NIH Fogarty Global Health Fellows Program

Mobilizing Young Investigators

Consortium of Universities in Global Health Conference
March 27, 2015
Objectives

- Provide focused mentoring for post-doctoral and doctoral trainees (US and LMICs) in global health research at established research training sites in LMICs
- Provide 11-month research education/experience opportunities in diverse research areas for trainees at those research sites
- Enhance the global health research career trajectory potential of the trainees
- Strengthen global health research networks among the alumni and mentors across institutions in the U.S. and LMICs
- Strengthen global health programs at U.S. academic institutions and help to sustain global health research at institutions in LMICs
Consortia

**GLOCAL**
- UC Davis
- UCSF
- UCLA
- UCSD

**VECD**
- Vanderbilt
- Emory
- Cornell
- Duke

**NPGH**
- UWASH
- UMICH
- U MINN
- U HAWAII

**GHES**
- UC Berkeley
- Stanford
- Yale
- FIU

**UJMT**
- UNC
- John Hopkins
- Morehouse
- Tulane

International Sites

- Argentina
- Bangladesh
- Brazil
- Cameroon
- Chile
- China
- Colombia
- Ethiopia
- Ghana
- Guatemala
- Haiti
- India
- Kenya
- Malawi
- Malaysia
- Mexico
- Mozambique
- Nicaragua
- Nigeria
- Panama
- Peru
- Russia
- Rwanda
- South Africa
- Sri Lanka
- Swaziland
- Tanzania
- Thailand
- Trinidad and Tobago
- Uganda
- Ukraine
- Vietnam
- Zambia
- Zimbabwe
### Fogarty Global Health Fellows Trained 2012-2015

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NIH Partners

- Eunice Kennedy Shriver National Institute of Child Health and Human Development
- Fogarty International Center
- National Cancer Institute (NCI)
- National Eye Institute (NEI)
- National Heart, Lung, and Blood Institute (NHLBI)
- National Institute of Allergy and Infectious Diseases (NIAID)
- National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)
- National Institute of Biomedical Imaging and Bioengineering (NIBIB)
- National Institute of Dental and Craniofacial Research (NIDCR)
- National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)
- National Institute on Drug Abuse (NIDA)
- National Institute of General Medical Sciences (NIGMS)
- National Institute of Mental Health (NIMH)
- National Institute of Neurological Disorders and Stroke (NINDS)
- National Institute of Nursing Research (NINR)
- Office of AIDS Research (OAR)
- Office of Behavioral and Social Sciences Research (OBSSR)
- Office of Research on Women’s Health (ORWH)
Sickle Cell Status and Malaria Severity in Ghana

Presented by:

Adel Driss, Ph.D.
Research Scientist
Morehouse School of Medicine
Atlanta GA
Personal Background

Academic Training:
- Ph.D. in Biology (2003), MSc in Genetics (1998), BSc in Natural Sciences (1996) – University of Tunis
- Postdoctoral Fellow (2004~2007) – Emory University
- Postdoctoral Fellow (2007~2013) - Morehouse School of Medicine
- UJMT Fogarty Fellow (2013-2014)- University of Ghana

Fogarty Fellowship Site:
- Noguchi Memorial Institute for Medical Research, University of Ghana

Fogarty-Funded Research Project:
Genetic polymorphism associated with malaria severity and Sickle Cell Anemia in Ghana

Primary Mentors:
Dr Jonathan Stiles (Morehouse School of Medicine)
Dr Michael Wilson (University of Ghana)
Dr Andrew Adjei (University of Ghana)
Specific Aims

Specific Aim 1: Establish a cohort of subjects with HbAA, HbAS, & HbSS with and without malaria.

Specific Aim 2: Assess correlation of miR-451 and let-7i with HbAA, HbAS, & HbSS with and without malaria.

- HbAS: “Protected” against Malaria parasite.
- MicroRNA miR-451 and let-7i are associated with “resistance” to malaria (LaMonte 2012).
- In-vivo confirmation of their involvement not determined.
- Hypothesis: miR-451 and let-7i mediate malaria and sickle cell anemia severity.

Normal $\beta$-Hb (HbA) sequence:

<table>
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<tr>
<th>Nucleotide</th>
<th>CTG</th>
<th>ACT</th>
<th>CCT</th>
<th>GAG</th>
<th>GAG</th>
<th>AAG</th>
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<td>Pro</td>
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<td>Glu</td>
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Mutant $\beta$-Hb (HbS) sequence:

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<th>CCT</th>
<th>GTG</th>
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<tbody>
<tr>
<td>Amino Acid</td>
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<td>Thr</td>
<td>Pro</td>
<td>Val</td>
<td>Glu</td>
<td>Lys</td>
<td>Ser</td>
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<td></td>
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<td>6</td>
<td>9</td>
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Vaso-occlusion
## Categories of Samples Collected

