Poster Session

Springboard Grant Awards

Global Health Scholar Awards

February 13, 2013
### SPRINGBOARD AND GLOBAL HEALTH SCHOLAR GRANT AWARDS
**MPH and MD/MPH STUDENTS**

**Wednesday, February 13, 2013**
**5-7 pm**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>5:00 pm</td>
<td>Poster Session Exhibit and Reception</td>
</tr>
<tr>
<td></td>
<td>Meet and Greet MPH and MD/MPH Students</td>
</tr>
<tr>
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<td>Welcoming remarks</td>
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<tr>
<td>5:25 pm</td>
<td>Julie Kornfeld, Ph.D., MPH</td>
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<td></td>
<td>Assistant Dean for Public Health</td>
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<tr>
<td>5:30 pm</td>
<td>Pascal J. Goldschmidt, M.D., FACC</td>
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<td>Senior Vice President for Medical Affairs and Dean of the Miller School</td>
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<tr>
<td>5:40 pm</td>
<td>José Szapocznik, Ph.D.</td>
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<td>Chair of the Department of Epidemiology and Public Health</td>
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<tr>
<td>7:00 pm</td>
<td>Reception Concludes</td>
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<tr>
<td>Name</td>
<td>Poster Number</td>
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<tr>
<td>Assaf, Rammy (<a href="mailto:RRAssaf@med.miami.edu">RRAssaf@med.miami.edu</a>)</td>
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<tr>
<td>Cnossen, Nick (<a href="mailto:NRCnossen@med.miami.edu">NRCnossen@med.miami.edu</a>)</td>
<td>2</td>
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<td>Crosland, Adam (<a href="mailto:BACrosland@med.miami.edu">BACrosland@med.miami.edu</a>)</td>
<td>3</td>
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<td>Crosland, Adam (<a href="mailto:BACrosland@med.miami.edu">BACrosland@med.miami.edu</a>)</td>
<td>4</td>
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<td>Cutler, Vanessa (<a href="mailto:VanessJCutler@gmail.com">VanessJCutler@gmail.com</a>)</td>
<td>5</td>
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<td>Gil, Harold (<a href="mailto:HGil@med.miami.edu">HGil@med.miami.edu</a>)</td>
<td>6</td>
</tr>
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<td>Grannan, Kelly (<a href="mailto:KJGrannan@med.miami.edu">KJGrannan@med.miami.edu</a>)</td>
<td>7</td>
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<td>Haverman D., Kimball A., &amp; Rivert C. (<a href="mailto:DSHaverman@med.miami.edu">DSHaverman@med.miami.edu</a>)</td>
<td>8</td>
</tr>
</tbody>
</table>
Heffley, Jason (JDHeffley@med.miami.edu) 9
The European Centre for the Environment and Human Health

Hendriksen, Brandon (BSHendriksen@med.miami.edu) 10
Community Health Worker Program: Observation and Formation in the Dominican Republic

Horesh, Elan (ELHoresh@med.miami.edu) 11
Observations of the “Nutrition Transition: on a remote island: Field Experience in the San Blas Islands, Panama

Knickerbocker, Chase (CBKnickerbocker@med.miami.edu) 12
Childhood Anemia in Rural Nicaragua

Lavasseur, Julie (JALevasseur@med.miami.edu) 13
Perceptions of Prenatal Care and Hospital Delivery. A Look at Access and Barriers to Maternal Healthcare in Thomonde, Haiti

Maguire, Mike (MMaguire@med.miami.edu) 14
WHO: Roll Back Malaria MMAguire@med.miami.edu

Milligan, Gregory (GPMilligan@med.miami.edu) 15
Providing sustainable access to clean water in rural Uganda: An immediate life-changing impact GPMilligan@med.miami.edu

Paiva McGlohn, Devlin (DPaivaMcGlohn@med.miami.edu) 16
Seasonality of Influenza and Other Respiratory Viruses

