

**American  
Cybernetic  
Corporation**



## **DEMONSTRATED EXPERIENCE IN PUBLIC HEALTH INFORMATICS**

### **Applications of Public Health Informatics in Public Health Surveillance - Spatial and Temporal Analysis**



**This document provides a list of significant projects, publications, & presentations by ACC team members, specific to Public Health Informatics (PHI).**

May 2009



## **A Summary of ACC's Expertise in Public Health Informatics**

One major area of ACC's focus is in the employment of **public health informatics** approaches to address the public health challenges of our times. Public health informatics (PHI) may be broadly defined as the application of computer or information technology to enhance public health practice, research and community services. This field directs attention to the employment of existing databases (secondary) coupled with the collection of primary data and the application of specialized presentation methods to offer both the investigator and the audience the most effective analytical tools. As described in our portfolio, one important area of our experience includes health service research methods using spatial and temporal analysis and Geographic Information Systems.

### **Public Health Preparedness and Response**

Lessons learned from recent disasters, regardless of natural or human-made, have demonstrated that **information** play a key role in health preparedness and response, in communicating risk and assistance to needy communities, and reducing avoidable loss of property and lives. Health surveillance systems for addressing emergency needs should be in place to provide **data**-driven, scientifically-sound logistic solutions of health data collection and reporting, and extend evidence-based **knowledge** support when needs arise. **Evidence strongly suggests that most communities are inadequately prepared!**

**Emergency health preparedness** and response, a major public health concern, has been a significant focus of ACC. State and local governments are acutely, or should be, aware of their specialized needs to better understand and respond to health emergencies. Examples of ACC's team experience, provided herein, include:

- Needs assessment (community assets, hazards, transportation, hospital surge capacity, health care providers, population characteristics, etc.),
- Training for addressing major steps of emergency management: including Mitigation, Preparedness, Response, and Recovery. as well as the implementation of a responsive process.

Based on our previous research findings, specific **information needs** in public health preparedness include:

- Conduct **needs assessment**. There is an expressed need for needs assessment in various vulnerable communities, to identify community assets, hazards, transportation, hospital surge capacity, health care providers, population characteristics, etc. The acquired needs assessment **data** will serve as a basis for useful **information**, and translated into actionable **knowledge**.
- Develop a comprehensive **database** to include up-to-date list of assets, hazards, volunteer pool, and health information kits, health care providers who can provide culturally and linguistically



appropriate care, and risk communication channels that vulnerable communities can use. Based on our previous studies many state medical examiner's offices maintain physician databases that **are either outdated or incomplete** - some had a third of the information incorrect. This should be improved.

- Develop a **special need registry** to serve as an emergency information system. Vulnerable populations could self-register. This system should be able to receive calls/emails, distribute information, and respond to situations in a declared emergency.
- **Improve Risk communication** for diverse communities: Maps are an important tool for disseminating information, such as community assets, health providers, community resources, evacuation plans. and can be a powerful tool for risk communication for residents with limited English ability. We are experts in maximizing the utility of maps in communicating risk through mapping to present various parameters of preparedness and response, and diverse populations.

### **Responding to Health Disparities**

One of the overarching goals of Healthy People 2010 proposed by the CDC is to reduce health disparities. Health disparities exist in different geographic locations, at different point or duration in time, and by various demographic subgroups (e.g., by age, gender, racial or ethnic groups). ACC is specialized in detecting and visualizing the effect of health disparities by the above characteristics, and link the detected problems to policy solutions.

By convention, the understanding of health disparities is often expressed by mortality or morbidity rates by its time duration in a broad political jurisdiction. Recent analytic methods have enabled researchers to further examine health disparities by demographic subgroups, at different duration of time, at certain geographic jurisdictions, and by certain relative risk – spatial and temporal analysis. This is a powerful statistic analysis of health disparities. ACC is specialized in detecting spatial and temporal trends of potential health disparities if any, and determine whether health clusters occurred in the past, up to the present time, and whether they are statistically significant.

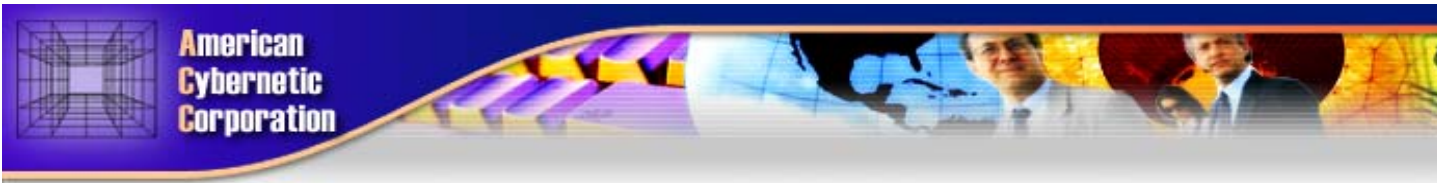
Further evidence of ACC's team experience is illustrated by its list of projects in areas pertinent to **reducing health disparities**. These include: HIV/AIDS, cancer prevention and detection, surveys and focus groups in the improvement of health surveillance systems, enhancing health programs (such as the community based participatory report program, screening for chronic diseases and smoking cessation), community health assessment, program implementation and evaluation. We have experience with more than 50 research contracts/grants in health preparedness & response for federal, state, and county health agencies in health disparities and smoking cessation, and have more than 60 peer-reviewed publications and presentations. We are specialized in translating complex research results into improvements in public health practice, providing forecasting and modeling, training, consultation and evaluation for most activities relating to public health informatics.

