

FOURTH HEALTH DISPARITIES CONFERENCE

MARCH 27-29, 2011 - NEW ORLEANS, LOUISIANA



XAVIER UNIVERSITY'S COLLEGE OF PHARMACY
**Center for Minority Health
& Health Disparities**
RESEARCH AND EDUCATION

Break Out A **Public Health Research:** Community-Based Participatory Research Around Disease Areas – Best Practice Models



Utilizing Interdisciplinary Strategies to Advance from Disparity to Reform

FOURTH HEALTH DISPARITIES CONFERENCE
MARCH 27-29, 2011 - NEW ORLEANS, LOUISIANA



XAVIER UNIVERSITY'S COLLEGE OF PHARMACY
**Center for Minority Health
& Health Disparities**
RESEARCH AND EDUCATION

CHILDHOOD OBESITY: PREVALENT CONTRIBUTIONS FROM THE ENVIRONMENT THROUGH EXPOSURES

Wellington K. Ayensu, MD
Jackson State University



Utilizing Interdisciplinary Strategies to Advance from Disparity to Reform

CHILDHOOD OBESITY: PREVALENT CONTRIBUTIONS FROM THE ENVIRONMENT THROUGH EXPOSURES

**WK Ayensu, MD; O Mahmud, BS; RD Isokpehi, PhD; I. Farah PhD;
PB Tchounwou, ScD**

Corresponding Email Address: wellington.k.ayensu@jsums.edu

Department of Biology and RCMI Center for Environmental Health
College of Science, Engineering and Technology, Jackson State University, Jackson MS 39217



FOURTH HEALTH DISPARITIES CONFERENCE
March 27 - 29, 2011 - New Orleans, Louisiana



Monday, March 28, 2011 between 3:15 PM -5:00 PM

Xavier University of Louisiana College of Pharmacy's Fourth Health Disparities Conference

"Utilizing Interdisciplinary Strategies to Advance from Disparity to Reform"

Sheraton New Orleans Hotel

March 27-29, 2011



Jackson State University
College of Science, Engineering and Technology

CHILDHOOD OBESITY

- More than tripled in the past 30 years.
- The prevalence of obesity among children aged 6 to 11 years increased from 6.5% in 1980 to 19.6% in 2008.
- The prevalence of obesity among adolescents aged 12 to 19 years increased from 5.0% to 18.1%
- Obesity is the result of caloric imbalance (too few calories expended for the amount of calories consumed) and is mediated by **genetic, behavioral, and environmental factors.**
- Immediate and Long-term health impacts

Source: <http://www.cdc.gov/healthyyouth/obesity/>



Jackson State University
College of Science, Engineering and Technology

http://www.boston.com/news/health/articles/2010/09/09/alarms_on_mass_youth_obesity/

HOME / NEWS / HEALTH AND FITNESS NEWS FROM THE BOSTON GLOBE

The Boston Globe

Alarms on youth obesity in Mass.

School study finds 1 in 3 overweight; sharp disparities linked to income



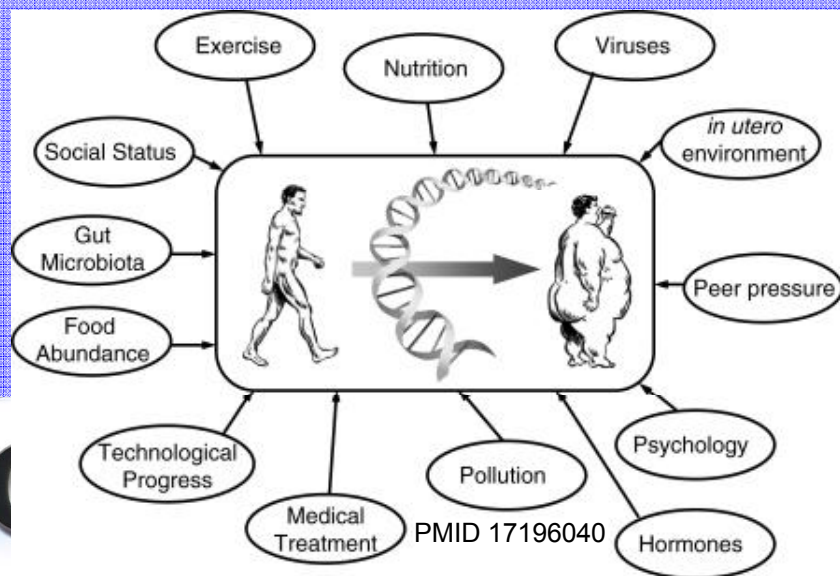
The Big Story: Report says 34% of Mass. children too heavy



Jackson State University
College of Science, Engineering and Technology

GENE-ENVIRONMENT INTERACTION IN COMMON OBESITY

- It has also demonstrated that interactions between genetic makeup and environment (G×E) are critical for the regulation of adipose mass function [17196040]
 - Polygenic, or common, obesity arises when an individual's genetic makeup is susceptible to an environment that promotes energy consumption over energy expenditure.
- The gene GAD2 encoding the glutamic acid decarboxylase enzyme (GAD65) [14691540]
 - **GAD65** catalyzes the formation of gamma-aminobutyric acid (**GABA**), which interacts with neuropeptide Y in the paraventricular nucleus to contribute to **stimulate food intake**.



Focus of Presentation:

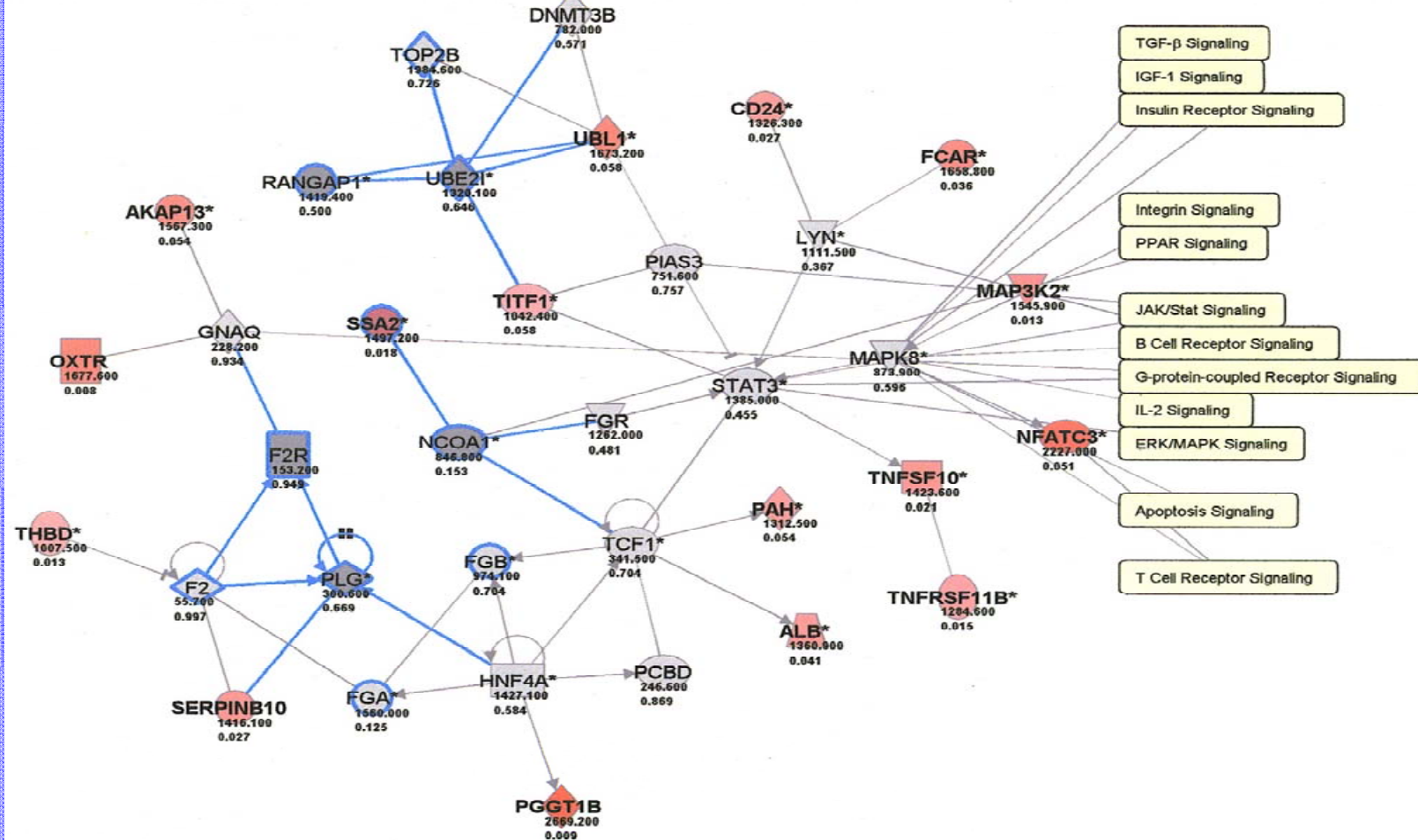
In utero Environment

Pollution caused by Mercury

Jackson State University
College of Science, Engineering and Technology

CHANGES IN BIOLOGICAL PATHWAYS INDUCED BY MERCURY INCLUDES THOSE FOR OBESITY

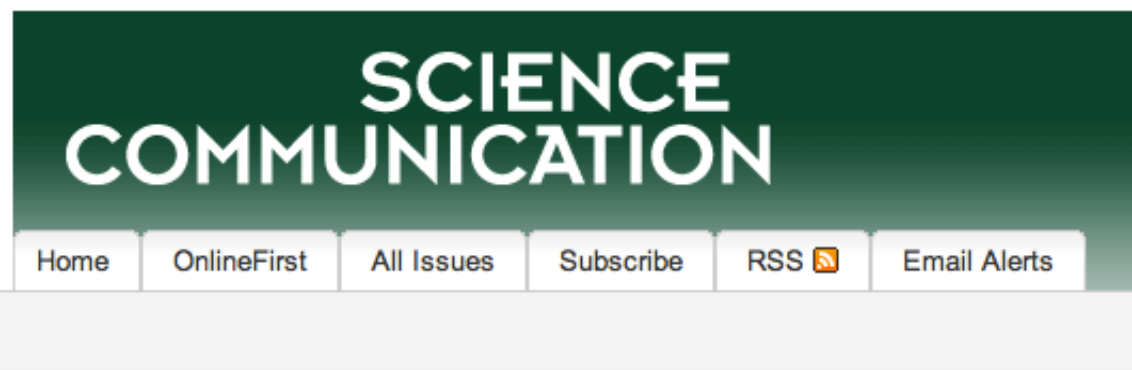
signal Observation 1: comu133AIngfiles.xls
Network 1



© 2000-2004, Ingenuity Systems



Sale and Extensive Ritual/Religious/Spiritual use of Mercury in a Largely-Latino Populated Community in Lawrence, Massachusetts



Report: Community-based, Participatory Research in Lawrence, Massachusetts, Flags Environmental Health Hazards and Fuels Education and Action

2. How was it used?
- a) Carried as a charm on a chain or in a pouch? 155 (17%)
 - b) Swallowed in a drink? 91 (10%)
 - c) Sprinkled around a child's crib or bed? 108 (12%)
 - d) Sprinkled in and around a car? 109 (12%)
 - e) Burned in candles or oil lamps? 152 (17%)
 - f) Applied to the skin? 143 (16%)
 - g) Put in baths and perfumes? 126 (14%)
 - h) Placed in a glass of water kept under a bed? 94 (10%)

ewsky

for Environmental Health Studies glatowsky@jsi.com
<http://scx.sagepub.com/content/25/2/204.abstract>

.....
among community residents, environmental scientists, and local health providers in the Casa de Salud (*Health House*) project informs the health agenda for Lawrence, Massachusetts, a largely Latino-populated from industrial decline, antiquated rental housing, and myriad hazards. For example, when Casa learned from residents that sold mercury in capsules for ritual purposes, the project conducted a sed, participatory research study that documented and described cury use among Spanish-speaking residents; in response, the Casa project partners generated educational outreach activities in Spanish and English. This report describes this community-based, participatory research study.

JSI Center for Environmental Health Studies
44 Farnsworth Street
Boston, MA 02210
617-482-9485



College of Science, Engineering and Technology

Lawrence MA has the highest rate of students with excessive weight – 47%

District	Number of students	Overweight %	Obese %	Overweight or obese %
LAWRENCE	2,564	19.1	27.5	46.6
FITCHBURG	1,417	18.8	27.4	46.2
HOLYOKE	1,063	20.7	24.3	45.0
NORTH BERKSHIRE UNION	109	24.8	19.3	44.0
BOSTON	9,841	20.0	23.6	43.6
SPRINGFIELD	4,964	18.8	24.8	43.6
LEOMINSTER	1,823	16.3	25.7	42.0
HAVERHILL	2,113	17.7	22.9	40.7

http://www.boston.com/news/local/massachusetts/specials/090810_obesity_chart/

The study, which reflects weight and height measurements for about 110,000 students, for the first time provides data on separate school districts and underscores the role of poverty and affluence in determining weight.

Lawrence, one of the state's poorest cities, had the highest rate of students with excessive weight, about 47 percent. Arlington, a wealthier suburban community with a longstanding commitment to nutrition and exercise campaigns, had the lowest level, about 10 percent.

Is there a Mercury link to Childhood Obesity in Lawrence MA or other communities that are exposed to mercury?

Jackson State University
College of Science, Engineering and Technology

MERCURY INFLUENCE ON MAMMALIAN EARLY DEVELOPMENT

- Pollutant in air, water, diet
- Public health hazards
- Expecting mothers are constantly exposed to it
- In the process mercury influences gene expressions via up- or down-regulation of protein expressions
- By analyzing types of proteins actively participating in mercury intoxication one can explain toxicity resulting in the disease state from gene activities.
- Receptors: interacts with functional groups
 - Sulphydryl groups (-SH),
 - Hydroxyl (-OH)
 - Carboxyl (-COOH)
- **OBJECTIVE:** To determine stage-specific embryonic expression of GABA receptor genes from microarray data and digital in situ hybridization images of mouse embryo.



Jackson State University
College of Science, Engineering and Technology

FINDINGS FROM PRELIMINARY STUDIES ON EFFECTS OF LOW DOSE MERCURY ON LIVER AND LYMPHOCYTES CELLS

- Identification of genes responsive to mercury
- Suggest Gene-Environment and Gene-Gene-environment interactions
- Among genes influenced were those encoding for Gamma AminoButyric Acid (GABA) Receptor involved with regulatory functions in the brain

Gene Symbol*	Entrez Gene Identifier			Official Full Name
	Human	Mouse	Rat	
GABBR1	2550	54393	81657	Gamma-aminobutyric acid (GABA-B) receptor, 1
GABBR2	9568	242425	83633	Gamma-aminobutyric acid (GABA) B receptor 2
GABRA1	2554	14394	29705	Gamma-aminobutyric acid (GABA-A) receptor, subunit alpha 1
GABRA2	2555	14395	29706	Gamma-aminobutyric acid (GABA-A) receptor, subunit alpha 2
GABRA3	2556	14396	24947	Gamma-aminobutyric acid (GABA-A) receptor, subunit alpha 3
GABRA4	2557	14397	140675	Gamma-aminobutyric acid (GABA-A) receptor, subunit alpha 4
GABRA5	2558	110886	29707	Gamma-aminobutyric acid (GABA-A) receptor, subunit alpha 5
GABRA6	2559	14399	29708	Gamma-aminobutyric acid (GABA-A) receptor, subunit alpha 6
GABRB1	2560	14400	25450	Gamma-aminobutyric acid (GABA-A) receptor, subunit beta 1
GABRB2	2561	14401	25451	Gamma-aminobutyric acid (GABA-A) receptor, subunit beta 2
GABRB3	2562	14402	24922	Gamma-aminobutyric acid (GABA-A) receptor, subunit beta 3
GABRD	2563	14403	29689	Gamma-aminobutyric acid (GABA-A) receptor, subunit delta
GABRE	2564	14404	65191	Gamma-aminobutyric acid (GABA-A) receptor, subunit epsilon
GABRG1	2565	14405	140674	Gamma-aminobutyric acid (GABA-A) receptor, subunit gamma 1
GABRG2	2566	14406	29709	Gamma-aminobutyric acid (GABA-A) receptor, subunit gamma 2
GABRG3	2567	14407	79211	Gamma-aminobutyric acid (GABA-A) receptor, subunit gamma 3
GABRP	2568	216643	81658	Gamma-aminobutyric acid (GABA-A) receptor, pi
GABRQ	55879	57249	65187	Gamma-aminobutyric acid (GABA-A) receptor, subunit theta
GABRR1	2569	14408	29694	Gamma-aminobutyric acid (GABA-C) receptor, subunit rho 1
GABRR2	2570	14409	29695	Gamma-aminobutyric acid (GABA-C) receptor, subunit rho 2
GABRR3	200959	328699	192258	Gamma-aminobutyric acid (GABA) receptor, rho 3



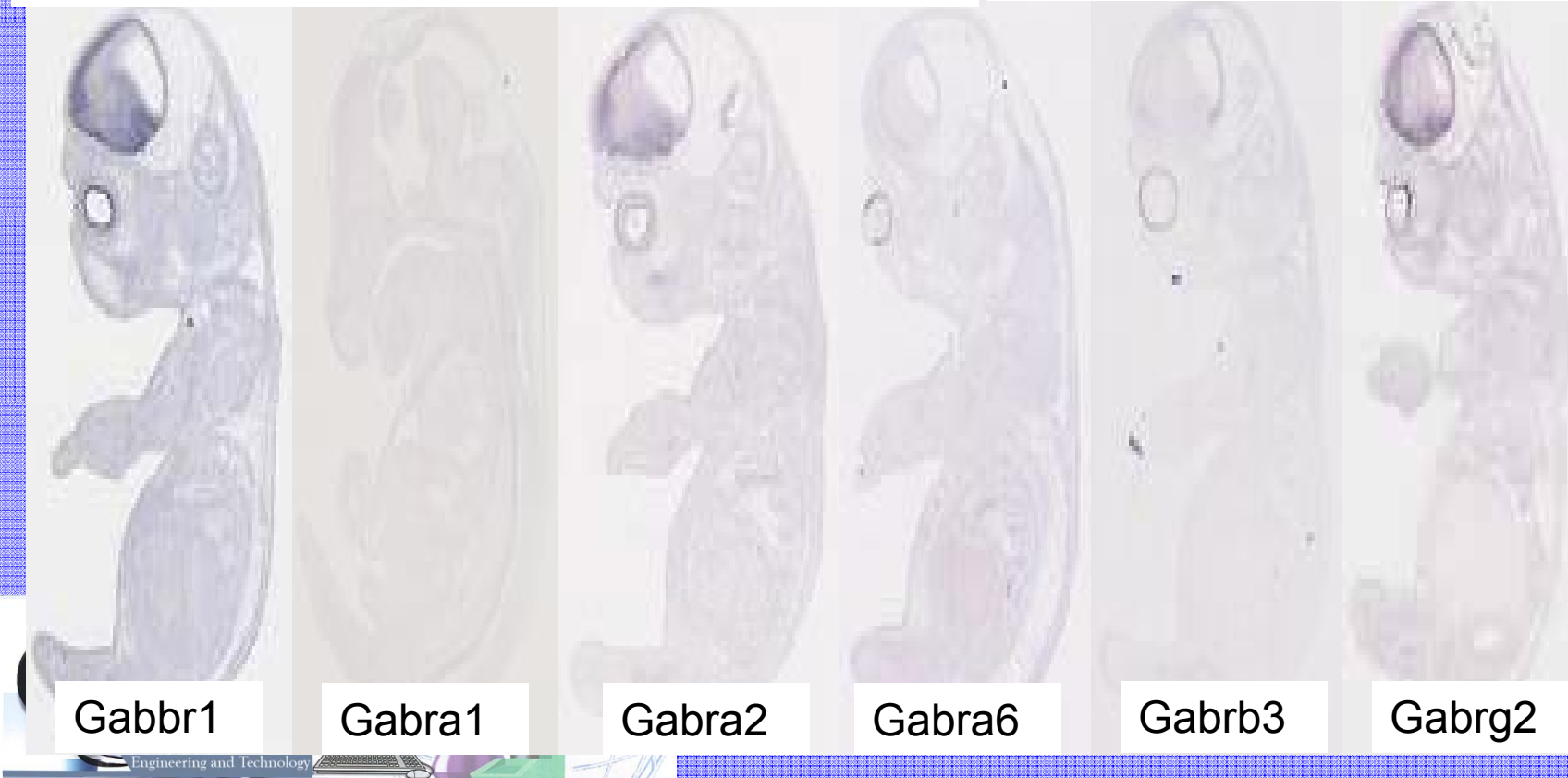
Integration of Microarray* and *In situ* Hybridization** Assays Results for Normal Expression of GABA Receptor Genes

Gene Symbol	E14.5 Microarray	E14.5 EUR express	Brain Expression Annotation (Strength: Pattern)
Gabbr1	1052.05	+	Strong : Regional
Gabra1	28.58	-	Moderate: Regional
Gabra2	163.53	+	Strong : Regional
Gabra6	13.53	-	No expression detected
Gabrb3	174.3	+	Strong : Regional
Gabrg2	1023.54	+	Strong : Regional

Data Sources

*Brains of Normal Mice NCBI
GEO: GDS2702

** A Transcriptome Atlas
Database for Mouse Embryo
www.eurexpress.org



Gabbr1

Gabra1

Gabra2

Gabra6

Gabrb3

Gabrg2

Summary

- Gamma-aminobutyric acid (GABA) interacts with hypothalamic neuronal pathways regulating feeding behavior.
- Low levels of mercury can alter the normal expression of GABA-receptors which may lead to unregulated food intake.
- Community Participatory Research can help identify practices that lead to mercury exposure in at risk communities



Jackson State University
College of Science, Engineering and Technology



HOME

PROJECTS

MEDIA

ABOUT US

RESOURCES

OUR TEAM

CONTACT US

Mission Statement

Director's Message

Funding

CBCB News

Funding Source

CBCB

Research Centers in Minority Institutions (RCMI) – Center for Environmental Health at Jackson State University (NIH-NCRR 2G12RR013459); Mississippi NSF-EPSCoR Grant Awards (EPS-0556308, EPS-0903787) Pittsburgh Supercomputing Center's National Resource for Biomedical Supercomputing (T36 GM008789); U.S. Department of Homeland Security Science & Technology Directorate (2007-ST-104-000007; 2009- ST-062-000014; 2009-ST-104-000021).

BBCDP

U.S. Department of Homeland Security Science & Technology Directorate (2007-ST-104-000007)

Visual Analytics Career Development Program

U.S. Department of Homeland Security Science & Technology Directorate (2009-ST-104-000021)

Collaborative URM Program

Empowering Historically Underrepresented Undergraduate Students in Functional Genomics (NSF-DBI- 0958179)

Mississippi Functional Genomics Network (NCRR P20RR016476-09A1)
Partnerships For Biomedical Research In Arkansas (NCRR P20RR016460-09)
National Center for Integrative Biomedical Informatics (NIH-NIDA#U54DA021519)



QUESTIONS



FOURTH HEALTH DISPARITIES CONFERENCE

MARCH 27-29, 2011 - NEW ORLEANS, LOUISIANA



XAVIER UNIVERSITY'S COLLEGE OF PHARMACY

**Center for Minority Health
& Health Disparities**
RESEARCH AND EDUCATION

BUILDING COMMUNITY CAPACITY IN RURAL MISSISSIPPI DELTA FOR POLICY AND ENVIRONMENTAL SYSTEMS CHANGE

Jackie Hawkins

Mississippi State Department of Health



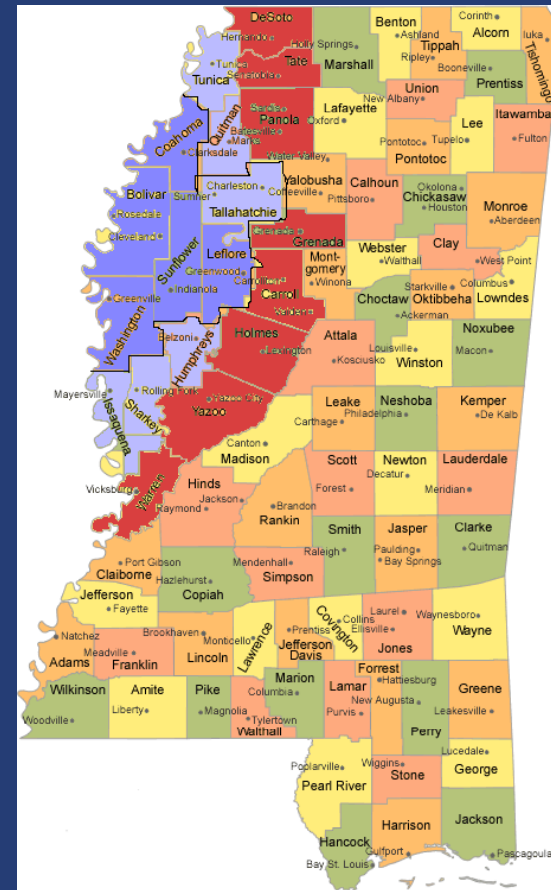
Utilizing Interdisciplinary Strategies to Advance from Disparity to Reform

“BUILDING COMMUNITY CAPACITY IN RURAL MISSISSIPPI DELTA FOR POLICY AND ENVIRONMENTAL SYSTEMS CHANGE.”

Jackie S. Hawkins, MRRPP, BS
Mississippi Delta Health Collaborative
Mississippi State Department of Health
Fourth Health Disparities Conference,
Xavier University, New Orleans, La
March 28, 2011

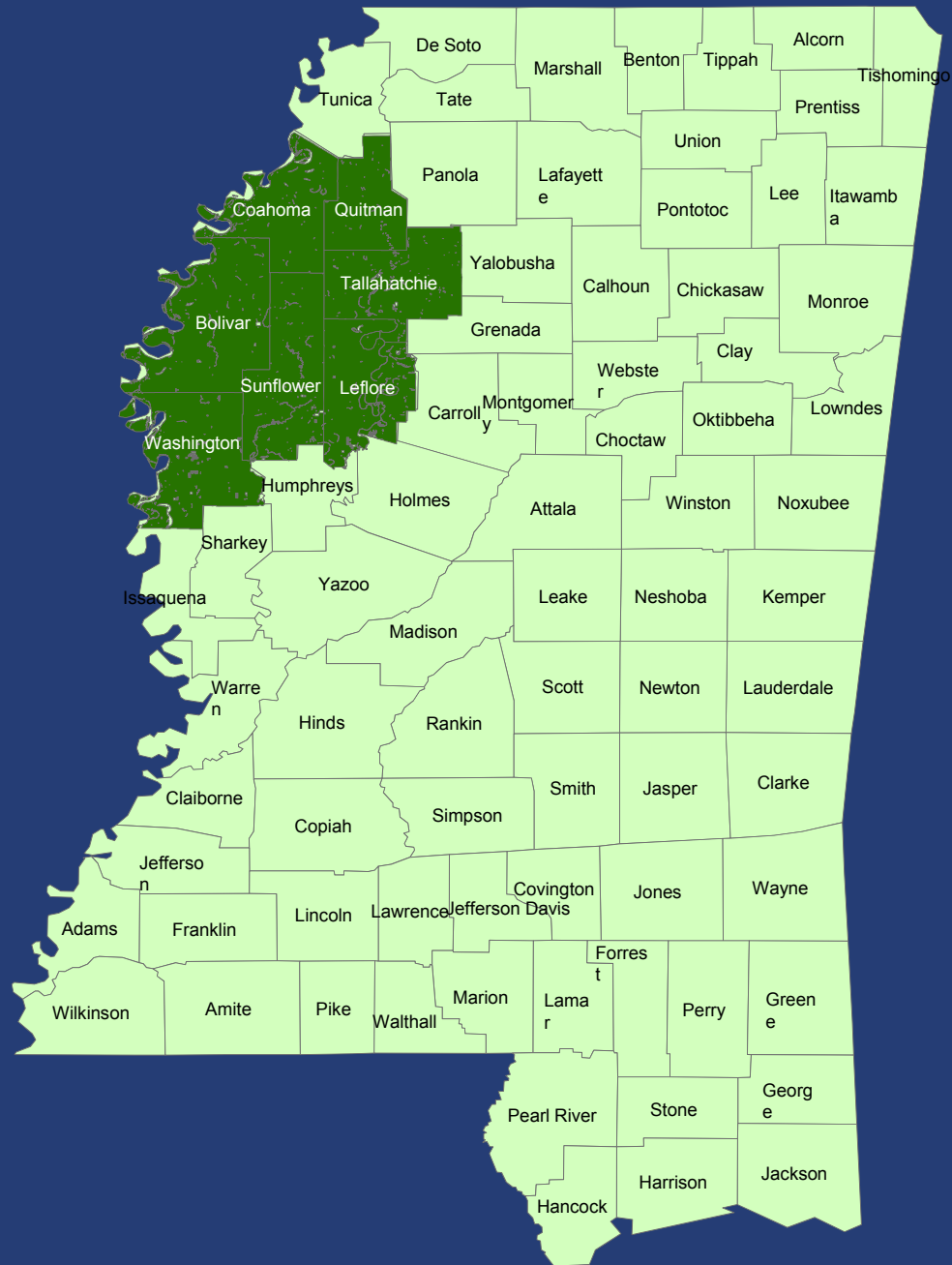
Creating Systems in the Mississippi Delta that Support Healthy Lifestyles

- ❑ Improved Clinical Outcomes for Diabetes, Hypertension, Cholesterol, and Smoking Cessation
- ❑ Improved access to physical activity
- ❑ Improved access to healthy foods
- ❑ Improved access to quality care
- ❑ Reduction health disparities by addressing the social determinants of health



Overview of the Mississippi Delta Health Collaborative

- Develop infrastructure at the community level to facilitate policy and environmental system changes to support healthier lifestyles and decrease risk factors for heart disease and stroke, leading to the reduction in chronic disease prevalence and incidence.
- Improve management of the ABCS among consumers.
- Address social determinants of health for the reduction in health disparities by reaching beyond public health and bringing together diverse representation from the community, government, law enforcement, recreation, business, transportation, health, public and private organizations, and academia.



Phase I

Mayor's Meeting

- ▣ Initial Introductory Meeting with Mayors
- ▣ Mayors Informational Packet
 - Overview of Delta Health Collaborative
 - County and State Level Chronic Disease Statistics
 - Community Engagement Matrix

Phase III City Forums

- ▣ Partnered with local Mayors to hold **City Forums** to discuss how and what local conditions have an adverse impact on health.
- ▣ Utilized Unnatural Causes Series and Discussion Guide
- ▣ Began September 2009
- ▣ Supported by and planned in coordination with each Mayor's Office

City Forum - Gunnison, Ms

What does your neighborhood look like?

- Run Down
- No Recreation
- No Parks
- No Grocery Stores
- Needs Supermarkets
- Pesticide (cars, houses, lungs)
- Too Much Dust

What are the strengths in your neighborhood?

- Crime Rate
- A lot of Open Ground
- A lot of Young People
- A MAYOR THAT CARES!!
- Someone from every sections of town came to the meeting



What actions could be taken to sustain those strengths?

- Unity/Commitment
- Working Together
- Keeping Citizens Informed
- Leadership Keys
- Motivation
- Knowing what to ask
- Leaders in Different Areas (team captains).
- Low

What actions could be taken to sustain those strengths?

- Unity/Commitment
- Working Together

Who can help us take those actions?

- MS Delta Health Collaborative
- Mayor and Board
- Citizens of Town

What actions could be taken to make those improvements?

- Enforce the 911 rule
- Lighting in the community
- Signs (Street)
- Farmer's Market



What things in your neighborhood need to be improved to reduce chronic stress, give residents better access to healthy choices, and/or give people a greater control over their lives?

- Visible addresses of homes for emergencies
- Keep trash picked up
- Recreation Center
- Walking Trails/Sidewalks
- Stray dogs
- Farmer's Market Close By

Common Themes

- ▣ Stray dogs
- ▣ No parks
- ▣ No grocery stores
- ▣ Travel 20 miles for nearest grocery store for fresh fruits and vegetables
- ▣ Not enough lighting
- ▣ No walking trails
- ▣ Too much trash
- ▣ Pesticides
- ▣ No sidewalks
- ▣ One local convenient store with fast food only
- ▣ Lot of empty space
- ▣ Dilapidated property



Phase II

Policy Listening Sessions

- ▣ Assess community/individual readiness for the implementation of policies to create the conditions for every citizen to achieve optimal health
- ▣ Identify policy champions or political leaders interested in health issues
- ▣ Identify health related issues (medical, environmental, social and financial) of importance to political leaders
- ▣ Identify prior or planned actions taken by political leaders to address these health related issues and discuss the impact of these actions
- ▣ Identify/discuss actions to improve or create environment in the Delta that supports healthy behaviors
- ▣ Address and attempt to understand political leaders' concerns regarding the MDHC
- ▣ Gain political leaders' support for the MDHC and work collaboratively as the MDHC move forward

Findings: Data Trends and Analysis

- ***When I say the words “community health” what comes to your mind? What do you think makes up a “healthy community”***

Community Health: Overall, the participants' perception of the words “community health” related to addressing illnesses or poor health conditions. Current health status and the provision of health services to their various constituents were priority concerns. In general, “community health” signifies interventions to address the health needs of individuals and families.

Healthy Community: The participants were less clear on what makes up a healthy community. The participants expressed an understanding that good health is just one component that makes up a “healthy community.” Social determinants of health were mentioned.

- ***What are biggest health problems and/or issues in your community or among your constituents (not ranked by any priority)?***
 - Obesity
 - Diabetes
 - Hypertension/Stroke
 - Drug and alcohol abuse
 - Asthma and allergies
 - Heart disease
 - Access to care
 - Lack of insurance and underinsured

Data Trends and Analysis

- ▣ ***What challenges or barriers exist in your community or among your constituents which have negative impact on it or their ability of staying healthy (not ranked by any priority)?***
 - Poverty
 - Rural location of small communities
 - Unemployment
 - Lack of economic development activities and descent housing
 - Few recreational/wellness facilities for all ages and after-school programs
 - Lack of affordable and accessible healthy foods (e.g. fruits and vegetable)

- ▣ ***What resources does your community have to help your constituents stay healthy (not ranked by any priority)?***
 - Local churches and faith-based organizations
 - Local schools, community colleges and institutions of higher learning
 - Local city and county governments including local health departments
 - Healthcare including hospitals and federally qualified health centers
 - Local private and non profits organizations
 - Local farmers' markets
 - Delta Health Alliance and Delta Council

Data and Trends Analysis cont.

- ▣ ***If you could change one thing about health in your county, what would it be (not ranked by any priority)?***
 - Improve the nutrition habits and practices of the community
 - Eliminate obesity in the community
 - Decrease exposure to asbestos and agriculture pesticides and chemicals
 - Increase commitment to improve the built environment
 - Provide accessible and affordable health care
 - Increase the number and quality of health care providers, facilities and services

Recommendations

- Facilitate the development of a Delta Region health policy agenda based upon policymakers' priorities and resident needs.
- Continue efforts to engage other local champions beyond the political leadership (business, faith-based, health, education and medical providers).
- Local policy makers, key community stakeholders and the general community should be provided a menu of evidence-based policies successfully implemented in similar communities with potential to improve the health status in the Mississippi Delta.
- The development of local related health policies should be promoted as an integral and integrated component of community development activities such as housing, education, transportation and economic development.
- Invest in leadership training and technical assistance in the target counties.
- Develop capacity to provide technical assistance in the development, implementation and evaluation of local policies to local policy makers, key stakeholders and the local communities.
- Program sustainability should be a primary goal for public and community health policy and program interventions in the target counties. Technical assistance and support in developing strategies to increase program sustainability should be provided to local policy makers, key stakeholders and the local communities.

Mayoral Health Council Request for Proposal

- ▣ **Nineteen (19) Mississippi Delta municipalities were selected through a competitive process to:**
 1. **build or strengthen a coalition of community partners in collaboration with their Mayor's office and**
 2. **develop and implement a community action plan to address risk factors for heart disease at the policy and environmental systems levels. Focus groups were held and community members were surveyed in each municipality to assess each community's most pressing need.**

- ▣ **Councils received training and technical assistance on policy and environmental change. The project partnered with Emory University Prevention Research Center and Jackson State University to evaluate the project.**

Mayor Health Councils

- Webb, Tutwiler, Glendora and Sumner in **Tallahatchie** County
- Lambert, Marks, and Sledge in **Quitman** County
- Greenwood in **Leflore** County
- Coahoma, Friars Point, and Lula and Jonestown in **Coahoma** County
- Beulah, Winstonville, Pace, Gunnison,, Alligator, Shaw, Rosedale in **Bolivar** County
- Greenville, Arcola, and Leland in **Washington** County
- Inverness , Ruleville and Moorhead in **Sunflower** County
- Belzoni in **Humphreys** County



Membership

- ▣ Mayors
- ▣ Retirees
- ▣ Community Members
- ▣ School Nurses
- ▣ Superintendent
- ▣ Home Health
- ▣ Teachers
- ▣ Boys and Girls Club
- ▣ YMCA
- ▣ MS State/MS State Ext
- ▣ Pharmacist
- ▣ Healthcare Providers
- ▣ Churches
- ▣ Banks
- ▣ Tobacco Treatment Specialist
- ▣ Sororities
- ▣ Law Enforcement
- ▣ Mental Health
- ▣ Social Workers
- ▣ Manufacturers

Mayors Responsibilities

- ❑ Verify all expenditures
- ❑ Mayor must participate in monthly conference calls
- ❑ Mayor must participate in quarterly grantee meetings
- ❑ Mayor must participate in the evaluation process (which includes a community assessment and focus groups)



Health Council Responsibilities

- ▣ Develop Action Plan
- ▣ Implement Strategies around physical activity, nutrition and reducing exposure to tobacco smoke.
- ▣ Participate in Leadership Institute
- ▣ Participation in Community Action Institute
- ▣ Participate in all technical assistance activities, including grantee meetings, conference calls and peer networking.
- ▣ Share lessons learned with the Mississippi Delta Health Collaborative.
- ▣ Participate in an annual evaluation and community assessment for a minimum of two years. The evaluation will involve the collection of data at the community level to demonstrate the impact of the intervention(s).

Health Council Coordinator Responsibilities

- ❑ Build or strengthen a coalition diverse community partners.
- ❑ Responsible for coordinating and/or ensuring the responsibilities of the Health Council are carried out as stated in the Health Council's approved application and the contractual agreement between the Health Council and the Mississippi State Department of Health.
- ❑ Participate in a community assessment process developed by the Mississippi Delta Health Collaborative. This includes conducting a community forum to engage community members and identify policy and environmental concerns related to risk factors for heart disease and stroke.
- ❑ Participate in monthly conference calls.

Community Assessments

Three Phases

1. Community Assets Survey for each town completed by the Mayor's Health Council
2. 22 focus groups conducted with each town
3. Community questionnaire administered within each town

Common Themes from the Focus Groups

- Perception of community.
 - Small, rural, friendly, welcoming and diverse.
- Concerns of community.
 - Health issues, jobs, safety, transportation, crime and teen pregnancies.
- Common illnesses in community.
 - High blood pressure, diabetes, stroke, heart disease, arthritis, and asthma, cancer.
- What people can do to prevent them from getting sick?
 - Exercise, eat right, follow doctor's advice, loose weight, and stop smoking.

Common Themes

- Where do people buy food ?
 - Out of town... (Wal-Mart & Kroger), farmer's market, gardens, local store in town (expensive), Wild game meat.
- Safety and physical activity.
 - Stray dogs, crime, and inadequate lighting.
- Perception of physical activity.
 - People do not enough exercise (No sidewalk, no indoor and out facilities).
- Reasons why people don't exercise.
 - No sidewalk, no bicycle trail, not motivated, lack awareness and lazy.
- Community coming together to solve an issue.
 - Natural disasters and community projects.

Common Themes from the Focus Groups

Perception of physical activity.

- People do not enough exercise (No sidewalk, no indoor and out facilities).

Reasons why people don't exercise.

- No sidewalk, no bicycle trail, not motivated, lack awareness and lazy.

Community coming together to solve an issue.

- Natural disasters and community projects.

Resources in community.

- Existing health programs, clinics, home health, hospice and hospitals.

Perception of schools.

- Needs improvement and parents need to be involved in children's school.

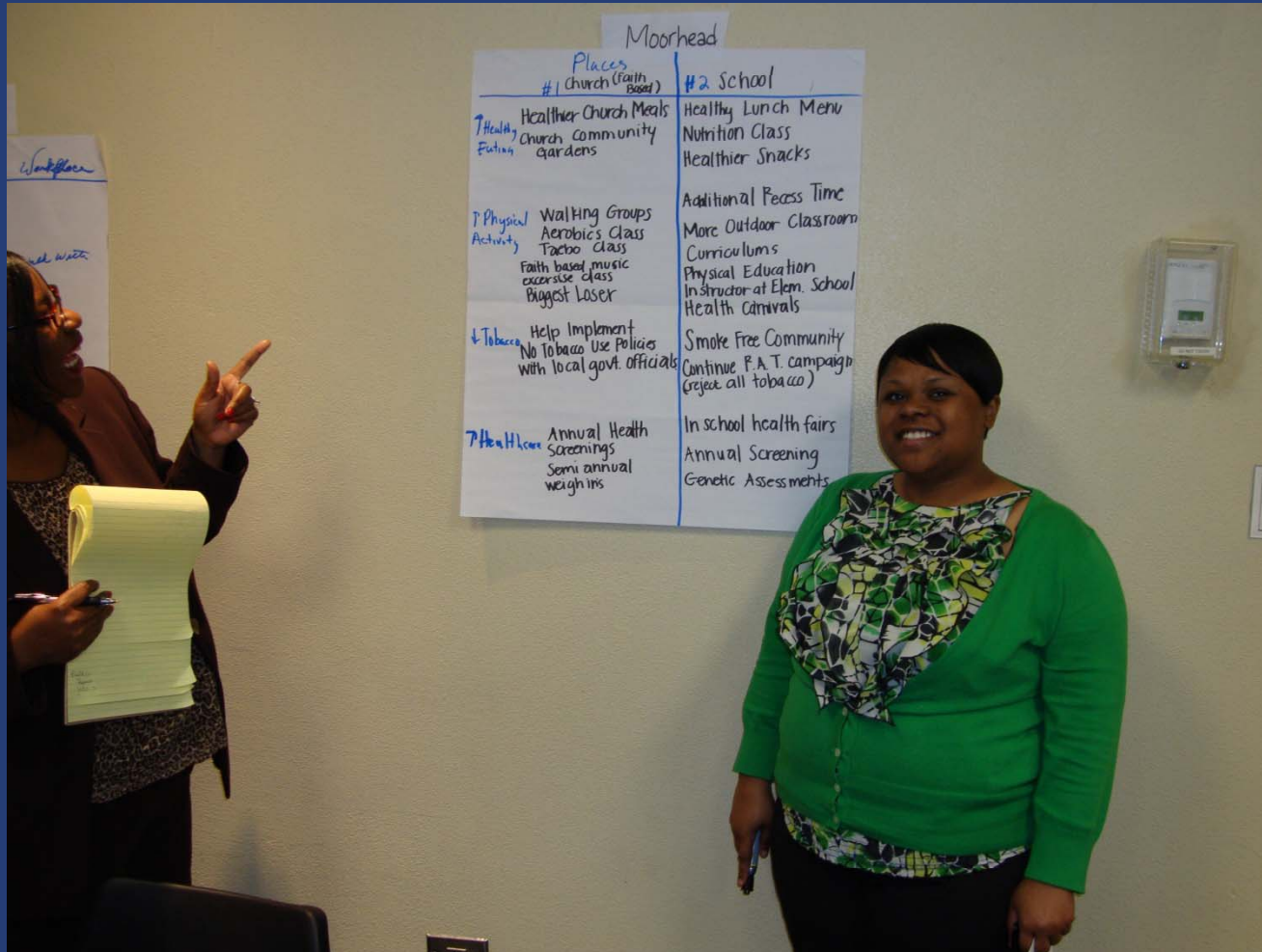
Access to healthcare.

- Travel long distance to access healthcare, expensive and lack health insurance.

Focus Group Training



Action Plan Training



Leadership Institute Training



Results

During a 9-month time frame:

- ▣ **Five (5) municipalities worked with their local school districts to implement joint-use agreements allowing community members to use school facilities**
- ▣ **Four (4) municipalities implemented smoke-free air policies**
- ▣ **Eleven(11) municipalities developed community gardens**





FY 2011

Priority areas for Mayoral Health Councils include:

- ▣ Access to healthy foods through the establishment of farmers markets, corner store/fruit and vegetable programs, and farm to market/school programs, policies for after school activities
- ▣ Access to recreation through joint use agreements, land use policies, rehabilitating blighted areas, sidewalks, mandated physical activity requirements for city funded youth programs, improving the built environment
- ▣ Smoke-free air ordinances
- ▣ Educate on and market health behaviors

Contact Information

Jackie S. Hawkins, MRPPP, BS
Ms Delta Health Collaborative
Ms State Department of Health

522 West Park Ave; Ste P
Greenwood, Ms 38930

662-455-1344(voice)

662-455-1344(fax)

Jackie.Hawkins@msdh.state.ms.us

Q&A

FOURTH HEALTH DISPARITIES CONFERENCE

MARCH 27-29, 2011 - NEW ORLEANS, LOUISIANA



XAVIER UNIVERSITY'S COLLEGE OF PHARMACY
**Center for Minority Health
& Health Disparities**
RESEARCH AND EDUCATION

SEXUAL VIOLENCE AS A PREDICTIVE RISK OF HIV AND STI AMONG WOMEN WHO LIVE IN A PUBLIC HOUSING IN PUERTO RICO

Lymari Cintron
Ponce School of Medicine



Utilizing Interdisciplinary Strategies to Advance from Disparity to Reform

SEXUAL VIOLENCE AS A PREDICTIVE RISK OF HIV AND STI AMONG WOMEN WHO LIVE IN A PUBLIC HOUSING IN PUERTO RICO



Lymari Cintron Lugo PhD (c)

Lisa R. Norman, PhD

Carolina Alvarez, MD, DrPH

Department of Public Health

Ponce School of Medicine, Ponce, Puerto Rico



Background

- Gender-Based Violence (GBV) is one of the most widespread human rights abuses and public health problems in the world today, affecting as many as one out of every three women.
- The consequences of GBV are often devastating and long-term, affecting women's and girls' physical health and mental well-being.
- Its ripple effects compromise the social development of other children in the household, the family as a unit, the communities where the individuals live, and society as a whole.

Background

- In Puerto Rico, according to official statistics collected by the [Office of the Women's Advocate \[in Spanish\]](#), 178 women have been murdered by their partners or ex partners between 2001-2008. This year, already [16 women \[in Spanish\]](#) have been murdered in cases of domestic violence in an Island with a population of roughly 4 million people.
- There is an average of 20,000 domestic violence incidents reported to the police every year. Those are only the ones that are reported.
- In their latest study (2007), the government's [Center for Victims of Rape \[in Spanish\]](#) calculated that 18,000 people, mostly women and girls, are victims of sexual violence every year.

Source: Global Voices Online. (2010). *Puerto Rico: Voices Against Violence*. Retrieved from <http://www.conversationsforabetterworld.com/2010/01/puerto-rico-voices-against-violence/>

Objectives

- **Reports of sexual violence incidents and HIV infection have found an association between sexual violence and HIV at a population level.**
- **The objective of these analyses is to examine the relationship between reported sexual violence and prevalence of HIV/STI.**

Methods

- **As part of *Proyecto MUCHAS*, 386 women who live in public housing in Ponce, Puerto Rico were surveyed about their experience with sexual violence, among other topics. Also, they also volunteered to submit to HIV and STI testing (gonorrhea and chlamydia).**

Sample Characteristics

- **Age:**
 - Mean age → 36.79 ($S_x=14.07$); Range 14-80 years
- **Relationship Status:**
 - 51.3% legally married / involved in common-law relationship
 - 30.7% single
 - 18.0% divorced, widowed, or separated
- **Education:**
 - 40.1% less than high school education
 - 38.7% high school education
 - 21.2% post high school education

Results: HIV/STI Test

- 2 women tested positive for HIV – 0.52%
- 11 women tested positive for chlamydia – 2.85%
- 1 women tested positive for gonorrhea – 0.26%

Results: Sexual History

- ▶ 12.3% of women reported to have a sexually aggressive partner.
- ▶ 13.8% of women reported to have a recent sexually aggressive partner.*
- ▶ 6.2% of women reported being threatened if ask for condom use.
- ▶ 14.7% reported being forced to have sex.



***Of those women who reported having had a previous sexually aggressive partner.**

Results: Previous Sexually Aggressive Partner

- Age:
 - 13.2% of youth vs. 10.2% of adults ($p>0.05$)
- Education:
 - 15.2% with at least a high school education vs. 7.6% of those with less than a high school education ($p<0.05$)
- Relationship Status:
 - 14.1% of those in a stable relationship vs. 10.7% of those in an unstable relationship ($p>0.05$)

Results: A Recent Sexually Aggressive Sexual Partner*

Age:

6.2% of youth vs. 18.3% of adults ($p>0.05$)

Education:

8.2% with at least a high school education vs. 5.8% of those with less than a high school education ($p>0.05$)

Relationship Status:

7.7% of those in a stable relationship vs. 7.0% of those in an unstable relationship ($p>0.05$)

***Among those who reported having a previous sexually aggressive sexual partner,.**

Results: Threatened if Asked to Use Condoms

- Age:
 - 3.6% of youth vs. 9.6% of adults ($p>0.10$)
- Education:
 - 5.6% with at least a high school education vs. 5.5% of those with less than a high school education ($p>0.05$)
- Relationship Status:
 - 6.0% of those in a stable relationship vs. 5.2% of those in an unstable relationship ($p>0.05$)

Results: Forced to Have Sexual Relations

- Age:
 - 6.2% of youth vs. 8.3% of adults ($p>0.05$)
- Education:
 - 8.2% with at least a high school education vs. 5.8% of those with less than a high school education ($p<0.05$)
- Relationship Status:
 - 7.7% of those in a stable relationship vs. 7.0% of those in an unstable relationship ($p>0.05$)

Relationships between Sexual Violence Indicators and HIV/STI Cases

- **Previous Sexually Aggressive Partner**

--21.4% of those with a previous sexually aggressive partner vs. 12.0% of those without a previous sexually aggressive partner were more likely to test positive for HIV/STI ($p < 0.05$).

- **Recent Sexually Aggressive Partner***

-- 25.0% of those with a recent sexually aggressive partner vs. 6.4% of those without a recent sexually aggressive partner were more likely to test positive for HIV/STI ($p < 0.05$).

*Among those who reported having a previous sexually aggressive partner.

Relationships between Sexual Violence Indicators and HIV/STI Cases

- **Threatened if Ask for Condom Use**

--5.9% of those with threatened if ask for condom vs. 0.0% of those threatened if ask for condom were more likely to test positive for HIV/STI ($p>0.05$).

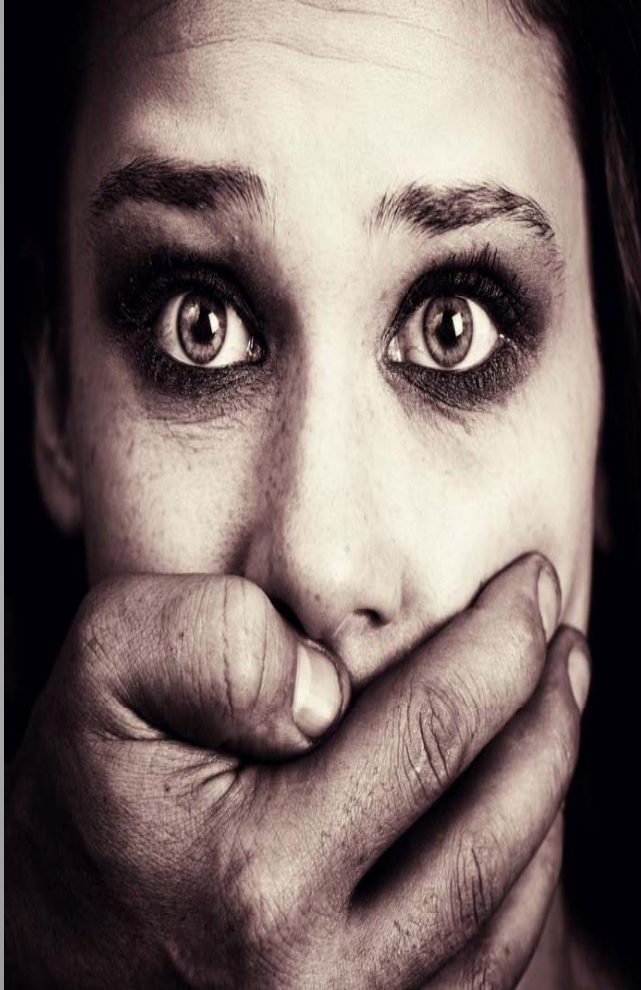
- **Forced to Have Sexual Relations**

--12.0% of those who reported being forced to have sex vs. 3.6% of those forced to not have sex were more likely to test positive for HIV/STI ($p<0.05$).

Conclusion

- These findings support our hypotheses that exposure to sexual violence increases the risk of HIV/STI among women who live in public housing in Ponce, PR.
- The trend suggests that exposure to sex violence is a significant predictor of STIs, including HIV.

Conclusion



- Domestic/sexual violence has been identified as an important public health problem that affects millions of women around the world, in particular, increased HIV/STI risk.
- Despite being of epidemic proportions, domestic violence too often remains in the **secrecy** of the home.

Conclusion

- As such, these factors should be considered when developing interventions to help women decrease their risk of contracting STIs, taking into account the cultural influence in which they live as well as their exposure to sexual violence.
- Understanding why women continue to stay with these abusive partners warrants further research to enhance our understanding of the underlying factors contributing to their continued selection of sexually abusive partners. In addition, negotiating skills need to be taught to better enable these to avoid these risky sexual situations

Acknowledgement

The authors would like to acknowledge the support received from the RCMI Program of the Ponce School of Medicine, and Pfizer in funding this research. In addition, we would like to acknowledge the support received by the school in general.

The authors would also like to acknowledge the contribution of the public housing staff for their help in conducting this research project.

Lastly, we would like to acknowledge the women who agreed to participate in our research study.



FOURTH HEALTH DISPARITIES CONFERENCE

MARCH 27-29, 2011 - NEW ORLEANS, LOUISIANA



XAVIER UNIVERSITY'S COLLEGE OF PHARMACY

**Center for Minority Health
& Health Disparities**
RESEARCH AND EDUCATION

INTERDISCIPLINARY: CULTURE COMPETENCY FOR HEALTH PROFESSIONS

Souzan M. Hawala-Druy, MPH, BSN
Howard University College of Nursing



Utilizing Interdisciplinary Strategies to Advance from Disparity to Reform

***Interdisciplinary:
Culture Competency
For Health Professions***

Souzan Hawala-Druy, MPH, BSN

Mary H. Hill, DSN, RN

Howard University- College of Nursing

Purpose of Study:

- ◆ Design and implement creative, evidence-based *interdisciplinary* educational activities
- ◆ Promote positive and cultural competence learning outcomes for culturally diverse students
- ◆ Prepare health professional students with the requisite knowledge and skills to provide culturally congruent and competent care to diverse population (reduce health disparities)

Methodology:

- ◆ It is Qualitative and quantitative study
- ◆ That measures students' level of cultural awareness, competence and proficiency pre and post educational intervention
- ◆ By the *Inventory for Assessing the Process of Cultural Competence-Student Version (IAPCC-SV)* by Campinha-Bacote
- ◆ And course evaluations, students' feedback, and portfolio journal reflections.

Culturally Congruent Care, OR Culturally Congruent Education, first?

Cultural blindness exist in education, *customized* teaching-learning style/strategies that *fit* student's learning abilities and culture (*passive/active OR product/process*)

Specific cultures' memorization & teaching are inadequate

Eclectic, fun likable, and culturally congruent course

self-heritage, role play, storytelling, debate, discussions, shared life experiences, textbooks, evidence-based research, videos, Clickers, case studies, guest speakers, st. presentation, exam, reflection journal "low-stake writing" or final paper "high stake Writing", one-day community immersion.

Faculty and students are challenged and energized by the variations in topics & activities

CONCLUSION:

- ◆ Results of IAPCC-SV showed that students are becoming more culturally competent and were progressing toward proficiency as a result of course participation (*over estimation, on-going process*).

RECOMMENDATIONS:

- 1- Use eclectic culturally congruent teaching-learning strategies that address diverse learner's needs,
- 2- Assign course faculty with expertise in culture competency, application of health communication skills and role modeling cultural competency / sensitivity, and
- 3- Evaluate course and revise periodically based on assessment of course outcomes, learner needs, and healthcare trends in society.

FOURTH HEALTH DISPARITIES CONFERENCE

MARCH 27-29, 2011 - NEW ORLEANS, LOUISIANA



XAVIER UNIVERSITY'S COLLEGE OF PHARMACY

**Center for Minority Health
& Health Disparities**
RESEARCH AND EDUCATION

Thank you for your participation!



Utilizing Interdisciplinary Strategies to Advance from Disparity to Reform