Prendes, Stefania (SPrendes@med.miami.edu) 17
“Let’s Talk About It”: A Public Health Approach to Mental Health Awareness
Puia Dumitrescu, Mihai (Dumitrescu@med.miami.edu) 18
Association of childhood physical and sexual abuse with lifetime and prenatal drug use in urban African-American Women

Roman, Diana (DRomanarocho@med.miami.edu) 19
The application of Community Based Participatory Research (CBPR) with communities from A Ministry of Sharing (AMOS)

Colasanti, J and Lifshitz, K. (JAColasanti@med.miami.edu) 20
An effort to improve HIV testing in Pregnant women within a single health district in Managua, Nicaragua
Student Name: Rammy Assaf, MIA, MD/MPH Candidate Class of 2015

Project: The Use of Social Media in Peruvian and Dominican Rural Health Campaigns

Abstract: In resource-limited rural clinics, media and qualitative research may bolster project sustainability. Supplementing health initiatives with social media may aid in the identification of areas for improvement, as well as in the assessment of a health program from multiple levels: patient, provider, and administrator. The development of media advertisement along with clinic operations in rural settings may play a particularly important role in securing financial and general resource support from donors, especially overseas.

Kausay Wasi Clinic in the valley of Coya, Peru operates on a medical campaign model, offering not just treatment, but patient education and preventive care. Visiting medical teams build the capacity of the clinic to operate on a regional level, treating patients from multiple cities. In this context, media projects serve as tools of campaign assessment.

Batey Relief Alliance (BRA) in the Dominican Republic brings needed support to thousands of individuals living in the underserved bateys each year. Through partnerships with key national and local actors, BRA funnels resources (both national and international) directly to underserved areas. Complementing BRA’s new rural HIV/AIDS prevention program with media projects is one way to identify important areas of improvement for project sustainability.
**Student Name:** Nick Cnossen, MD/MPH Candidate Class of 2015

**Project:** Implementation of Fluoride Treatment by Community Health Workers in the Dominican Republic

**Abstract:** During July of 2012, three students travelled to the Dominican Republic in order to work with community health workers (CHW’s) established by Medical Students in Action in the city of Los Hoyos. The workers from Los Hoyos were trained to provide basic dental cleanings and fluoride treatment to children in their own village. This training was intended as a follow-up to fluoride treatment information gathered during a previous trip with Medical Students in Action. Additional dental healthcare supplies were provided in the hopes that fluoride treatment in Los Hoyos could be made an integral and sustainable component of the role currently served by the CHW program. The trainings in Los Hoyos were followed by observations of two CHW programs in other areas of the country in order to ascertain the effectiveness of their respective interventions in regards to dental health. It was concluded that dental health remains a large health concern throughout the Dominican Republic. Fluoride varnish therapy, when combined with basic dental hygiene education, appears to be a promising and pragmatic means by which to improve dental health in rural communities.
Student Name: Adam Crosland, MD/MPH Candidate Class of 2015

Project Title: A Cultural Investigation of traditional Medicine Through a Health Perspective Inventory in Ticantiki

Abstract:
Purpose: Individual surveys were administered to women of childbearing age (18 years of age – 49 years of age) in several communities in the Central Plateau region of Haiti to assess the efficiency of mobile clinics, with a specific focus on maternal health.

Background: Haiti is one of the poorest countries in the Western hemisphere and has a culture that has manifested itself from years of diplomatic and economic instability. The public health sector disproportionally suffers from the lack of health infrastructure.

Methods: The survey includes questions that investigate the barriers women face in obtaining healthcare at these aforementioned mobile clinics. Additional questions inquired about parity, pregnancy complications, personal beliefs on deliveries, and prenatal consultations. Interviews with Community Health Workers (CHW) helped to provide a community-based picture on how the clinics run administratively.

Results: Data analysis (N = 120) is currently underway.