ACC's expertise lies in the streamlining the data collection, storage, analysis and presentation process. We analyze data to draw meaningful results, and to earn actionable knowledge.



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## **ACC Team Expertise**

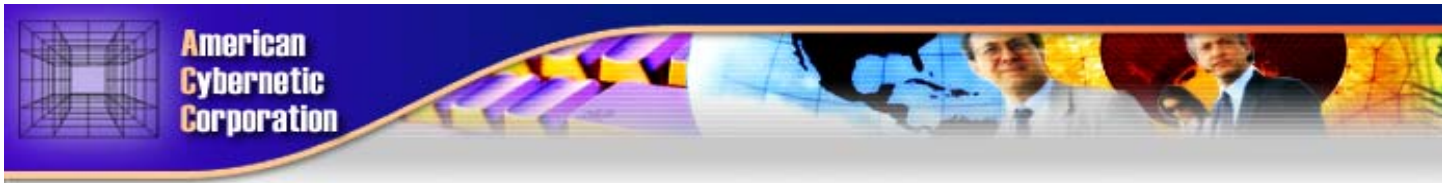
### **SAFETY/PUBLIC HEALTH EMERGENCY PREPAREDNESS RESPONSE**

#### ***Grants/Contracts***

1. Monitoring the Future of Maryland's Traffic Safety Programs, Maryland Department of Transportation, and State Highway Administration.
2. Assessing Bioethical Issues in Data Analysis, for the National Center for Bioethics in Research and Health Care.
3. Monitoring the Future of Maryland's Traffic Safety Programs & An Integrated Web-based System, for the Maryland Highway Safety Office, Maryland Department of Transportation.
4. Biodefense Informatics and Health Surveillance Data Management Training for Public Health Preparedness and Response to Bioterrorism, for Texas Department of Health.
5. Database Inventory Based on the Survey of Physicians for Emergency Response Purposes. For Texas Department of Health.
6. A Collaborative Partnership for Bioterrorism Research Between UNTSPH and Collin County, Texas. For CDC/Association of Schools of Public Health.
7. Public Health Preparedness and Response to Bioterrorism - Educational Programs in 38 counties of Texas. For Texas Department of Health.
8. Needs Assessment for Public Health Preparedness and Response to Bioterrorism, Texas Public Health Regions II and III. For Texas Department of Health.
9. Database Inventory and Survey of Nurses for Emergency Preparedness and Response. For Texas Department of Health.
10. Database Inventory and Survey of Veterinarians and PAs for Emergency Preparedness and Response Purposes. For Texas Department of Health.

#### ***Publications***

1. **Hsu CE**, Soto Más F, Jacobson HE, Harris AM, Hunt V, Nkhoma E. Public Health Preparedness of Health providers: Meeting the Needs of Diverse, Rural Communities. Journal of National Medical Association. 98 (11). P 1784-1791. 2006. PMID: 17128688
2. **Hsu CE**, Soto Más F, Jacobson H, Papenfuss RL, Nkhoma E, Zoretic J., Assessing the Readiness and Training Needs of Non-urban Physicians in Public Health Emergency and Response. Disaster



Management and Response: Journal of Emergency Nurses Association. 3 (4): P 106-111. 2005. PMID: 16216794. *Feature Article*.

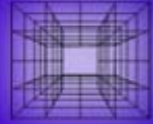
3. Jacobson HE, Soto Mas F, **Hsu CE**, Miller JA, Turley JP. Self-Assessed Emergency Readiness and Training Needs of Nurses in Rural Texas. Public Health Nursing, 2009. 26 (4), In Press.
4. Soto Más F, **Hsu CE**, Jacobson HE, Zoretic J, Felan M. Physician Assistants and Bioterrorism Preparedness. Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science. 4 (3). P 301-308. 2006. PMID: 16999591.
5. Nkhoma E, **Hsu CE**, Hunt V, Harris AM. Detecting Spatiotemporal Clusters of Accidental Poisoning Mortality among Texas Counties, U.S., 1980-2001. International Journal of Health Geographics. 3 (1):25 P 1-13. 2004. PMID: 15509301.
6. Tan J, Soto Más F., **Hsu CE**, Chapter 5. E-Public Health Information Systems: E-Technologies for Public Health. Preparedness and Surveillance. In Joseph Tan: E-Health Care Information Systems: An Introduction for Students and Professionals. San Francisco, CA: *Wiley, Josey-Bass Publishers*. p. 127-154. Apr 2005.

