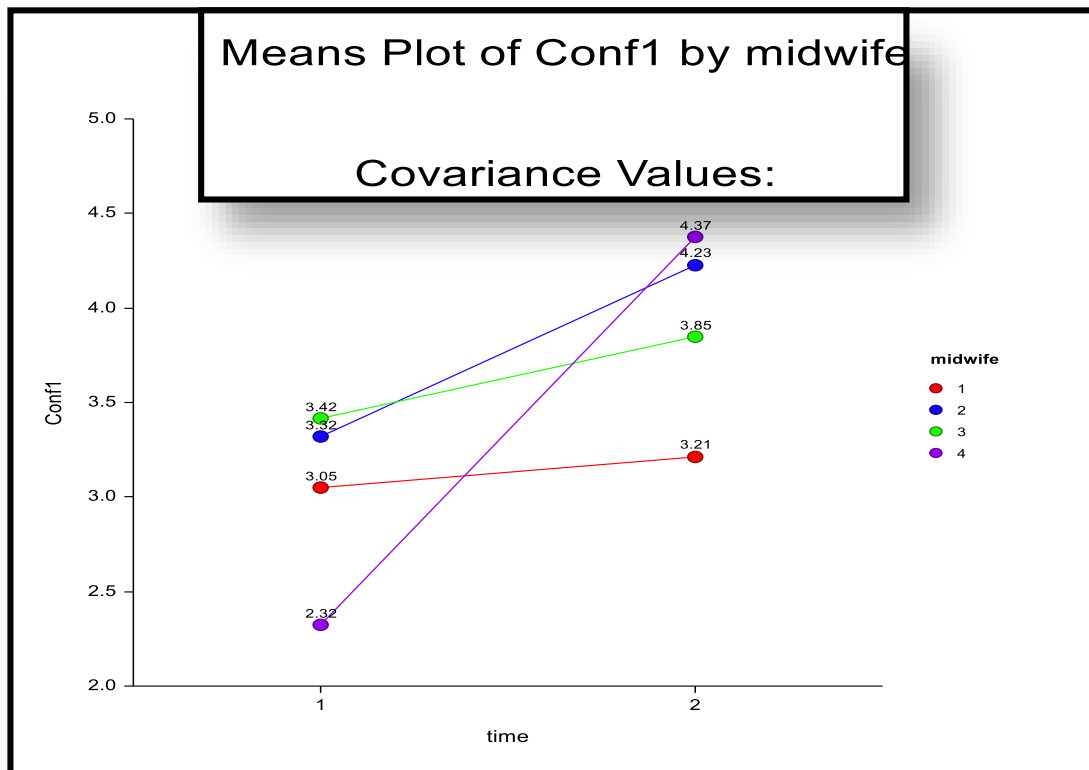


August 2016 Project Results

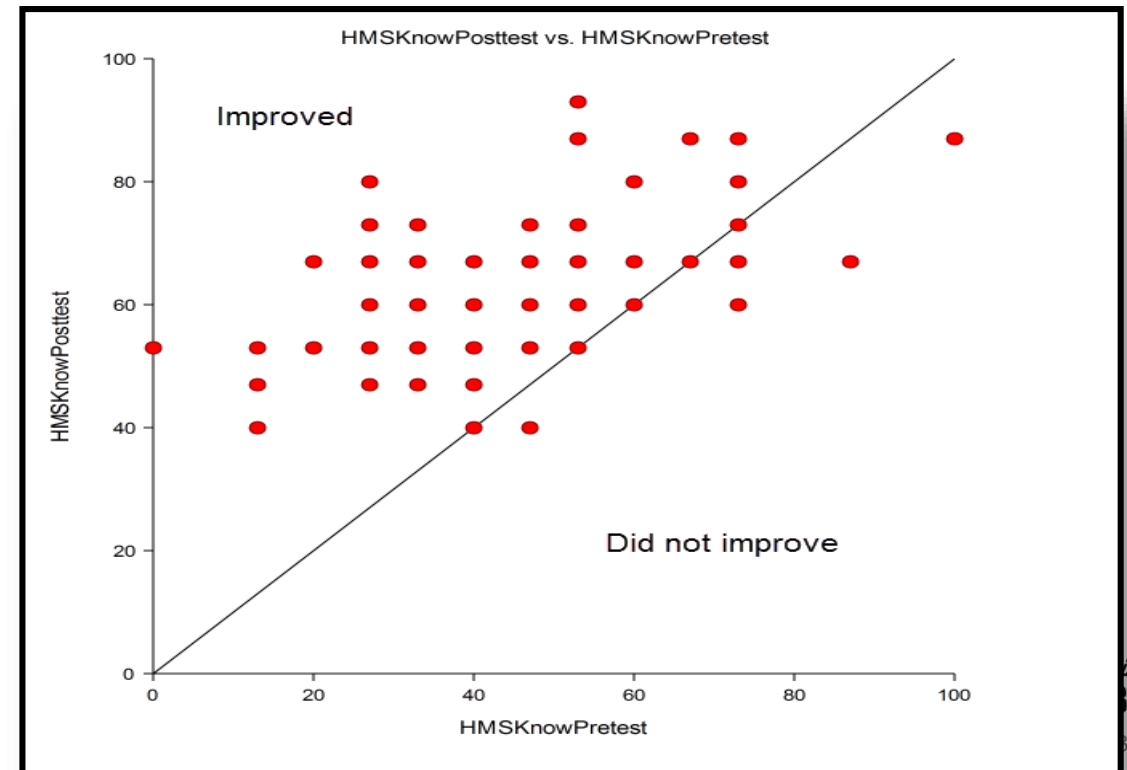
Helping Mothers Survive-Bleeding after Birth