Discussion: By observing societal norms and working with community members, I allowed my original assessment plan to be influenced and evolve over time. Maternal health is a multifactorial state, therefore, continued investigation of health determinants and cultural understanding are imperative in the efforts to decrease maternal health disparities in Haiti.
Student Name: Adam Crosland, MD/MPH Candidate Class of 2015

Project Title: A Maternal Focus on Mobile Clinic Efficiencies and Barriers to Maternal Healthcare in the Central Plateau of Haiti

Abstract: Background: Haiti is one of the poorest countries in the Western hemisphere and has a culture that has manifested itself from years of diplomatic and economic instability. The public health sector disproportionally suffers from the lack of health infrastructure.

Methods: Individual surveys were administered to women of childbearing age (18 years of age – 49 years of age) in several communities in the Central Plateau region of Haiti to assess the efficiency of mobile clinics, with a specific focus on maternal health. The survey includes questions that investigate the barriers women face in obtaining healthcare at these aforementioned mobile clinics. Additional questions inquired about parity, pregnancy complications, personal beliefs on deliveries, and prenatal consultations. Interviews with Community Health Workers (CHW) helped to provide a community-based picture on how the clinics run administratively.

Results: Data analysis (N = 120) is currently underway. Final qualitative and quantitative data will be available at the conclusion of this Capstone.

Discussion: By observing societal norms and working with community members, I was better situated to structure more community competent approaches to my experience. Maternal health is a multifactorial state, therefore, continued investigation of health determinants and cultural understanding are imperative in the efforts to decrease maternal health disparities in Haiti.
Student Name: Vanessa Cutler, MD Candidate 2016

Project: An Examination of Attitudes Towards Women’s Health on a Rural, Indigenous Island Inhabited by the Kuna Indians of Panama

Abstract: In comparison to the global average of 54 per 1,000 adolescent pregnancies, Latin America can attribute 73.1 per 1,000 pregnancies to adolescent-aged females. A January, 2012 review of the maternal health records of 303 Kuna females on Ticantiki Island, within the Kuna Yala, shows that this population has seen a significant decrease in the mean number of years with respect to first sexual intercourse (2.7 vs. 5.4), first sexual intercourse to first birth (0.8 vs. 1.8) and first menarche to first birth (3.5 vs. 7.2) between females aged 16 or younger and older with no significant differences in the number of pregnancies including births and miscarriage between groups. While the mechanisms behind these current trends are unclear, we designed three surveys for male and female adults (≥ 16 years of age) in order to determine their attitudes and beliefs about partner selection, a woman’s role in the Kuna society, and the quality of health care for women on the island. We designed one survey for adolescents (11-15 years of age) to determine their attitudes towards future personal and educational goals.
**Student Name:** Harold Gil, MPH Candidate 2013

**Project Title:** HIV / AIDS Mortality in Guatemala from 2005 - 2009

**Abstract:** This is a descriptive, serial cross-sectional study of HIV/AIDS adult mortality in Guatemala during the period 2005-2009. The study provides a quantitative and qualitative description of the HIV/AIDS epidemic in Guatemalan in recent years. Data from Guatemala’s national vital registry was collected for four demographic variables (sex, age, ethnicity, and geographic area) and analyzed to elucidate trends across these factors over time. Descriptive epidemiological analyses show that there has been a consistent and significant decrease in HIV/AIDS adult mortality rates across the four variables considered. The project will address the needs of the Guatemalan Ministry of Health (MoH) in improving data quality and in identifying subpopulations to target. Evaluation findings will be used to make informed recommendations for improving the National HIV/AIDS Program’s monitoring and surveillance efforts.
**Student Name:** Kelly Grannan, MD/MPH Candidate Class of 2015

**Project:** HIV Knowledge Assessment in HIV Positive Adults

**Abstract:** Clinica de Familia, a non-profit clinic run by Columbia University’s International Family AIDS Program, serves the southeastern region of the Dominican Republic with HIV prevention, screening, and treatment. Based on a partnership between Columbia University and the Dominican community of Washington Heights, the clinic was among the first in the country to provide HIV care, and continues to provide services free of cost. Sponsored programs include chronic HIV treatment, prevention of vertical transmission, treatment for active tuberculosis cases, HIV testing, patient education, Programa de la Mujer, a wellness program for sex workers, treatment for HIV positive children and those with HIV positive parents, and support groups for HIV positive children, adolescents, and adults.