## **Presentations**

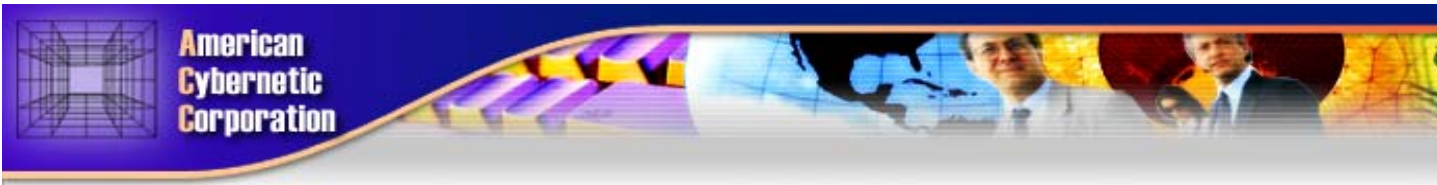
1. CME Training Speech title: "Public Health Preparedness and Response in Special Populations" *Continuing Medical Education* offered through American Academy of Family Physicians, Clinical Directors' Network. NY. Mar 28, 2007. <http://www.cdnetwork.org/NewCDN/LibraryView.aspx?ID=cdn348>
2. Speech Title: Public Health Informatics in Public Health Preparedness and Health Disparities Research: The Roads Traveled and Lessons Learned. University of Texas Houston Health Science Center. Feb 28, 2007. <http://webcast.shis.uth.tmc.edu/20070228-115556-1/msh.htm>
3. Speech title: "Disaster Preparedness and Public Health Intervention". Center on Aging, Legacy College – Meet the Professor Series. College Park, MD. November 1st, 2006.
4. Speech title: "Avian Flu and the State of Preparedness in Maryland". UMCP Alumni Association, Family Weekend. Stamp Student Union. November 2006.
5. Speech title: "Avian Flu and Analysis of President Bush's National Preparedness Plan" Panelist, National Press Club. Washington DC. November 9, 2005. <http://www.vetmed.vt.edu/Publications/Vitalsigns/nov05/index.html#npc>

## **Conference Abstracts**

1. **Hsu CE**, Chiu YW, Miller JA, Soto Más F. Spatial and Temporal Surveillance of Human Avian Flu Cases - Locating Clear and Present Clusters. American Public Health Association Annual Conference, Nov 4-8, 2006, Boston, MA. [http://apha.confex.com/apha/134am/techprogram/paper\\_144102.htm](http://apha.confex.com/apha/134am/techprogram/paper_144102.htm)



2. **Hsu CE**, Miller JA, Más FS, Nkhoma ET. A Spatial-Temporal Surveillance System for Prostate Cancer Disparities in Population Subgroups, American Public Health Association Annual Conference, Nov 4-8, 2006, Boston, MA.  
[http://apha.confex.com/apha/134am/techprogram/paper\\_144122.htm](http://apha.confex.com/apha/134am/techprogram/paper_144122.htm)
3. **Hsu CE**, Soto Más F, Jacobson HE. Emergency preparedness and response - comparing the needs of non-urban physicians and veterinarians in North Texas, American Public Health Association Annual Conference, Nov 4-8, Boston, 2006.  
[http://apha.confex.com/apha/134am/techprogram/paper\\_125146.htm](http://apha.confex.com/apha/134am/techprogram/paper_125146.htm)
4. Miller JA, **Hsu CE**, Más FS, Harris AM, Bae SJ. Biodefense Informatics Training: EpiInfo and Data Management Workshops for Public Health Workers, American Public Health Association Annual Conference, Nov 4-8, 2006, Boston, MA.  
[http://apha.confex.com/apha/134am/techprogram/paper\\_144041.htm](http://apha.confex.com/apha/134am/techprogram/paper_144041.htm)
5. Soto Más F, **Hsu CE**, Jacobson HE. Public Health Preparedness and Response: A Comparative Study of Healthcare Providers, Society for Public Health Education's 2006 Midyear Scientific Conference, Las Vegas, NV. 2006.
6. Soto Más FG, **Hsu CE**, Ohagi E, Marshall M, Kaigan K. Bioterrorism-related Preparedness of Health Providers, American Public Health Association Annual Conference in Philadelphia, PA. December 2005. [http://apha.confex.com/apha/133am/techprogram/paper\\_106450.htm](http://apha.confex.com/apha/133am/techprogram/paper_106450.htm)
7. Lykens K, Moayad N, Sammer C, **Hsu CE** and Patrick M. Public Health Preparedness In Rural North Texas, Annual Conference of Association of Health Services Research and Health Policy in Nashville, TN. June 2003.
8. **Hsu CE**, Hagan KD, Ohagi E and Lykens K. Using GIS to Assist the Assessment of Public Health Preparedness in Texas. Proceedings of Annual Conference of Texas Public Health Association -San Antonio, TX. Apr 2003.