Pre-and Post-Tests-89 participants

Confidence Results



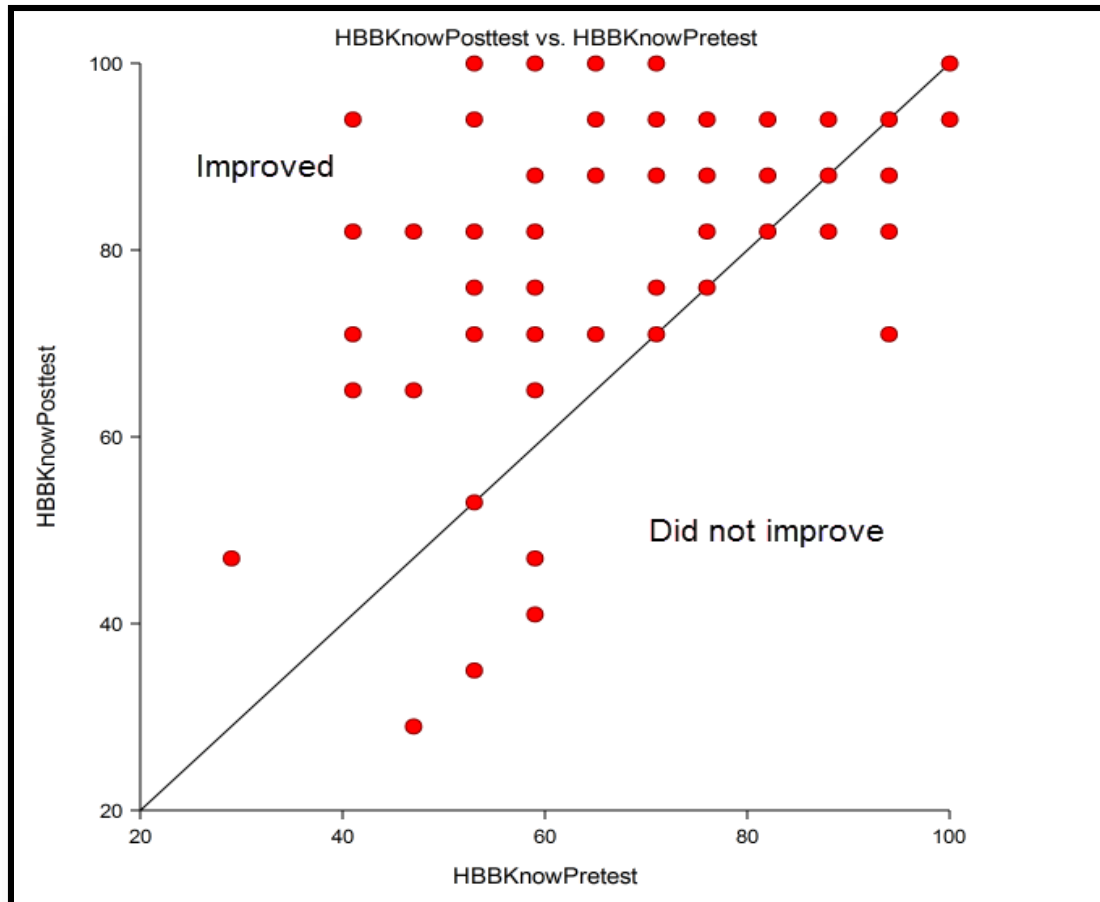
Knowledge Results



August 2016 Project Results:

Helping Babies Breathe

Pre-and Post-Tests, 89 participants, August 2016



August 2016 Project Results:

Helping Mothers Survive & Helping Babies Breathe

Results: Objective Structured Clinical Examinations (OSCE)

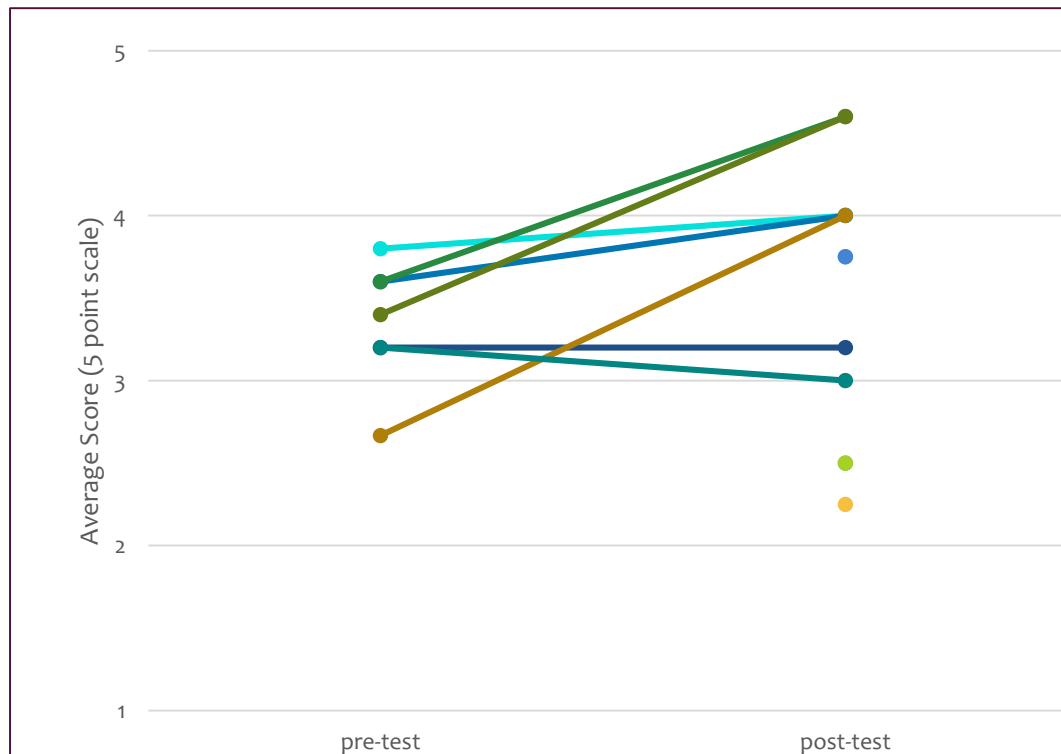
OSCE Post -Test Score Percentage	Count	%
HMS OCSE 1 3 rd Stage Management	92	100.00%
OSCE 2 Retained Placenta Management	92	98.92%
OSCE 3 Severe postpartum hemorrhage	91	97.85%
HBB OSCE 1 Bag & Mask Ventilation	92	100.00%
OSCE 2 Newborn resuscitation-First steps	91	100.00%
OSCE 3 Newborn resuscitation scenario	80	97.86%