During my summer with the clinic, I worked in conjunction with these programs, but focused on primary care in HIV positive adults. I assisted in clinic patient evaluations and worked with Drs Milagro de la Rosa, Alexandra Molina, and Carmen Rodriguez to better understand the clinic’s role in meeting the primary care needs of HIV positive adult clients. Using this experience and background research, I created an HIV knowledge assessment questionnaire and surveyed 50 clients to assess individual understanding of key points regarding HIV transmission, disease course, and treatment adherence.
Abstract: Let’s Move for HEALTH is a student-created and student-run nutrition and healthy lifestyle education program. It is a longitudinal program that uses an integrated approach targeting children and their families to promote healthy behavior through nutrition and physical activity. The program has three components: a nutritional curriculum taught to students in the classroom, ABCs for Fitness to incorporate physical activity, and parent nights to teach skills for healthy living. The aims of the program are to teach children and their families the importance of living a healthy lifestyle as well as to teach the skills needed to read a food label and cook a healthy meal.

Let’s Move for HEALTH partnered with the Hope for Miami after-school program in the fall of 2012. The efficacy of the program was evaluated by a pre and post-intervention questionnaire. Preliminary results have shown an increase in knowledge about nutrition and healthy living among 4th grade participants from three different communities.
Student Name: Jason Heffley, MD/MPH Candidate Class of 2015

Project: The European Centre for the Environment and Human Health

Abstract: The Global Health Scholar Award facilitated my participation in a fascinating and highly educational summer experience in environmental health. Delving into the more specific field of environmental toxicology, my work focused on developing a model to predict the concentration of potentially hazardous environmental pharmaceuticals, in particular estrogens. This process required the use of Geographic Information Systems (GIS), integrated with nationally available pharmaceutical and census data. Traveling to southwest England and immersion at an international hub of environmental health research allowed for additional learning experiences with experts in other fields of environmental health. The wide range of research conducted at the Centre includes studying the positive effects of the natural environment on aging, identifying healthy workplace environments, and studying bacterial antibiotic resistance. Finally attendance at courses in the Masters in Environment and Human Health program at the European Centre presented another learning opportunity, with a focus on the built and natural environment of low-income neighborhoods in the city of Plymouth. Overall this experience at the European Centre for Environment and Human Health was extremely valuable and a highly relevant adjunct to the University of Miami Masters in Public Health coursework.
Student Name: Brandon Hendriksen, MD/MPH Candidate Class of 2015

Project: Community Health Worker Program: Observation and Formation in the Dominican Republic

Abstract: Two years ago Medical Students in Action (MSA), a Miami based NGO, began a community health worker (CHW) program to enhance prevention and sustainability of medical service efforts in Los Hoyos de Niza, Dominican Republic. Initial efforts at creating the program failed due to lack of initial planning, research, and structure.

In order to create a more sustainable and successful CHW program, a week long research effort was designed to travel to different regions of the country in order to observe and learn from other functioning, successful programs. The two sites visited during this project were the programs run in La Romana and Puerto Plata: El Buen Samaritano Hospital and Health Horizons International.

A key aspect of this research effort was to bring community representatives from Los Hoyos to visit these other programs.

The lessons learned by board members and community representatives alike were discussed in order to incorporate them into a newly designed Los Hoyos program. Some of the principals discussed were community health worker selection, incentive, training, retention, confidentiality, and communication. Community representatives also determined that a program focused on chronic patients may be best for their community.
**Student Name:** Elan Horesh, MD/MPH Candidate Class of 2015

**Project:** Observations of the “Nutrition Transition: on a remote island: Field Experience in the San Blas Islands, Panama

**Abstract:** In the current “nutrition transition,” the consumption of high-calorie, nutrient-poor foods is increasing throughout the developing world. Globalization affects the nature of the food supply chain, thereby altering the quantity, type, cost, and desirability of foods available for consumption. This poster will depict observations of the nutrition transition on a remote Panamanian island, Niadub, inhabited by Guna Indians.