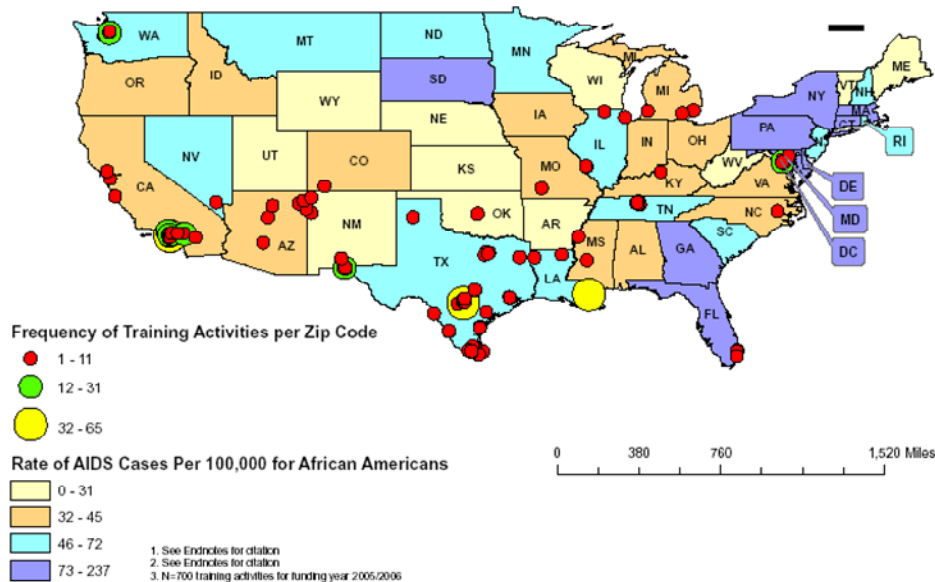


## **HIV/AIDS**

### **Grants/Contracts**

1. The design of a comprehensive HIV/AIDS web enabled content and collaboration management and reporting system for the integration of grant and program data associated with all DHHS funded programs throughout the Department (including CDC, HRSA, SAMHSA, IHS, OWH, OMH, NIH, CMS) for the Office of HIV/AIDS Policy (OHAP), Department of Health and Human Services (DHHS).
2. A Web-based system for evaluating HIV prevention program in community-based organizations, for the Program Evaluation and Research Branch, Center for Diseases Control and Prevention (CDC) .
3. HIV web-based evaluation system for the Alabama HIV prevention and control evaluations, for the Alabama Health Department.
4. Assessing the effectiveness of community based organizations for the delivery of HIV preventions for the Funded by the Program Evaluation and Research Branch, Center for Diseases Control and Prevention (CDC)
5. HIV prevention in African-American adolescent females (University of Alabama at Birmingham), for the U.S. Department of Health and Human Services.
6. Using social networks to reduce risky sex in HIV+ women (University of Alabama at Birmingham), for the U.S. Department of Health and Human Services.
7. Knowledge and Attitudes of AIDS in a Sample of Rural Nurses, for the Northeast Center for Rural Development.
8. Web-Based Evaluation Specialist. Evaluation Team of DELTA Region AIDS Education and Training Center. For HRSA, US DHHS through Louisiana State University.
9. Web-Based Evaluation Specialist. Evaluation Team of National Minority AIDS Education and Training Center. HRSA, US DHHS through Howard University.
10. Evaluation of HIV Prevention Programs in Community-based Organizations, by the Center for Health Policy Studies, University of Texas School of Public Health, for the Texas Department of Health.

**African American AIDS Case Rate per 100,000 (2005)<sup>1</sup> by NMAETC Level I-V Provider Training Activities (2005/2006)<sup>2,3</sup>**



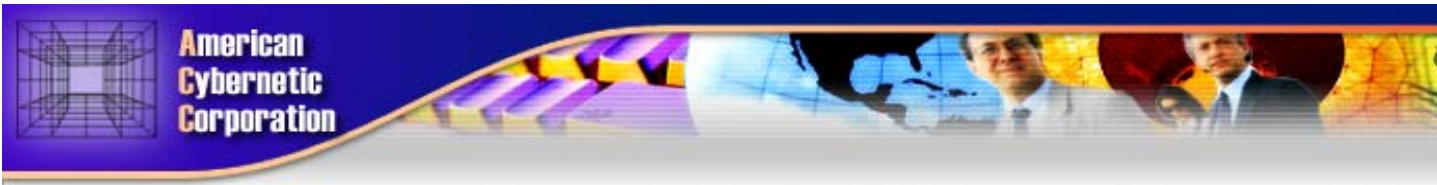
## **Publications**

Chiu YW, **Hsu CE**, Wang MQ, Nkhoma E. Examining Geographic and Temporal Variations of AIDS Mortality: Evidence of Racial Disparities, *Journal of National Medical Association*, 2008.100 (7): 788-796. [Journal of the National Medical Association](#). PMID: 18672555.