February 2018 Project Results-Chiquimulilla

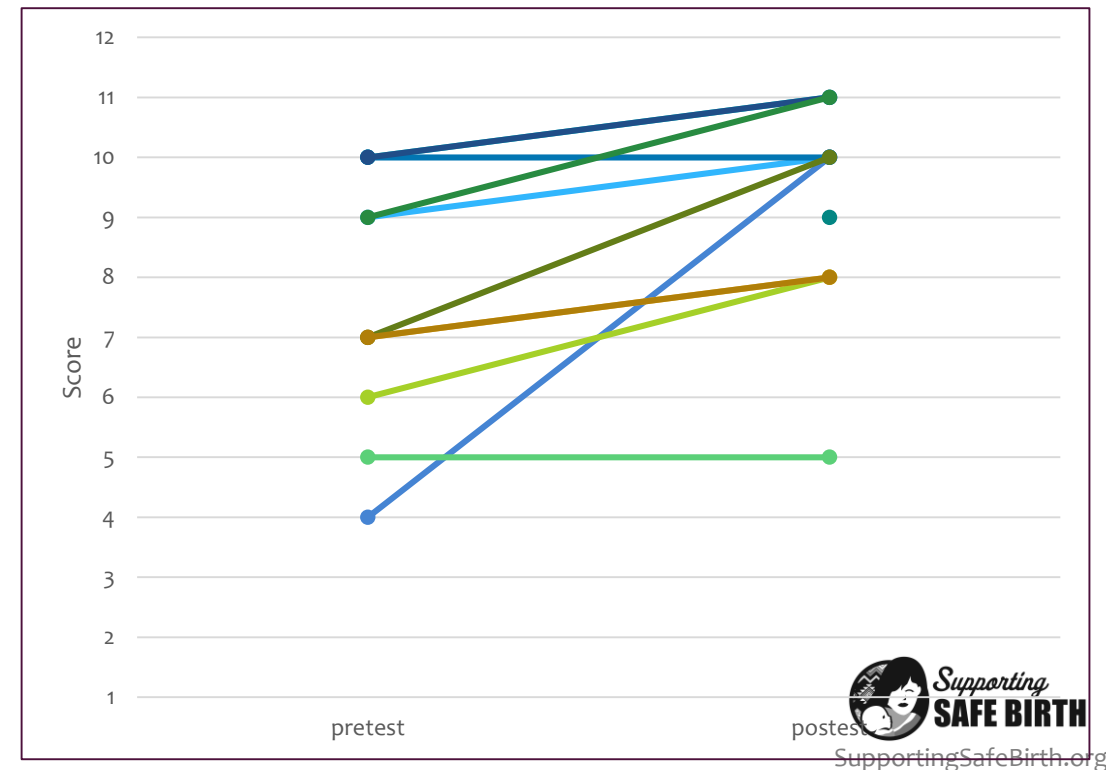
Helping Mothers Survive-Bleeding after Birth

Pre-and Post-Tests

Confidence Results



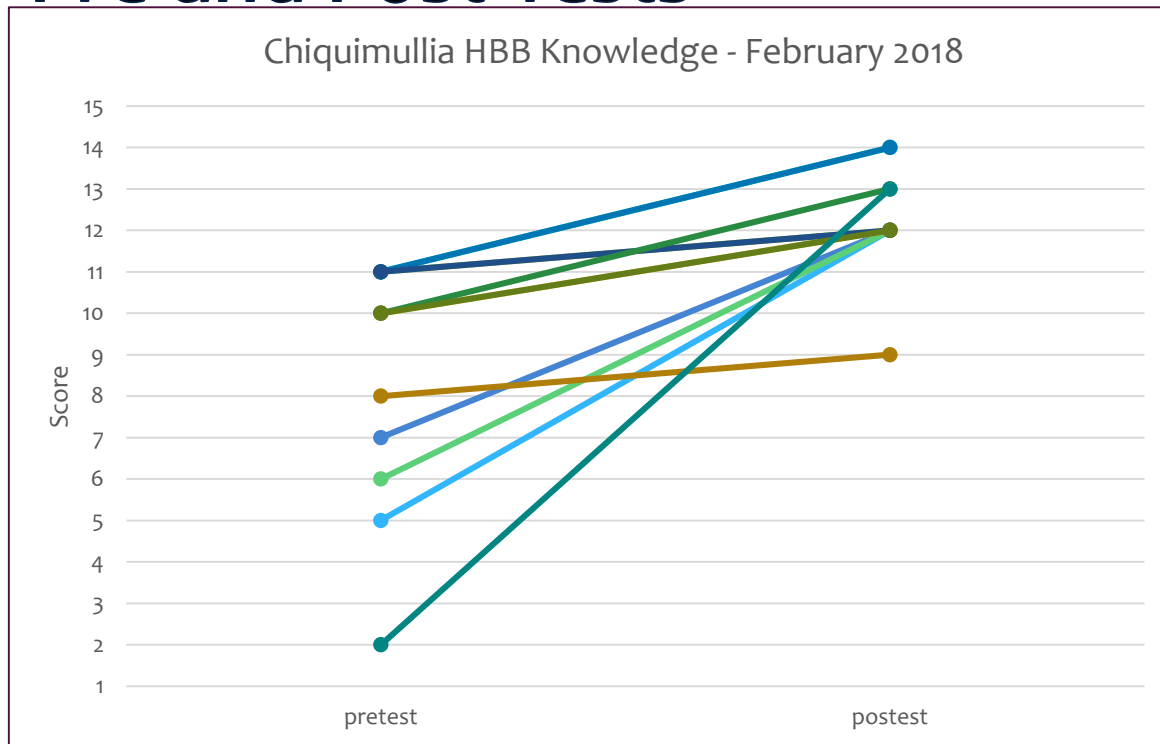
Knowledge Results



February 2018 Project Results: Chiquimulilla

Helping Babies Breathe

Pre-and Post-Tests

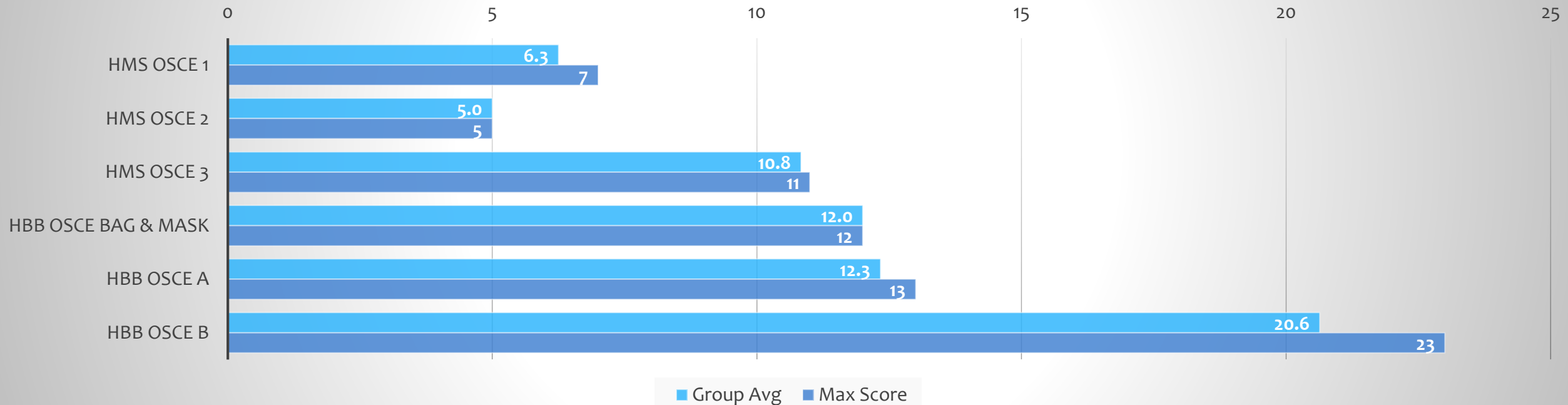


February 2018 Project Results: Chiquimulilla

Helping Mothers Survive & Helping Babies Breathe

Skills Competency Scores

Skill Competency Group Average
Compared to Maximum Score Possible



Comments from the Midwives (Chiquimulilla February 2018)

Question 1: *What is the best part of course?*

“Learned new things for midwives”

“We practiced as if it were real with the use of the mannequins. I think I feel ready in an emergency”

“Everything was very beautiful and everything was personalized”

“To give life to babies and mothers”

“For me, it was all good”

“I learned more to help our communities and improve our work”

“The part of helping babies breathe with the mask”

“I learned many practical tips to help mothers and babies, how to help mothers in their delivery and the babies to breathe”

“Everything, with a lot of practice”

Comments from the Midwives (Chiquimulilla February 2018)

Question 2: *How can the course improve?*

“I just thank God for allowing them to be with us again. God bless your work and your lives to be with us”

“**And thank you for your patience”**

“For me it was very good and we hope that they will return”

“**I like a lot; I feel good”**

“Just thank you for the course”

“**Thank you for your patience and that everything was very beautiful and may God bless you”**

“Thank you for your patience”

Overall Results



Strengths

- Positive feedback
- Cultural acceptability
- Hands-on training
- Sustainability potential
- Master trainers- "Train the Trainer"

Challenges

- Mannequins/materials
- New skills review
- Literacy and educational levels
- Cultural barriers
- Need for interpreters

Hilda's TV Interview

February, 2018



- Happy with the hands-on training,
- Practice with emergencies &
- Receiving the:
- Ambu bag
- Suction device
- Infant stethoscope



Conclusions

- First combined implementations of HMS & HBB in August, 2016, February & October, 2018
- Significant improvement in confidence & knowledge
- Culturally sensitive
- Hands-on training
- Sustainability: Expansion, follow-up & mentoring



Project Expansion

Rotary District 6250 Grant received July 2018

Mannequins & teaching materials to train the trainers in Wisconsin, USA

6 Mama Natalie

6 Neo Natalie

6 Premie Natalie

6 Mama breast



Large flip charts & booklets to teach each program

HMS Bleeding After Birth

HBS Helping Babies Breathe

HMS Pre-eclampsia/Eclampsia

HBS Essential Care for Every Baby

HMS Threatened Preterm Birth

HBS Essential Care for Small Babies

Please Join Our Global Grant



Madison West Towne-Middleton
Madison, Wisconsin

Las Americas Rotary Club
Guatemala City, Guatemala



Supporting Safe Birth

Rotary Global Grant Application

I. Helping Mothers Survive project expansion (3 years) to other areas and participants including:

1) Bleeding after Birth

- For midwives
- For health professionals in clinics/hospitals
 - Treatment of shock, use of non-pneumatic anti-shock garment (NASG), Bakri Balloon

2) Pre-eclampsia/Eclampsia

- For midwives: Action plan to assess & recognize hypertension
- For health professionals: Advanced care for severe preeclampsia & eclampsia

3) Threatened Preterm Birth care for health professionals

4) Normal Labor & Birth for midwives & health professionals

5) Complicated Labor & Birth for midwives & health professionals





Supporting Safe Birth

Rotary Global Grant Application

II. *Helping Babies Survive* project expansion (3 years) to other areas and participants including:

- 1) **Helping Babies Breathe**
For midwives & health professionals
- 2) **Essential Care for Every Baby**
For midwives & health professionals
- 3) **Essential Care for Small Babies**
For health professionals





Supplies Needed for each Midwife & Master Trainer



- **Each Midwife needs:**

- String bag with neonatal Ambu bag/masks, suction device, blood pressure cuff (Microlife cradle), fleece baby hats, adult & infant stethoscope, fetoscope/doppler, gloves, soap, baby front packs

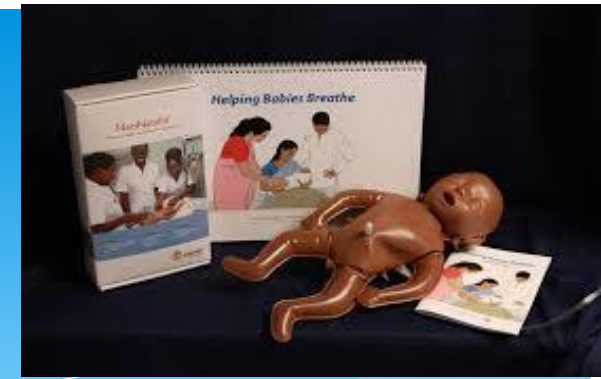
- **Each pair of Master Trainers need:**

- Mama Natalie & Neo Natalie mannequins
- Flip charts, wall posters, & provider guides for each program
- 8 x 10 flip chart for individual teaching; flashdrive with documents
- See other supplies: blankets, fleece hats, stethoscopes, gloves, artificial blood, buckets, basins, cord ties, basin/soap, baby front packs





Supplies Needed for EACH Training



HMS trainings

HMS Bleeding after birth

Mama Natalie & Neo Natalie mannequins, flip charts, wall posters, & provider guides, non-pneumatic anti-shock garment, Bakri Balloons, artificial blood, buckets, basins, cord ties, gauze, underdrape, clean razor blade/scissors, baby front packs

Pre-eclampsia/Eclampsia

Mama Natalie mannequins, flip charts, wall posters, & provider guides, artificial meds, IV, syringes, BP cuffs, stethoscopes, fetoscopes/doppler, reflex hammers, foley catheters/syringes/urine collection bags, gloves

Threatened Preterm Birth Care for health professionals

Mama Natalie mannequins, flip charts, wall posters, & provider guides, pregnancy wheels, BP cuffs, stethoscopes, thermometers, fetoscope/dopplers, measuring tapes, towels, baby hats, blankets, scissors, cord ties, artificial meds, neonatal ambu bag/mask, infant stethoscopes

Normal Labor & Birth & Complicated Labor & Birth for midwives & health professionals

Mama Natalie & Neo Natalie mannequins, flip charts, wall posters, & provider guides cord ties, blankets, hats, gloves, infant stethoscopes, thermometers, fetoscope/dopplers, blood pressure cuffs/stethoscopes, neonatal ambu bag/mask, suction devices, infant stethoscopes, underdrape, clean razor blade/scissors, baby front packs

HBS Trainings

Helping Babies Breathe for midwives & health professionals

Neo Natalie mannequins, baby blankets, fleece hats, flip charts, wall posters, & provider guides, blankets, infant stethoscopes, cord ties, syringes, artificial meds, gloves, gauze, timers,

Essential Care for Every Baby for midwives & health professionals

Neo Natalie mannequins, baby blankets, fleece hats, flip charts, wall posters, & provider guides, blankets, infant stethoscopes, cord ties, syringes, artificial meds, gloves, alcohol wipes, box for scale, digital thermometers, laminated Jobaids

Essential Care for Small Babies for health professionals

Premie Natalie mannequins, baby blankets, small fleece hats, flip charts, wall posters, & provider guides, blankets, infant stethoscopes, cord ties, syringes, artificial meds, gloves, box for scale, digital thermometers, baby front packs, laminated Jobaids, Nifty cups, nasogastric tubes, syringes



2019 Global Grant Budget

Vocational Training Team One 14-day & One 6-day trip

1st trip: April 27-May 12 6 team members

Chiquimulilla midwives & Guatemala City midwifery students

- * HMS-Bleeding after Birth & HBS-Helping Babies Breathe
- HMS-Preeclampsia-Eclampsia & HMS Essential Labor & Birth
- **Training 46 midwives and 16 Future Master Trainers**
- New midwife trainees receive Midwife Supply Bags
- Each pair of Master Trainers receive training equipment to teach others

2nd Trip: July 3-8 (Mentoring)

2 trainers mentor Master Trainers in Chiquimulilla

- HMS-Bleeding after Birth & HBS-Helping Babies Breathe
- **6 Master Trainers teach a new class of 12 midwives**

Pledges (as of 3/12/19)

Total Project Funding = \$83, 129.

Future pledges: Oct/Nov 2019 VTT & 2020

* Funding: Club Rotário Guatemala del Este \$5000.				
* Rotary International match	\$2500.	(7500.)	* Funding: Marshfield Sunrise Rotary	\$500
			* District 6250 match	\$500.
* Funding: home club (MWTM)	\$5000.		* Rotary International match	\$750. (1750.)
* District 6250 match	\$5000.			
* Rotary International match	\$7500.	(17,500.)	* Funding: Ft. Atkinson Rotary	\$1000
			* District 6250 match	\$1000.
• Funding: Madison Downtown Rotary	\$250.		* Rotary International match	\$1500. (3500.)
* District 6250 match	\$250.			
* Rotary International match	\$375.	(875.)	* Funding Milwaukee Rotary	\$5000
			* Rotary International match	\$1500. (6500.)
• Funding: Waunakee Rotary	\$1500.			
• District 6250 match	\$1500.		* Donations from SSB to MWTM Rotary	\$1150.
• Rotary International match	\$2250.	(5250)	* District 6250 match	\$1150.
			* Rotary International match	\$1725. (4025)
• Funding: Madison East-Monona	\$500.			
• District 6250 match	\$500.			
• Rotary International match	\$750.	(1750.)		

Future 2019 Global Grant Vocational Training Team

One 14-day training

3rd trip: October 26-November 9 6 team members
Guatemala City Midwives Post-Graduation

- HMS-Preeclampsia-Eclampsia & HMS Essential Labor & Birth
 - **Training 24 midwives and 10 Future Master Trainers in their villages throughout Guatemala**
 - Additional tentative budget:
 - VTT trip expenses: \$21,492.
 - Training expenses: \$ 8420.
 - Midwife bags & Master Trainer Supplies: \$22,605.
 - New midwife trainees receive midwife supply Bags
 - Each pair of Master Trainers receive training equipment to teach others
- ~\$52,517.

Vision



To build birth attendants' capacity for providing evidence-based care to vulnerable women and babies, and to establish effective partnerships to increase the scope and coverage of these programs in Guatemala.

Contact us:

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https://youtu.be/VWs_kpQnoWE



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Thank you!