**Methods:** Observation and interviewing were the two means of gathering data on dietary, physical activity, and food system changes. BMIs were also collected from 52 patient charts from the island clinic dated 1999-2001 and were compared to data collected from 50 comparable individuals on the island in 2012.

**Results:** Included are anecdotal accounts of the changes in Guna diet and lifestyle as well as observational evidence of the “nutrition transition”’s arrival to Niadub. Compared to the 22.92 average BMI calculated from the 1999-2001 time-period, the current calculated average BMI was 24.44.

**Conclusions:** Anecdotal data described changes on the island, consistent with the theory of the nutrition transition. The compared average measurements of BMI suggest increasing body fat over time. These findings, when shared with the community members, may hopefully lead to discussions on appropriate routes to address this issue.
Student Name: Chase Knickerbocker, MD/MPH Candidate Class of 2015

Project: Childhood Anemia in Rural Nicaragua

Abstract: Nicaragua is a beautiful country with rates of childhood anemia as high as 62% in rural areas. I worked with AMOS, a not for profit organization that educates community health workers (CHWs) to serve the health needs of 27 remote communities in Nicaragua and collects data on their interventions. Diana Roman and I collaborated with the AMOS staff and CHWs to create a questionnaire for the communities that would provide AMOS with information regarding beliefs and practices surrounding anemia testing and treatment. After implementation in two pilot communities, we compiled and delivered our findings to AMOS and all the CHWs for discussion. Following this, I lead a workshop with the CHWs regarding the benefits of workshops as opposed to lectures. I also trained CHWs in taking vital signs and the signs and symptoms of some of the most common complications seen in the rural communities and what they should do in each situation. Finally, our recommendations to AMOS for improving their anemia program included: blanket prophylactic treatment for young children, continued treatment through early developmental years, and to not attempt an intervention to change family practices regarding the soaking of beans before cooking, an important source of iron.
Student Name: Julie Levasseur, MD/MPH Candidate Class of 2015

Project: Perceptions of Prenatal Care and Hospital Delivery. A Look at Access and Barriers to Maternal Healthcare in Thomonde, Haiti

Abstract: As a Global Health Scholar recipient, Julie was able to conduct interviews with women of Haiti’s central plateau in order to evaluate perceptions of prenatal care and hospital deliveries. Julie worked at Project Medishare’s Maternal Health Center, and interviewed 100 women in group sessions focusing on how women utilized services offered at the center, the medical needs of the community, and the greatest barriers to accessing health services. The main goal of this work was to gauge the general attitude towards hospital deliveries and prenatal care appointments in order to increase the utilization of these services. Responses from the women revealed transportation as one of the major barriers preventing women from delivering at the hospital, rather than a cultural belief or social pressure promoting home delivery. The knowledge of eclampsia and other pregnancy complications were cited as reasons why women preferred to deliver in the hospital with physician supervision. Lastly, the interviews showed that the concept of prenatal care has many interpretations, ranging from good hygiene and diet, to using mosquito nets. Through these interviews, prenatal care education and emergency transportation services for women in labor were identified as possible areas to address in future health initiatives in Thomonde, Haiti.
Student Name: Michael Maguire, MDMPH Candidate Class of 2015