Chiu YW, Wang MQ, Chuang HY, **Hsu CE**, Nkhoma ET. A new application of spatiotemporal analysis for detecting demographic variations in AIDS mortality: an example from Florida., *The Kaohsiung journal of medical sciences*, 2008. 24 (11), 568-76. PMID: 19239990.

## **Presentations**

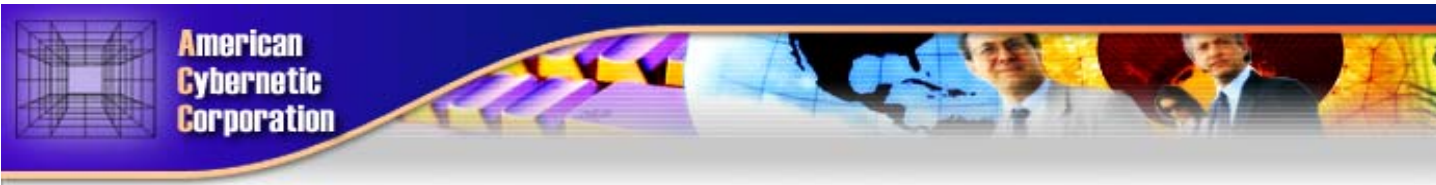
1. Metzger C, **Hsu CE**, Boekeloo B Relating Training Levels of the National Minority AIDS Education and Training, APHA annual meeting, Washington DC., American Public Health Association, Nov 2007. Oral Presentation.
2. **Hsu CE**, Boekeloo B, Hardt A, Bellows D., Otway M, McNeil J et al. Relating Characteristics of the National Minority AIDS Education and Training Center Programs to High Minority AIDS Incidence Geographic Areas in the US, Treatment and Management of HIV Infection in the United States Conference, Atlanta, GA. Sept 2005.



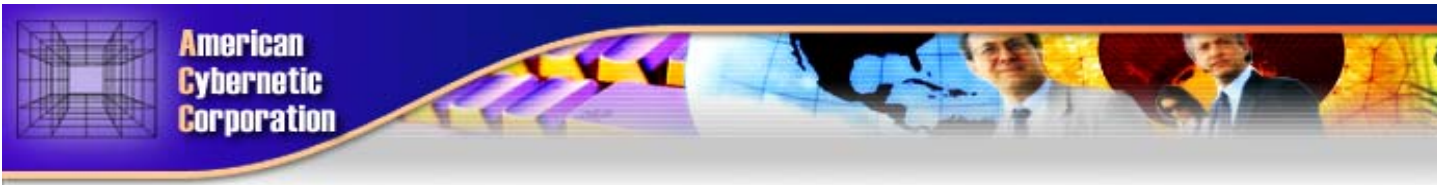
## **Cancer and Other Health Related Projects**

### **Grants/Contracts**

1. Developing tools and methods to study the use, impact and cost effectiveness of prostate cancer screening, for the NIH.
2. Determining prostate cancer and lifestyle practices among African-American SDA and non-SDA men for the US Army Medical Research Command.
3. Spatial and Temporal Cluster Analysis of Colorectal, Breast, and Prostate Cancer Clusters in Maryland Counties, 1979-2002, for the Maryland Statewide Health Network Program, State of Maryland DHMH
4. Hepatitis B Education and Screening Program for 6 Asian American Communities. Asian American Health Initiative. Montgomery County, State of Maryland, for the Department of Health and Human Services, Montgomery County, State of Maryland.
5. Asian American Liver Cancer Prevention Program in Maryland, for the National Cancer Institute.
6. Assessing Bioethical Issues in Data Analysis, for the National Center for Bioethics in Research and Health Care.
7. Alabama Department of Human Sources Family Preservation and Support web-based evaluations, for the Alabama Department of Human Resources.
8. The effect of cheese intake on nutrient intakes in the U.S. population, for the Dairy Management Incorporated.
9. The impact of added sugars on the diet quality of children's diets, for the Northeast Dairy Foods Research Center.
10. Adult identity mentoring project, for the CDC, subcontracted by the UAB
11. Structural equation modeling development for the Tuskegee syphilis project (A pilot project conducted for the University of Connecticut).
12. The effect of flavored milk on the diet quality of children's diets, for the Northeast Dairy Foods Research Center.
13. National cardiovascular disease risk of minority elders, for the Academic Research Enhancement Award, for the National Institute of Health
14. Development of Atlanta disability resource guide, for the Atlanta Housing Authority.



15. Program development and evaluations for the family preservation project, for the Department of Human Resources, Alabama Department of Human Services.
16. Predictors of milk consumption in U.S. school-aged children: evidence from USDA Nationwide Food Consumption Surveys, for the USDA Hatch Grant.
17. Prediction of Work Tolerance in Encapsulating Protective Clothing from Simple Field Test, for the National Institute of Health, U.S. Department of Health and Human Services
18. Community Assessment of Breast Cancer Control Needs for the Susan G. Komen Foundation Houston Affiliate.
19. Lecture-discussion entitled "Developing and Implementing a System to Document and Evaluate Residency Clinical and Educational Outcomes." Proposal for the 33<sup>rd</sup> Annual Spring Conference of the Society of Teachers of Family Medicine, Orlando, FL, May 3-7, 2000.
20. Smoking Intervention Using Health Feedback--Results of a Pilot Study," March, 1997 at M.D. Anderson Cancer Center, Department of Epidemiology, University of Texas – Houston Health Science Center, March 1997.