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<th>AS</th>
<th>AC</th>
<th>SC</th>
<th>SS</th>
<th>AF</th>
<th>SβThal</th>
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<td></td>
<td></td>
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<td>3</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>1</td>
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<td>19</td>
<td>10</td>
<td>60</td>
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<td>1</td>
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Anemia severity is modulated by malaria and sickle cell status in Ghanaian case control study.
Conclusions

- Cohort of 350 Ghanaian patients and controls with different sickle cell status with and without malaria.
- Anemia severity is modulated by malaria and sickle cell status in Ghanaian case control study.
- Blood Clinical Data show significant differences between malaria and non malaria samples depending on Sickle Cell status.
- Cohort will be used to screen miR-451 and let-7i expression in plasma.
1. Driss A et al. Malaria severity and sickle cell anemia status in a Ghanaian case control study.

2. Driss A et al. MicroRNA mir-451 and let7i and polymorphisms are involved in resistance to malaria in sickle cell patients from Ghana.

3. Harp D, Driss A et al. Role and function of exosomes and miRNA in endometriosis


5. Botchway F, Wilson N, Driss A et al. CXCL10 Gene Promoter Polymorphism -1447A>G is Associated with Severe Malaria in Ghanaian Children

**Post-Fellowship**

**Current Position:** Research Scientist in Department of OB/GYN, Morehouse School of Medicine

**Public Health in women:** Establishment of a tissue bank for Women’s Health Research at Morehouse School of Medicine.

**Research:** Deep sequencing of MicroRNA extracted from cell exosomes in endometriosis.

**Other:** Ongoing Collaborative Research with Mentors at Morehouse Sch. Medicine & Noguchi Memorial Institute for Medical Research at University of Ghana.
A Lilongwe From Home: HIV Research and Training in Malawi

Presented by:
Kathryn Lancaster, MPH
Doctoral Candidate
University of North Carolina-Chapel Hill
Personal Background

Academic Training:
- PhD: University of North Carolina-Chapel Hill
- MPH: Tulane University
- BS: University of Arizona

Fogarty Fellowship Site:
- UNC Project-Malawi

Fogarty-Funded Research Project:
“Alcohol use disorders and HIV care continuum engagement among female sex workers in Malawi”

Primary Mentors: William Miller, Irving Hoffman, & Mina Hosseini-pour
Specific Aims

1. Investigate the patterns of marijuana and alcohol use among FSW in Lilongwe, Malawi

2. Evaluate and compare the associations of marijuana and alcohol use with HIV testing:
   a) Awareness of HIV status
   b) HIV serostatus

3. Evaluate and compare the association of marijuana and alcohol use with engagement into HIV care and treatment:
   a) Current use of ART among ART eligible FSW
   b) ART adherence
   c) Retention
Characteristics of FSW in Lilongwe, Malawi, July-September 2014 (N=200)

<table>
<thead>
<tr>
<th>Sociodemographics</th>
<th>Sex work</th>
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<tbody>
<tr>
<td>• Median age: 24 years (IQR: 22-28)</td>
<td>• Median duration in sex work: 3 years (IQR: 1-5)</td>
</tr>
<tr>
<td>• Born in Malawi: 96%</td>
<td>• Location for soliciting paying sexual partners</td>
</tr>
<tr>
<td>• Place of residence</td>
<td>• Bottle shop/bar: 91%</td>
</tr>
<tr>
<td>• Bar: 55%</td>
<td>• Other: 9%</td>
</tr>
<tr>
<td>• Guesthouse/hotel: 29%</td>
<td>• Median weekly paying sexual partners: 21 (IQR: 10-35)</td>
</tr>
<tr>
<td>• Private house: 14%</td>
<td></td>
</tr>
<tr>
<td>• Bottle shop: 2%</td>
<td></td>
</tr>
<tr>
<td>Alcohol Use among FSW (N=200)</td>
<td>Total study population n(%) or Mean (SD)</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td><strong>Ever consumed alcohol</strong></td>
<td>161 (81%)</td>
</tr>
<tr>
<td><strong>Quick drinking screen</strong></td>
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</tr>
<tr>
<td>Days consumed alcohol in last 90 days</td>
<td>27.8 (24.7)</td>
</tr>
<tr>
<td>Standard drinks consumed in a day</td>
<td>6.2 (8.7)</td>
</tr>
<tr>
<td>Days consumed ≥5 drinks in last 90 days</td>
<td>13.9 (20.7)</td>
</tr>
<tr>
<td><strong>AUDIT</strong></td>
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<tr>
<td>Hazardous drinking (score: 7-15)</td>
<td>62 (31%)</td>
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<td>Harmful drinking (score: 16-19)</td>
<td>28 (14%)</td>
</tr>
<tr>
<td>Alcohol dependence (score: ≥20)</td>
<td>25 (13%)</td>
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<tr>
<td><strong>Long-term health risk</strong></td>
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</tr>
<tr>
<td>Low risk</td>
<td>32 (16%)</td>
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<tr>
<td>Medium risk</td>
<td>41 (21%)</td>
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<tr>
<td>High risk</td>
<td>84 (42%)</td>
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Proportion of HIV-infected FSW engaged in the HIV care continuum (n=138)