Project: WHO: Roll Back Malaria

Abstract: Duke University’s Sanford School of Public Policy “Global Health Fellowship” in Geneva, Switzerland allows participants the opportunity to learn firsthand how global health policy is formulated and implemented. Both through a rigorous course component: “Health Policy in a Globalizing World” and an internship at the World Health Organization, the fellowship gives exposure to policy, advocacy, prevention and financial components of global health. Concurrently working at the WHO secretariat: Roll Back Malaria, a particular focus on malaria control was placed. The internship included the opportunity to interact with some of the world’s thought-leaders in global health and policy, as well as the ability to communicate directly with countries (through their ministries of health) most in need for malaria advocacy and programing, as well as key organizations that provide funding for disease control. Fellowship also included access to various private-sector organizations and public entities that are leading global health stakeholders. Through learning and extensive research on current best-practice models for malaria control, cost-effectiveness and efficacy, a general overview of global health policy was obtained. As a product, multiple publications were generated and an investment framework was developed for malaria control. Post-fellowship, ongoing work with WHO:RBM is ongoing as a consultant.
Student Name: Gregory Milligan, MD/MPH Candidate Class of 2015

Project: Providing sustainable access to clean water in rural Uganda: An immediate life-changing impact

Abstract: An estimated one billion people worldwide live without access to safe drinking water. As a result, waterborne diseases are common as about 4 billion cases of diarrhea cause nearly 2 million deaths worldwide each year, over 90% of which are among children. The current project therefore generated a sustainable source of safe water for two schools and a local clinic in Nyarushanje, a rural village in Southwest Uganda commonly afflicted with waterborne illnesses such as diarrhea, cholera, and typhoid. In addressing water safety, water was pumped from the local river to a storage tank of 5,000 liters, where the water is chlorinated for safety, then distributed to the schools and clinic. A local water committee was established, a maintenance worker was trained, and a means of revenue production was generated through a nominal fee paid per liter of water. Accordingly, the current project provided a sustainable source of safe water for three institutions in rural Uganda, and in doing so a means of revenue production was created not only for project sustainability, but also for project expansion with time. A sustainable source of safe water is a strong environmental determinant of health and any intervention providing it demands community involvement and maintenance. The current project elucidates a comprehensive strategy of meeting this need while maximizing long-term sustainability.
Abstract: Knowledge of temporal and spatial patterns of Influenza circulation and other respiratory viruses have significant importance in public health for the implementation of preventive measures such as vaccination. This project aims to identify and describe temporal circulation of Influenza, Respiratory Syncytial Virus (RSV), Parainfluenza, and Adenovirus from 2006 through 2011 in Guatemala and determine the presence of seasonality. Data were collected from the National Health Laboratory, community surveillance, and from the sentinel unit of San Marcos. After performing a X-12-ARIMA test, we determined that seasonality for influenza was not present. Influenza was detected throughout the year in Guatemala from the years between 2006 and 2011. However we did detect seasonality for the other respiratory viruses. Influenza in Guatemala lacks the present of a strong seasonal character, thus makes it difficult to predict or to make accurate and vital decisions with regards to the timing of vaccinations across the country and that can have a negative effect on preventing outbreaks.
Student Name: Stephanie Prendes-Alvarez, MD Candidate Class of 2013

Project: “Let’s Talk About It”: A public Health Approach to Mental Health Awareness

Abstract The lifetime prevalence rate of mental disorders for individuals 13 to 18 years old is 46.3%. On average, only one-fourth of children needing mental health care get the help they need. “Let's Talk About It” was developed four years ago to address this public health concern. It is a middle school-based mental health awareness project with a theoretical framework based on the Theory of Reasoned Action. The program aims to increase adolescents’ intentions to seek mental health care if needed by affecting knowledge, attitude, behavioral control and subjective norm. The program was modified this year from its original 10-week design to a 4-week design in order to incorporate it into an MD/MPH course as a service-learning requirement. A variety of mental health topics are covered, including but not limited to: depression, anxiety & suicide. “Let's Talk About It” will be implemented at sixteen middle schools in Miami-Dade County, FL this academic year. The eighth grade participants complete four questionnaires at the first and last visit: Demographics, Mental Health Attitudes, Mental Health Knowledge & Theory of Planned Behavior. Previously collected data has demonstrated that after visiting with 8th graders weekly, they become more knowledgeable about mental health topics and they develop a more positive attitude towards mental health issues. We are hopeful that this year’s data will offer similar results and that its integration into an MD/MPH course is a viable option for ensuring project sustainability.
Student Name: Mihai Puia Dumitrescu, MD, MPH Call of 2012

Project: Association of childhood physical and sexual abuse with lifetime and prenatal drug use in urban African-American women

Abstract: Aims: To estimate the degree of association that links sexual/physical abuse in childhood with drug and alcohol use and other risk behaviors in urban African-American women.