## **SPATIAL TEMPORAL ANALYSIS/HEALTH DISPARITIES**

### ***Grants/Contracts***

1. Developing a Health Action Plan – A Community Based Participatory Study of Asian American Community in Maryland for the Department of Health and Human Services, Montgomery County, State of Maryland.
2. Spatial and Temporal Analysis of Cancer Health Disparities in Maryland. University of Maryland Medical School
3. Developing culturally and linguistically appropriate Smoking Cessation Programs for Asian Communities in PG and Montgomery County, Maryland. State of Maryland Cigarette Restitution Funds. Support through PG/Montgomery County DHHS
4. Hepatitis B Education and Screening Program for 6 Asian American Communities. Asian American Health Initiative. Montgomery County, State of Maryland. Department of Health and Human Services, Montgomery County, State of Maryland.
5. Asian American Health Initiative. A Community Health Needs Assessment Database for Asian Americans of Montgomery County, Department of Health and Human Services, Montgomery County, State of Maryland.
6. An Evidence-Based Approach to Addressing Health Disparities in Collin County, Texas. Community Partnership Grant CDC/Association of Schools of Public Health

### ***Publications***

1. **Hsu CE**, Liu LC, Juon H, Bawa J, Tillman U, **Miller J**, **Wang MQ**. A Hepatitis B Education and Screening Program for 9 Asian American Communities in Maryland. Journal of the National Medical Association 2007; 99(8): 900-907.
2. **Hsu CE**, Soto Más F, **Miller JA**, Nkhoma ET. A Spatial-Temporal Surveillance System for Prostate Cancer Disparities in Population Subgroups. Journal of the National Medical Association. 99 (1):72-86. 2007. PMID 17304971
3. **Hsu CE**, Soto Más F, Hickey JM, **Miller JA**, Lai D. Surveillance of the Colorectal Cancer Disparities Among Demographic Subgroups - A Spatial Analysis Approach. Southern Medical Journal Vol. 99 (9): P 949-956. 2006. *CME Issue*. PMID: 17004529.
4. **Hsu CE**, Jacobson H, Soto Más F. Evaluating the Disparities of Female Breast Cancer Mortality Among Racial Groups – a Spatiotemporal Analysis. International Journal of Health Geographics. 3 (1):4. P 1-11. 2004. PMID: 14987336.