- Seropositive: 100%
- Linked to HIV care: 69%
- On ART: 52%
- Suppressed viral load: 50%
Proportion of HIV-infected FSW engaged in the HIV care continuum (n=138)

- **100%** previously diagnosed
- **80% (111/138)** linked to care
- **69%** of those previously diagnosed linked to care
- **52%** of those linked to care on ART
- **50%** of those on ART virally suppressed
Lessons Learned & Advice

If you want to go quickly, go alone. If you want to go far, go together.

-African Proverb
The Way Forward…

Research

• Semi-structured qualitative interviews
• Manuscripts preparation
• Dissemination
• Develop a combination intervention focusing on substance use treatment and increasing access to HIV testing, care, and treatment services for FSW

Future Directions

• Postdoctoral Research Associate at the UNC Institute for Global Health and Infectious Disease
Zikomo Kwambiri

UNC-Chapel Hill
- Kathryn Salisbury
- Charles Van der Horst
- William Miller, dissertation chair
- Irving Hoffman
- Vivian Go
- Brian Pence
- Kimberly Powers

UNC Project-Malawi
- Mina HosseiniPour
- Thandi Lungu

Theatre for a Change
- Katy Chadwick
- Zoe Dibb

Funding
- UNC Hopkins Morehouse Tulane Fogarty Global Health Fellows Program (R25 TW009340)
- Training in Sexually Transmitted Diseases and HIV (5 T32 AI 07001-38)
Emergent injection drug use and HIV risk in Nyanza, Kenya

Jennifer Syvertsen, PhD, MPH
Assistant Professor
Department of Anthropology
The Ohio State University
Personal Background

Academic Training:
- MPH, Epidemiology, USF
- PhD, Applied Anthropology (Bio-Cultural Medical Anthropology), USF
- Postdoctoral Fellow, Global Health, UCSD

Fogarty Fellowship Site: Kisumu, Kenya


Primary Mentors: Kawango Agot, Spala Ohaga, Steffanie Strathdee, Carol Camlin, Karla Wagner
Specific Aims

To use mixed methods to investigate the emergence of injection drug use & HIV risk in Nyanza, Kenya.

1) To use ethnographic methods to describe the social and cultural contexts of injection drug use

2) To conduct surveys to examine the HIV risk behaviors of people who inject drugs (n=151)

3) To employ qualitative interviews to identify the role of migration and mobility in the diffusion of injection drug use into the Nyanza region (n=29)
Research Results

Evidence of injection drug use in Kisumu, Kenya: Implications for HIV interventions

- 84% male, mean age 28.8
- Women >4x odds of being HIV+
- Factors associated with HIV+
  - Injection & sexual risk
  - Structural vulnerability
  - Unique features of the injection risk environment

*Drug & Alcohol Dependence, accepted*

Injection of brown sugar heroin
Research Results

Dissemination in Kenya -

• **Overview** (KEMRI/CDC; stakeholders meeting in Nairobi)
• **Gender disparities** (University of Nairobi HIV/STI annual meeting)
• **Needle & Syringe Exchange** (UCSF Semi-annual forum in Kisumu)

Global conferences -

• **Dynamic drug markets in Kenya** (International Society for the Study of Drug Policy, Belgium; special issue *IJDP*)

Getting help injecting
Lessons Learned & Advice

• **Be open & iterative** – expect the unexpected throughout your research

• **Use your time wisely** – fieldwork, think, write

• **Take full advantage of the opportunity!**
  Build relationships, travel, immerse yourself in the culture & try to learn the language(s)
Harm reduction programs in Kisumu

Publishing – gender disparities & drug markets

OSU seed grant:
• Qualitative study on health of women who inject

NIH grant:
• Ethnography & bio-behavioral data on drug use in Kisumu
Asante sana!

Study team: Kawango Agot, Spala Ohaga, Karla D Wagner, Carol A Camlin, Steffanie A Strathdee, Eunice Omanga, Petronilla Odonde, Grace Rota, Kelvin Akoth, Jared Omundo, the peer educators at Impact RDO

Generous funding: National Institutes of Health Fogarty International Center / University of California Global Health Institute (UCGHI) GloCal Health Fellowship Program (R25 TW009343)

Thanks to all of the brave participants who volunteered to take part in our study.
Endowment Training Intervention: Changing Attitudes Toward Opioid Substitution Therapy in Ukraine

Presented by:
Maxim Polonsky, Ph.D.
Yale School of Medicine
Personal Background

Academic Training:
- Ph.D. Marketing and Consumer Behavior (UConn School of Business)

Fogarty Fellowship Site:
- Ukrainian Institute on Public Health Policy (UIPHP), Kyiv, Ukraine

Mentors:
- Frederick Altice, M.D. (Yale)
- Sergii Dvoriak, M.D., Ph.D. (UIPHP)
Research Background

• Opioid substitution therapy (OST) is internationally recognized as the most effective form of treatment for opioid dependence and is also among the most effective HIV prevention strategies available (Altice et al., 2010; Meyer et al., 2012).
• Treatment for opioid dependence has been more influenced by moral biases and prejudices than by the scientific evidence (Torrens et al., 2013).
• High levels of stigma and prejudice towards OST prevail in the region and are reflected in structural and organizational resistance to change that limits access to treatment.
• Reluctance of the Ukrainian CJS to adopt OST despite the overwhelming evidence base pointing to its health benefits and improved outcomes for prisoners.
Polonsky et al. (2014). Challenges to implementing opioid substitution therapy in Ukrainian prisons: Personnel attitudes toward addiction, treatment, and people with HIV/AIDS. *Drug and Alcohol Dependence.*
ENTRI brief description:

ENTRI offer participants various indicators of efficiency in treating drug addiction and asks to rate each of the indicator’s respective value as it appears to them, on a scale from 1 (not at all important) to 10 (very important). Participants are also told that their responses will be matched with the best fitting treatment method. However, because these indicators are universal (e.g., reduction in mortality due to overdose), the participants’ responses are consistent with and are matched with the OST. Thereby ENTRI “tricks” the respondents, as they are not aware about the purpose of the exercise that aims at changing their attitudes.
Intervention

- Endowment Training Intervention (ENTRI).
  - Targets attitude change via eliciting perceived ownership of a solution to a problem.

- The endowment effect (Thaler, 1980) documents that owning a particular good increases its value, even when ownership is experimentally induced and not necessarily sustained.

- The effort that people put into some object doesn’t just change the object but changes people, and their evaluation of that object.

- We expected that mental effort invested by prison medical administrators during a short task, is likely to bring about the desired effect: perceived ownership of an idea that OST is beneficial, and a preference for OST over other treatment methods.
Results

Attitude toward OST

Control

Intervention

F = 7.97, p < .01; η² = .15
Results

F = 4.19, p = .03; η² = .05

Attitude toward OST

Control

Intervention

Low Knowledge
High Knowledge
Next Steps

• Replication

• Improved Design (e.g., Pre and Post-test control group)

• Difference vs. Change: longitudinal component

• Designing similar intervention to target other attitudes (e.g., homophobia, intolerance toward PLWHAs, etc.)

• Testing similar intervention with other populations (e.g., health care providers, people with drug addiction, general population).

• Exporting similar intervention to other locations (e.g., Moldova).
Veni, vidi, vici
Ecology of Vibrio cholerae in Bangladesh

Presented by:
Enrique Rojas, PhD
Postdoctoral Researcher
Stanford University
Personal Background

Academic Training:
- B.A., University of Pennsylvania
- Ph.D., Harvard University
- Postdoc, Stanford University

Fogarty Fellowship Site:
- icddr,b, Dhaka, Bangladesh

Fogarty-Funded Research Project:
“Environmental factors affecting the epidemic potential of *Vibrio cholerae*”

Primary Mentors: Shah Faruque, K.C. Huang, Julie Theriot
Specific Aims

1) To test for a “microbial front” in the Ganges estuary, and to specifically examine the dynamics of *V. cholerae* within this community.

1) To measure the dynamics of microbial community structure during a cholera epidemic.
Research Results

The salinity front partitions *Vibrio* species

![Graph showing TCBS Plate Count (CFU/mL) vs Site Number with salinity (PPT) on the right side. The graph indicates a decrease in TCBS Plate Count from left to right, with markers for different *Vibrio* species: Non-cholerae Vibrios, *V. alginolyticus*, and *V. cholerae*. A map on the right shows Dhaka and Nijhum Dwip with a scale bar of 50 km.]
Research Results

Abundance of non-pathogenic *V. cholerae* predicts cholera epidemics

![Graph showing the relationship between cholera cases and TTGA plate count over months, with a sharp peak in cholera cases correlating with an increase in TTGA plate count. A map of the region with marked locations is also shown.](image-url)
Next Steps

Back in the lab
Lessons Learned & Advice

1) Don’t drink the water.

2) Designing and executing a project *de novo*.

3) Fresh approaches to old problems.
Barriers to follow-up for HPV among female sex workers in Peru

Presented by:
Devora Aharon, MDc
Icahn School of Medicine at Mount Sinai, MD candidate 2015
Personal Background

Academic Training:
- Icahn School of Medicine at Mount Sinai, MD Candidate 2015
- Columbia University, Bachelor of Arts

Fogarty Fellowship Site:
- Centro de Salud “Alberto Barton” del Callao, Peru
- U.S. Naval Medical Research Unit 6, Callao, Peru
- Universidad Nacional Mayor de San Marcos, Callao, Peru

Fogarty-Funded Research Project:
“Barriers to follow-up for HPV among female sex workers in Lima, Peru”

Primary Mentors:
Joseph Zunt, MD, MPH
Silvia Montano, MD, MPH
Specific Aims

Background:

- Cervical cancer in Peru is the leading cause of cancer in Peruvian women
- Prevalence of cervical HPV among female sex workers (FSW) in Peru: 67% (High-risk types: 42%)
- Centro de Salud “Alberto Barton” del Callao screens FSW with annual Pap but had no data about follow-up care and barriers

Specific aims:

- Assess barriers to follow-up of abnormal Pap smears among FSW in Lima, Peru
- Improve access to follow-up care
Mixed Methods Study

Quantitative:
- 97 Questionnaires
- All FSW seen at Barton Clinic for screening
- History of STI screening tests and follow-up care

Qualitative:
- 17 In-depth interviews
- FSW with history of HPV/abnormal Pap
- Barriers to follow-up care
### Participant-reported prevalence and follow-up for STI

<table>
<thead>
<tr>
<th>Sexually Transmitted Infection</th>
<th>Number of Patients (%)</th>
<th>Follow-up care for an abnormal result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cervicitis</td>
<td>56 (57.7%)</td>
<td>98.2%</td>
</tr>
<tr>
<td>Candida</td>
<td>43 (44.3%)</td>
<td>100%</td>
</tr>
<tr>
<td>Bacterial Vaginosis</td>
<td>43 (44.3%)</td>
<td>98.0%</td>
</tr>
<tr>
<td><strong>HPV/Abnormal Pap</strong></td>
<td><strong>27 (27.8%)</strong></td>
<td><strong>29.6%</strong></td>
</tr>
<tr>
<td>Syphilis</td>
<td>12 (12.4%)</td>
<td>100%</td>
</tr>
<tr>
<td>Genital Herpes</td>
<td>5 (5.2%)</td>
<td>80.0%</td>
</tr>
<tr>
<td>Trichomoniasis</td>
<td>5 (5.2%)</td>
<td>100%</td>
</tr>
<tr>
<td>HIV</td>
<td>1 (1%)</td>
<td>100%</td>
</tr>
</tbody>
</table>
Factors associated with follow-up for HPV

<table>
<thead>
<tr>
<th>No follow-up</th>
<th>Successful follow-up</th>
<th>No association</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not being informed of Pap smear result</td>
<td>Understanding HPV causes cervical cancer</td>
<td>Rapport with medical personnel</td>
</tr>
<tr>
<td>Lack of knowledge about HPV and cervical cancer</td>
<td>Social support/Discussed diagnosis with others</td>
<td>Fear of diagnosis/consequences</td>
</tr>
<tr>
<td>Friend with negative experience with abnormal Pap</td>
<td>Friend died from cancer</td>
<td>Shame/stigma</td>
</tr>
<tr>
<td>Travel/migratory worker</td>
<td></td>
<td>Delay between exam and informed of result</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost of follow-up care</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Need to independently locate follow-up facility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Need to miss work</td>
</tr>
</tbody>
</table>
Impact

Interventions:

- Table for Pap smear record in each patient’s chart
- Pamphlet about HPV, cervical cancer, Pap screening

Presentations:

- Peruvian College of Obstetrics Regional Meeting, April 2014, Lima, Peru
- International Papillomavirus Society Annual Meeting, August 2014, Seattle, WA
- World Cancer Congress, December 2014, Melbourne, Australia
- Mount Sinai Global Health Journal Club February 2015, New York, NY
Lessons Learned & Advice

- Begin IRB process early

- Have a thorough knowledge of on-the-ground conditions when designing study methods and instruments

- Quiet observation can be an excellent way to gain trust from and knowledge about the study population

- Don’t be afraid to speak the language
Smartphone Screening for Diabetic Retinopathy in India

Presented by:
Martha Ryan, MDc
Emory University School of Medicine, Class of 2015
Personal Background

Academic Training:
- Carnegie Mellon University, BS 2009
- Emory University School of Medicine, MD 2015

Fogarty Fellowship Site:
- Madras Diabetes Research Foundation, Chennai, India

Fogarty-Funded Research Project:
- Comparison Among Methods of Retinopathy Assessment (CAMRA) Study: Smartphone, Non-Mydriatic and Mydriatic Photography

Primary Mentors:
- Dr. Andrew Hendrick, Emory University
- Dr. Venkat Narayan, Emory University
- Dr. Ramachandran Rajalakshmi, MDRF
Diabetic retinopathy, a sight threatening complication of diabetes, can be effectively treated if detected early.

One valuable screening tool is fundus photography. However, these cameras are costly and bulky.

Smartphones are easy to use, highly portable, increasingly affordable, ubiquitous, and naturally facilitate image transmission.

Objective: Determine and compare the sensitivity and specificity of smartphone and non-mydriatic fundus photography compared to 7-field mydriatic photography.
Photography

Smartphone  Non-mydriatic  Mydriatic
## Research Results

<table>
<thead>
<tr>
<th>Camera</th>
<th>Diabetic Retinopathy</th>
<th>Vision Threatening DR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sensitivity (95% CI)</td>
<td>Specificity (95% CI)</td>
</tr>
<tr>
<td>Non-mydriatic</td>
<td>81 (75, 86)</td>
<td>94 (92, 96)</td>
</tr>
<tr>
<td>iPhone</td>
<td>50 (43, 56)</td>
<td>94 (92, 97)</td>
</tr>
</tbody>
</table>
Future Work

• Glaucomatous optic nerve assessment via fundus photography
• Cost effectiveness of smartphone photography
• Demographic Factors affecting image quality
• New cameras, new techniques…
Personal Next Steps

• Return to my 4th year clerkships

• Graduation in May of 2015

• Ophthalmology residency at Wills Eye Institute, Philadelphia PA
Lessons Learned & Advice

- Ask for help
- Be patient
- Stay flexible
- Set smart goals
- Write it down
Mujeres Unidas: An urgent need to mobilize in Mexico

Presented by:
Lianne Urada, PhD, LCSW
Assistant Professor
UC San Diego, School of Medicine
Personal Background

Academic Training:
- BA Psychology & MSW, UCLA
- PhD Social Welfare, UCLA
- NIDA T32 Postdoctoral Fellow, (Substance Use, HIV, & Related Infections), UCSD Global Public Health

Fogarty Fellowship Site:
- Tijuana, Mexico

Fogarty-Funded Research Project:
“Mujeres Unidas”: Community Mobilization among Female Sex Workers in Tijuana

Primary Mentors:
Dr. Anita Raj (UCSD)
Dr. Kimberly Brouwer (UCSD)
Dr. Gudelia Rangel (El Colegio de la Frontera del Norte)
Specific Aims

1. To understand barriers and facilitators of community mobilization among FSWs in Tijuana, the role of community mobilization in reducing HIV/STI risks for FSWs, and the role of substance use in participation.

2. To adapt measures of community mobilization to the Tijuana context.
# Socio-demographics (n=301)

<table>
<thead>
<tr>
<th></th>
<th>Total %/N</th>
<th>No strong connection*</th>
<th>Has strong connection</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (average years)</td>
<td>33 (18-74)</td>
<td>34</td>
<td>33</td>
<td>.243</td>
</tr>
<tr>
<td>Education (average years)</td>
<td>8 (0-23)</td>
<td>7.7</td>
<td>8.3</td>
<td>.077</td>
</tr>
<tr>
<td>Spouse/steady partner</td>
<td>56 (169)</td>
<td>54 (73)</td>
<td>58 (97)</td>
<td>.451</td>
</tr>
<tr>
<td>Number of kids (average)</td>
<td>2.6 (0-10)</td>
<td>2.7</td>
<td>2.5</td>
<td>.512</td>
</tr>
<tr>
<td># of clients (past 30 days)</td>
<td>17 (0-160)</td>
<td>16.6</td>
<td>16.8</td>
<td>.94</td>
</tr>
<tr>
<td>Homeless (past 6 months)</td>
<td>23 (69)</td>
<td>61 (42)</td>
<td>39 (27)</td>
<td>.002</td>
</tr>
<tr>
<td>Depressed</td>
<td>14 (0-30)</td>
<td>15</td>
<td>13</td>
<td>.001</td>
</tr>
<tr>
<td>Someone would lend them money or give them something</td>
<td>47 (142)</td>
<td>35 (47)</td>
<td>57 (96)</td>
<td>.001</td>
</tr>
<tr>
<td>Felt distant/cutoff from others (past 30 days)</td>
<td>3.1 (1-5)</td>
<td>3.4</td>
<td>2.8</td>
<td>.005</td>
</tr>
</tbody>
</table>

*Having someone to talk to about private matters or to get advice
Bivariate associations with having strong connections or not (cont’d)