Methods: Data were drawn from the Miami Prenatal Cocaine Study postpartum survey of urban, low SES, African-American women (>18) delivering at UM/JMH in the early 1990's. Childhood physical/sexual abuse (self-report) was analyzed in relation to lifetime and pregnancy use of alcohol and drugs (self-report and bioassays). Analyses included Student t-tests, Chi-square, and Wilcoxon rank sum.

Results: Among the mothers (mean age, 25 years; 88% single), 353 (24%) reported having been exposed to sexual (15%) or other physical (17%) abuse during childhood (<18 years). Mothers with abuse were significantly more likely (P<0.05) to: have used alcohol, tobacco, marijuana, and cocaine/crack (ever and during pregnancy); engage in risky sex; and have been arrested / charged.

Conclusions: This study shows evidence linking abuse in childhood with later risk behaviors, including drug involvement. It is one of the few studies to report on the degree to which childhood trauma might account for prenatal drug use (measured by postpartum self-report/bioassays), known to pose serious risks to mothers and offspring. Interventions to reduce childhood trauma might prevent/ameliorate later drug use during pregnancy.
Abstract: **Purpose.** To apply CBPR principles in order to identify interventions used by the community San Onofre which resulted in a large decrease in anemia rates and how these could be translated into another community called San Jose de Mula with high rates of anemia.

**Methods.** The SHOWeD method was used as a model to design survey questions for each community. In addition, the local health promoter was included to identify families to be interviewed during home visits in order to determine anemia testing history and potential positive and negative deviants and their effect for shaping future interventions of anemia.

**Results.** Three important theme differences were identified between both communities: distance, beliefs, and education as well as the use of local natural resources such as plants rich in iron. The findings were presented to communities which allowed for development of recommendations to be implemented in the future to continue or improve the decrease rates of anemia.

**Conclusion.** CBPR was useful to connect with the communities and identify approaches that worked for San Onofre and possibly could be translated to San Jose de Mula to improve anemia rates.
Student Names: Jonathan Colasanti MD, MSPH  
Karina Lifschitz, MPH, MAIA

Project: An effort to improve HIV testing in Pregnant women within a single health district in Managua, Nicaragua

Abstract: Report the rate of HIV testing among pregnant women and total number of positive cases in Managua. Implement and evaluate a decentralized HIV testing strategy aiming to increase HIV testing rates of pregnant women of a single health district in Managua.

Methods: We conducted a retrospective comparison of HIV testing rates and number of positive cases in pregnant women in a single Managua health district and the department of Managua from 2010 and 2011. We conducted a prospective clustered randomized controlled trial of decentralized HIV testing availability for pregnant women from level of health centers to level of health posts from December 2011 – March 2012.

Results: In Managua, 39.4% of pregnant women receiving prenatal care in the public system in 2010 and 49.8% in 2011 received an HIV test (p < 0.001; phi = 0.10). The same statistics in our district of focus were, 24.2% and 49.3% (p<0.001; phi = 0.26). In 2010, 27 pregnant women in Managua and 2 from the health district tested HIV positive. In 2011 these numbers were 31 and 3 respectively. With regard to the prospective portion of the study, the estimated odds ratio for women living in areas with decentralized HIV testing available to receive an HIV test was 3.558 (95% CI 2.380, 5.319).

Discussion/Conclusion: HIV testing rates in pregnant women in Managua, Nicaragua are increasing yet still fall short of PAHOs goal of 95% testing. The evaluation of our decentralization strategy suggests this might be one mechanism to increase HIV testing rates of pregnant women in Managua.
Looking forward to next year’s projects addressing contemporary public health issues: