

Nicaraguan women of reproductive age (18–49 years old) in rural and urban clinics associated with UNAN-León in León, Totogalpa, and Sabana Grande, Nicaragua. Surveys were orally administered in Spanish by medical students and translators. 212 women were selected by convenience sampling at clinics from May 11th to June 5th, 2015. The survey was anonymous with collection of only broad demographic data, and oral informed consent was obtained from participants. The study was approved by the UC Davis IRB and the Director of UNAN-León.

Findings: Of the 212 women who participated, 52.3% reported living in rural settings while 45.8% reported living in urban centers. 42.5% were between the ages of 18–25 and 57.5% were between the ages of 26–49. Social attitudes preliminary data shows that more rural women reported that their partner is who should decide if they obtain birth control (31.5%) compared to urban women (17.5%). For access, more urban women (90.7%) reported knowing where they could obtain birth control, as opposed to rural women (63%). For education, 90.1% of urban women and 88.7% of rural women reported having seen information or received education about family planning. For contraceptives use, 32% of urban women report using no form of contraception compared to 29% of rural women.

Interpretation: Our findings suggest that differences in social attitudes, access, education, and use of modern contraceptives in Nicaraguan women are not as significant as expected. The study is limited by participant selection and clinic location, limiting its generalizability.

Funding: Medical Student Research Funding Scholarship, UC Davis School of Medicine.

Abstract #: 1.032_MDG

The short-term response of breast milk micronutrient concentrations to a lipid-based nutrient supplement in Guatemalan women

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Background: Malnutrition is highly prevalent in the Guatemalan population. Impaired nutritional status in lactating women results in decreased micronutrient content of breast milk. Supplementation with a lipid-based nutrient supplement (LNS) during lactation could augment breast milk nutrient content. Our objective was to assess the efficacy of LNS comparing two dosing methods for increasing milk micronutrients in Guatemalan women.

Methods: The randomly-allocated, cross-over design included 30 mother-infant dyads 4–6 months postpartum in Quetzaltenango, Guatemala. In three 8-hour milk collection visits the participating mother received a single bolus dose of 30 g LNS (B), 10 g of LNS divided over 3 time points (D), or no LNS (C). Mid-feed milk samples were collected at each infant feed and total milk consumption measured. Maternal blood was collected at baseline, maternal dietary intake was assessed, and maternal and infant anthropometry was measured. The

primary outcome was area- under-the-curve (AUC) of breast milk B-complex vitamins. [Clinicaltrials.gov](https://clinicaltrials.gov/ct2/show/study/NCT02464111) (NCT02464111on).

Findings: Of 26 dyads completing the study, results for 8 are included in this preliminary data analysis. For milk riboflavin, the mean increase in AUC vs. C was 300±173% for B (p=0.002) and 164±105% for D (p<0.0001). For milk thiamin, this comparison was 25±19% for B (p=0.049) and 24±24% for D (p=0.087). For milk pyridoxal, the B increase was 65±61% (p=0.015) and D was 45±62% (p=0.123). Neither B nor D supplementation strategy increased milk niacin with respect to C, with B increasing 55±137% (p=0.689) and D, decreasing 6±37% (p=0.591).

Interpretation: Supplementation with the bolus dose rapidly and substantially increased the amount of thiamin, riboflavin, and pyridoxal in breast milk, but did not significantly affect niacin. With the current preliminary number of dyads, interpreting the responses for D remains provisional.

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Abstract #: 1.033_MDG

Improving women's confidence and motivation related to healthy lifestyle goal attainment through group-centered meetings at a community based organization

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Program/Project Purpose: Obstacles such as stress and chronic disease often prevent women from achieving wellness. The purpose of Grupo de Bienestar para Mujeres is to use group-based learning and support network development to empower Latina women to achieve lifestyle driven health goals. The program began in January 2014 at CommunityHealth, the largest free clinic serving the uninsured in Illinois, to fulfill the need for culturally competent and sustained sources of support in health goal attainment.

Structure/Method/Design: The program's goals are to:

- 1) Deliver health information through peer-driven exchange and discussion of approaches to healthy eating, exercise, and stress reduction.
- 2) Increase participants' knowledge, confidence, and motivation related to health information and goal attainment.
- 3) Foster an environment of sustained support to increase individual and community health.

Groups consist of Spanish-speaking women in the community served by CommunityHealth. Participants are recruited directly by provider referral, attendance at other health-education courses, or through response to advertisement.

During weekly group meetings, women participate in a discussion-based session utilizing health information materials and

discussion guides that encompass topics centered on healthy eating, exercise, stress reduction, and chronic disease.

Participants are encouraged to share their experiences on the week's topic, offer advice to one another, and set goals which are specific, realistic, and attainable during the span of a week. Medical students facilitate the group, which is further sustained through partnership with a Community Health Worker associated with CommunityHealth.

Outcome and Evaluation: An IRB approved survey study is underway to determine if attending Grupo de Bienestar para Mujeres increases participants' confidence and motivation for health behavior change. Initial results suggest an increase in confidence associated with goal attainment and number of participant identified sources of motivation.

Going Forward: Ongoing challenges include expanding recruitment and sustaining long-term participant involvement. Unmet goals include using objective measures to evaluate 1) growth in participant knowledge, 2) improvements in individual and community health, and 3) the effects of group support on goal attainment. Future program activities will be directed at using feedback to improve the Grupo de Bienestar para Mujeres and also to offer this model to similar community based organizations.

Funding: SSOM CCGH 2015, Albert Schweitzer Fellowship 2014-2015.

Abstract #: 1.034_MDG

A retrospective chart review of treatment initiation and outcomes following antiretroviral therapy (ART) delivery at the Komfo Anokye Teaching Hospital (KATH) HIV clinic in Kumasi, Ghana

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Background: There is no doubt that global access to anti-retroviral medications has certainly helped to curb the HIV/AIDS epidemic, but what is still open to interpretation is how successful we are at the individual level in resource limited settings.

Methods: We reviewed the charts of patients who enrolled in care at the Komfo Anokye Teaching Hospital (KATH) HIV clinic in Kumasi, Ghana in 2004. We collected information on demographics, clinical statuses at presentation, and treatment histories over a 10 year period. We calculated descriptive statistics including means, standard deviations, and percentages to describe various characteristics and treatment outcomes (gaps in care, regimen changes, loss to follow up) of this cohort.

Findings: Of a reported 1200+ people enrolled in 2004, we reviewed charts for 474 (~40%). The average age was 39 years (range 15-90). 435/448 (97%) had disclosed their statuses at the time of enrollment. 201/439 (46%) were married and 100/439 (23%) were widowed. Clinically, 54/459 (12%) were co-infected with tuberculosis, and 256/439 (58%) met WHO stage 3 or 4 criteria at enrollment. The mean CD4 count at presentation to the clinic was 206 cells/uL (range 1-1278). 450/469 (96%) started ARTs during the study period with

a mean time from diagnosis to initiation of ART being 8 months (range 1-98). 144/458 (31%) were discovered to have had no regimen changes during this period, 99/458 (22%) had one change, 88/458 (19%) had two changes, and 127/458 (28%) had three or more changes. Reasons for the initial switch included treatment failure (26%), drug stockouts (14%), and drug toxicity (48%). Additionally, 204/457 (45%) had at least one gap in care (range 7-70 months) and 74/467 (16%) were lost to follow up.

Interpretation: Over this 10 year period following the introduction of ARTs, there was a high percentage of patients experiencing regimen changes, gaps in care, and loss to follow up. This highlights the fact that simply providing ARTs is not enough to curb the HIV/AIDS epidemic in resource limited settings.

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Delivering early essential newborn care training in Rural Mongolia: an on-the-ground perspective

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Background: The under-five mortality rate in Mongolia has fallen 74% over the past 20 years, yet the fall in neonatal mortality rate has lagged behind. Moreover, the country has seen a disparity in the reduction in neonatal deaths across socioeconomic lines. The WHO, UNICEF, UNFPA and the Mongolian Ministry of Health together have developed the Early Essential Newborn Care (EENC) program to train local physicians on neonatal resuscitation and routine newborn care. This program was implemented in 2014 with a goal of reducing the country's neonatal mortality rate by half by 2020. Objectives include sharing the perspective of two Mongolian physicians on the front lines of this nation-wide program and taking an in-depth look at the barriers in improving newborn mortality in Bayan-Ölgii, an area with one of the highest neonatal mortality rates in the country.

Methods: This is a qualitative investigation by two physicians from the US who served as independent observers to a three-day EENC training program in Bayan-Ölgii. A neonatologist and an obstetrician who led the program were interviewed. Pre and post-test data was collected from 12 participants using a standardized set of 12 questions including questions about routine newborn care and neonatal asphyxia.

Findings: Pre and post-test results (N=12) were 51.2% and 88.6% respectively. Strengths of the program include: (1) use of multiple modalities including didactic sessions and simulations, (2) inclusion of various stakeholders including hospital administrators (3) EENC use of the scale-up strategy, training physicians who subsequently train healthcare providers in lower level facilities. Challenges include: (1) frequency of EENC training programs are dependent on the involvement of the local provincial department of health, (2) poor geographical accessibility of the program, (3) limitations in personnel allocation within the hospital during the program.