<table>
<thead>
<tr>
<th></th>
<th>Total %/N</th>
<th>No strong connection</th>
<th>Has strong connection</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug use</td>
<td>53 (159)</td>
<td>0.55</td>
<td>0.51</td>
<td>.457</td>
</tr>
<tr>
<td>Condom use (with clients)</td>
<td>3.4 (0-4)</td>
<td>3.3</td>
<td>3.5</td>
<td>.106</td>
</tr>
<tr>
<td>Condom use (with regular partners)</td>
<td>3.1 (0-4)</td>
<td>2.8</td>
<td>3.2</td>
<td>.081</td>
</tr>
<tr>
<td>Family rejected their sex work</td>
<td>48 (144)</td>
<td>43 (57)</td>
<td>52 (87)</td>
<td>.100</td>
</tr>
<tr>
<td>Hides sex work from medical providers</td>
<td>28 (85)</td>
<td>34 (45)</td>
<td>24 (40)</td>
<td>.066</td>
</tr>
<tr>
<td>Sexually transmitted infections</td>
<td>35 (104)</td>
<td>43 (46)</td>
<td>37 (54)</td>
<td>.350</td>
</tr>
<tr>
<td>No one knows about their sex work</td>
<td>10 (30)</td>
<td>12 (16)</td>
<td>8 (14)</td>
<td>.038</td>
</tr>
<tr>
<td>Ever arrested</td>
<td>49 (147)</td>
<td>54 (73)</td>
<td>44 (74)</td>
<td>.080</td>
</tr>
<tr>
<td>Fearful of police abuse/harassment</td>
<td>33 (96)</td>
<td>60 (79)</td>
<td>40 (65)</td>
<td>.025</td>
</tr>
<tr>
<td>Ever physically abused</td>
<td>54 (162)</td>
<td>62 (83)</td>
<td>4 (7)</td>
<td>.011</td>
</tr>
<tr>
<td>Violence from clients</td>
<td>.98 (0-4)</td>
<td>1.2</td>
<td>0.85</td>
<td>.050</td>
</tr>
</tbody>
</table>
## Qualitative data themes

<table>
<thead>
<tr>
<th></th>
<th>Community mobilization</th>
<th>Barriers to mobilization /care</th>
<th>Power &amp; Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Female sex worker participants (n=60 interviews)</strong></td>
<td>Social/peer support for: client problems, violence, living conditions, FSW rights, organization of FSW</td>
<td>Isolation/lack of trust</td>
<td>FSW identity</td>
</tr>
<tr>
<td></td>
<td>Social services, agency support</td>
<td>Rivalries/stigma towards other FSWs</td>
<td>Autonomy vs. powerlessness/lack of control</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Secrecy</td>
<td>Self-esteem/efficacy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Discrimination</td>
<td>Knowledge of rights</td>
</tr>
<tr>
<td><strong>Tijuana Providers (n=20)</strong></td>
<td>Agency outreach to the community</td>
<td>Restrictions to services</td>
<td>Few organizations of FSWs exist</td>
</tr>
<tr>
<td></td>
<td>Women need more than “condoms”</td>
<td>Unable to assist substance users: Refer to drug treatment instead</td>
<td>Sex work labels</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Perceived discrimination &amp; distrust</td>
<td></td>
</tr>
</tbody>
</table>
“What mobilization could offer”

<table>
<thead>
<tr>
<th>Benefits</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunities to make more income through alternative jobs (group loans)</td>
<td>54</td>
</tr>
<tr>
<td>Improved access to healthcare</td>
<td>45</td>
</tr>
<tr>
<td>Less abuse/violence</td>
<td>43</td>
</tr>
<tr>
<td>Improved human rights</td>
<td>38</td>
</tr>
<tr>
<td>Reduced isolation</td>
<td>33</td>
</tr>
<tr>
<td>Changes in government policy</td>
<td>24</td>
</tr>
<tr>
<td>• less expensive healthcare</td>
<td>41</td>
</tr>
<tr>
<td>• more protections against abuse for sex worker's safety</td>
<td>30</td>
</tr>
<tr>
<td>• social insurance: jobs/support to leave sex work</td>
<td>30</td>
</tr>
<tr>
<td>• changes in police practices</td>
<td>20</td>
</tr>
<tr>
<td>• reproductive health service (family planning/contraceptives, post-abortion care)</td>
<td>17</td>
</tr>
<tr>
<td>• less discrimination in healthcare against sex workers</td>
<td>14</td>
</tr>
<tr>
<td>• make sex work completely legal</td>
<td>12</td>
</tr>
<tr>
<td>• less discrimination against substance users</td>
<td>9</td>
</tr>
<tr>
<td>• better clinic appointment hours</td>
<td>6</td>
</tr>
<tr>
<td>• rescue of those who are trapped in sex work</td>
<td>5</td>
</tr>
<tr>
<td>• better drug treatment</td>
<td>3</td>
</tr>
</tbody>
</table>
The Urgent Need to Mobilize…

An older friend I met when I came here…She drank a lot…but every time a *guaynito* died from the street…she’d go through *all* the streets …We’d gather [money] for the burial of that person. It’d be one of the cheapest funerals…but she’d have a funeral.

For there to be something like that…“You know what? Something happened to a co-worker”. United through pain…Why? They’ve gone through the same…

* Young girls missing love from their mothers…they always call me “*amá*” [mom] at *El Bordo [the canal]*. Because if one gets sick, I have pills [thrown out]. A Salvadorian girl who just got here says, “*Ay mom, they found parasites in me. I have to buy…*” I say “*Ah, wait, let me see*” and I had one…

- *Female sex worker in El Bordo, the canal*
“I thought [the meeting] was very good... why not make the talks more often, it’s a way for us to blow off steam or to say what is bothering us about the cops... co-workers... people in the bars... it’s a way to distract your mind, of not just drugging yourself, of seeing other things, right? beyond what... well there is.”

-Tijuana female sex worker
Lessons Learned/Next Step: Mobilization Intervention (Community Advisory Board Mtgs)
Acknowledgements

- *Mapa de Salud* research office & team: Krissy Meckel-Parker, Dr. Kimberly Brouwer, Dr. Carlos Magis-Rodriguez, Dr. Tommi Gaines

- *Mujeres Unidas* team: Andres Gaeta, Alondra Baez, Dr. Patricia Gonzalez-Zuniga, Dr. Gudelia Rangel, Dr. Anita Raj, and UCSD Interns: Mikaela Freundlich, Aileen Velarde

- National Institutes of Health Fogarty International Center / University of California Global Health Institute (UCGHI) GloCal Health Fellowship Program (R25 TW009343), and National Institutes of Drug Abuse (3R01DA028692, K01DA036439)
Characteristics and Outcomes of Severe Traumatic Brain Injury in Thailand

Presented by:
Sumidtra Prathep, MD
Attending Anesthesiologist
Songklanagarind Hospital,
Prince of Songkla University
Personal Background

Academic Training:
- Prince of Songkla University
- University of Washington

Fogarty Fellowship Site:
- Songklanagarind Hospital,
  Prince of Songkla University, Thailand

Fogarty-Funded Research Project:
“Characteristics and Outcomes of Thai Patients Hospitalized with Severe Traumatic Brain Injury between 2009-2011”

Primary Mentors:
- Joseph Zunt, MD MPH
- Monica S Vavilala, MD
- Hutcha Sriplung, MD
- Nakornchai Phuenpathom, MD
Specific Aims

To define the clinical characteristics and outcomes of severe TBI at a tertiary trauma care center in Thailand.
Inclusion Criteria

- ≥ 18 years
- Received hospital care between January 2009 - December 2011
- TBI ICD-9 diagnosis codes: 800.xx-804.xx 850.xx-854.xx
- Severe TBI: admission Glasgow Coma Scale (GCS) score <9, head abbreviated Injury Score (AIS) ≥3
- Tracheal intubation for TBI

Data Sources

- The NINDS Common Data Elements (CDEs) variable definitions were used to abstract data and to develop a local TBI registry.
- Data were abstracted from hospital medical records.
Outcome Measures

- In-patient mortality
- Discharge Glasgow Outcome Scale (GOS) score.
  - 1 = death
  - 2 = persistent vegetative state
  - 3 = severe disability; need help for daily living
  - 4 = moderate disability, no need for assistance in activities of daily living, but may require special equipment
  - 5 = low disability; light damage with minor neurological and psychological deficits.

Research Results

- Severe TBI accounted for 27.4% of all TBI admissions
- Median age: 34 ± 1.2 years
- 161 (80.5%) patients were male
- Median GCS score: 7± 0.2
- 110 (55%) patients were transported to the hospital by a vehicle managed by a non-profit organization
Mechanism of Injury

- Motorcycle Accident, 65.5%
- Motor Vehicle Accident, 11.0%
- Ground Level Fall, 6.0%
- Homicide/Suicide, 5.0%
- Pedestrian vs Vehicle, 4.5%
- Fall from >1 meter, 4.0%
- Terrorism/War, 1.5%
- Others, 2.5%
- \( \text{Others}^2 \), 2.5%
Results

- Median hospital stay was 12+ 2.2 days (range 3-260 days)
- 56 (28%) patients were discharged from the hospital with GOS 4.
- Follow up rates at 3, 6 and 12 months were 35.5%, 24.0% and 15.0%, respectively.
- Most patients who presented to the hospital had an improved GOS when they came for follow up at 6 and 12 months
Head CT Scan Results

- Subdural Hematoma
- Subarachnoid Hemorrhage
- Contusion
- Midline Shift
- Intracerebral Hemorrhage
- Epidural Hematoma
- Intraventricular Hemorrhage
- Cerebral Edema
- Diffuse Axonal Injury
The proportion of severe TBI patients receiving care at this level 1 trauma center has increased substantially since 1996.

The morbidity and mortality of patients with severe TBI remains high.

Blood alcohol was present in the majority of severe TBI patients.

The mode of transportation for severe TBI patients differs from that seen in other developing nations.
Lessons Learned & Advice

- http://www.timeanddate.com/worldclock/meeting.html
- http://www.gotomeeting.com/online/

- Keep moving forward in injury research, may need to push the policy in Thailand
Questions & Discussion