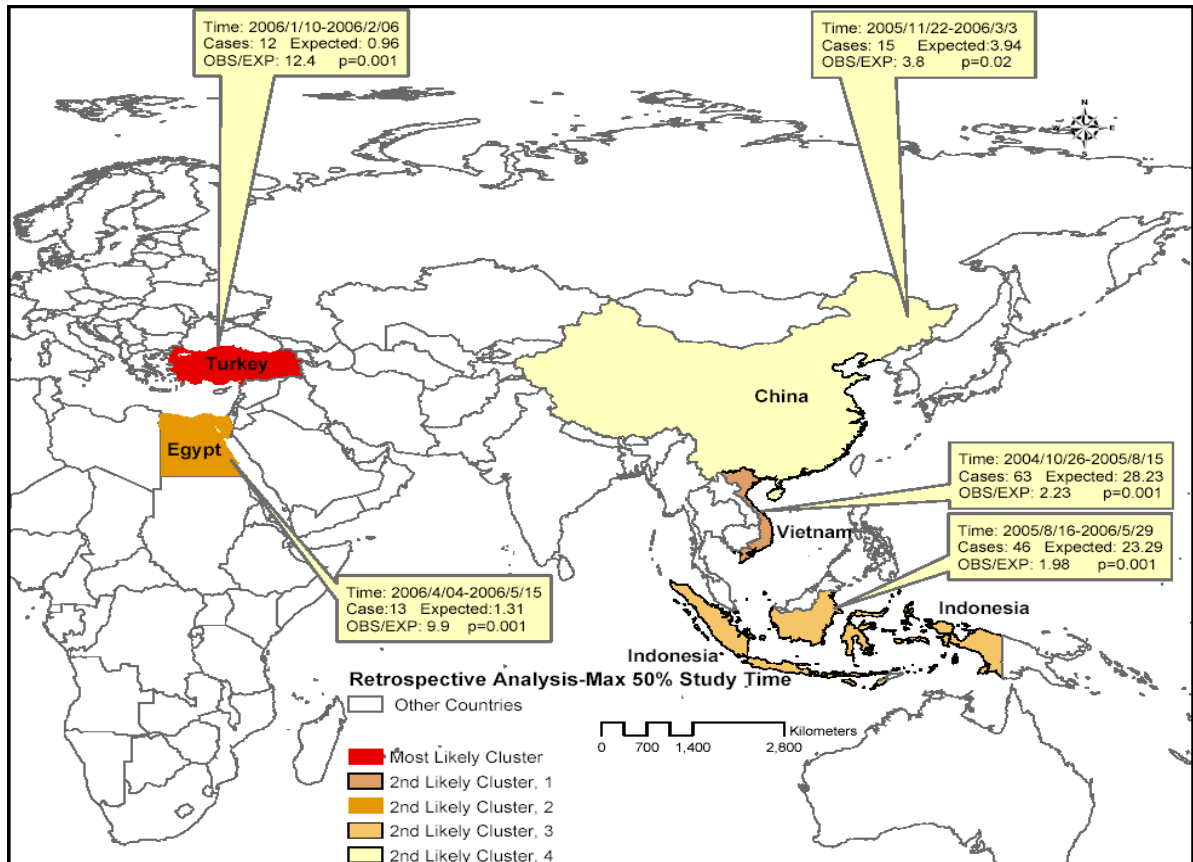
5. **Hsu CE**, Johnson L and Brooks A. Promoting Health Information Literacy - Collaborative Opportunities For Faculty of Health Sciences and Academic Librarians. Academic Exchange Quarterly. 7 (1):P 200-206. 2003.
6. **Hsu CE**, Lai D, Begley C, Franzini L. The Association Between Income and Mortality in Texas and Taiwan - a Comparative Study of Spatial Statistics. Journal of Advances and Applications in Statistics. 2 (2):149-176. 2002
7. Chiu YW, **Hsu CE**, Wang MQ, Nkhoma ET. Examining Geographic and Temporal Variations of AIDS Mortality: Evidence of Racial Disparities. 99 (9): In Press, September 2007. Journal of the National Medical Association.
8. Le T, Bae S, **Hsu CE**, Singh K, Ning S. Effects of Cardiorespiratory Fitness on Serum Ferritin Concentration and Incidence of Type 2 Diabetes: Evidence from Aerobics Center Longitudinal Study (ACLS), The Review of Diabetes Studies, 2008. 5(4), 245-252. PMID: 19290385

## **Presentations**

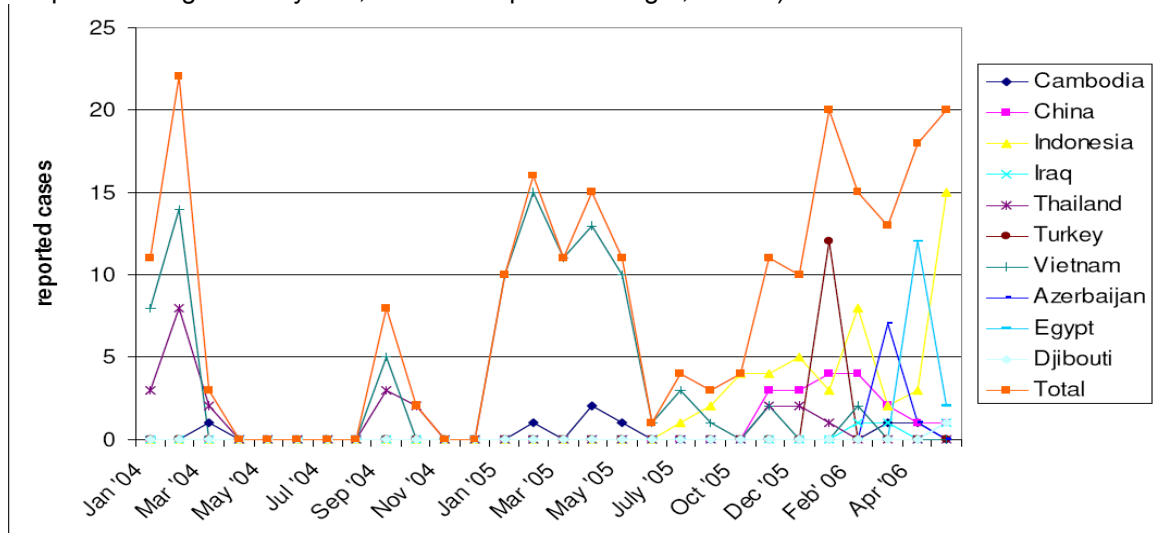
1. Presentation title: "Community Health Disparities Report Card" (for AHC service area). Center for Health Disparities Blue Ribbon Panel. Adventist Health Care Systems. Rockville, MD. April 2006.
2. Speech title: "Asian American Health In Montgomery County, Maryland". Asian American health Initiative Annual Conference. Bethesda, MD. May 5, 2006.  
[http://www.aahiinfo.org/pdf/conference06/reviews/AAHI\\_EDHsu.pdf](http://www.aahiinfo.org/pdf/conference06/reviews/AAHI_EDHsu.pdf)
3. Speech title: "Benefits and Drawbacks of Going Beyond Minimum Race and Ethnicity Standards in Collecting Health Data". Maryland State Action Agenda for Ending Health Disparities. Maryland Department of Health and Mental Hygiene Annual Conference in Eliminating Health Disparities. Baltimore, MD. May 16, 2006.
4. Speech title: "Asian American Health Needs and Policy Implications" Sponsored by Asian American Studies Program. Nyumburu Cultural Center, University of Maryland College Park, MD. <http://www.phi.umd.edu/aahi/docs/AAHITalk0327.pdf>
5. Research Study Presentation, "'The Impact of Maternal Smoking in Pregnancy on Cognitive and Behavioral Development of Children at 54 Months of Age,'" at the National Center for Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention, Atlanta, GA, 2005.
6. Invited presentation, "Prostate Cancer Disparities in Texas," to The Prostate Cancer Program, Baylor College of Medicine (Prostate SPORE), Houston, Texas. February, 2007.

## **Conference Abstracts**

1. **Hsu CE**, Martinez G, Su B, Lee SM. Developing An Evidence-Based Culture of Mental Health Wellness in Under-Represented Asian American Communities, 2007 CDC National Prevention Health Promotion Summit: Creating a Culture of Wellness., Washington DC Nov 28-29, 2007. Centers for Disease Control and Prevention., Accepted for presentation.
2. Lee SM, **Hsu CE**, Martinez G, Su B. Model Minority at Risk: Expressed Needs of Mental Health by Asian American Youth., APHA 2007 Annual Conference. Washington DC. Nov 2007, American Public Health Association., Accepted for presentation.
3. Lee SM, **Hsu CE**, Martinez G, Su B. Partnership for Health Disparities Solutions: Collaborating with Hard-to-Reach Asian American Communities to Address Health Needs, Fourth Annual Asian American Health Conference of NYU. New York City 9/28-29, 2007. NYC., NYU Center for Asian Health, Accepted for presentation.
4. **Hsu CE**, Liu CH, Bawa J, Tillman U, Li M. A Hepatitis B Education Outreach and Screening Program for Asian American Community in Montgomery County, Maryland, American Public Health Association Annual Conference, Nov 4-8, 2006, Boston, MA.
7. **Hsu CE**, Chiu YW, Miller JA, Soto Más F. Spatial and Temporal Surveillance of Human Avian Flu Cases - Locating Clear and Present Clusters. American Public Health Association Annual Conference, Nov 4-8, 2006, Boston, MA.
8. **Hsu CE**, Miller JA, Más FS, Nkhoma ET. A Spatial-Temporal Surveillance System for Prostate Cancer Disparities in Population Subgroups, American Public Health Association Annual Conference, Nov 4-8, 2006, Boston, MA.
9. Li J, **Hsu CE**, Atkinson N, Tillman U, Gold RS. Asian American Community Health Needs Assessment - Developing a Minority Health Surveillance Database, American Public Health Association Annual Conference in Philadelphia, PA. December 2005.
10. **Miller JA**, **Hsu CE**, Mas FS, Harris AM, Bae SJ (2006) Biodefense Informatics Training: EpiInfo and Data Management Workshops for Public Health Workers, American Public Health Association Annual Conference, Nov 4-8, 2006, Boston, MA, APHA.



Map with the cluster information of retrospective space-time permutation analysis of avian influenza human cases reported to WHO between 2004/1/1 and 2006/5/29 (Maximum cluster temporal setting of 1.25 years, maximum spatial setting 2,000 km).



Temporal Variations of Avian Influenza Cases by Monthly Report, 2004-06



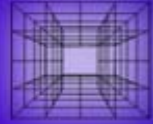
## SURVEY/FOCUS GROUP

### **Grants/Contracts**

1. Knowledge and Attitudes of AIDS in a Sample of Rural Nurses, for the Northeast Center for Rural Development.
2. Database Inventory Based on the Survey of Nurses for Emergency Preparedness and Response, for the Texas Department of State Healthcare Services
3. Database Inventory Based on the Survey of Physicians for Emergency Response Purposes, for the Texas Department of Health
4. A Collaborative Partnership for Bioterrorism Research Between UNTSPH and Collin County, Texas, for the CDC/Association of Schools of Public Health
5. Public Health Preparedness and Response to Bioterrorism Needs Assessment, Texas Public Health Regions II and III, for the Texas Department of Health
6. Asian American Liver Cancer Prevention Program in Maryland, for the National Cancer Institute.
7. A Hepatitis B/Liver Cancer Prevention Outreach Program for Medically Underserved Asian American Communities in Maryland, for the National Cancer Institute.
8. Community Assessment Report, to the Board of Directors of the Susan G. Komen Foundation, Houston, Texas.
9. Focus groups and surveys for Clinician and Staff Educational Intervention, EDICT (Elimination of Disparities In Clinical Trials) project, Baylor College of Medicine, Houston, Texas.

### **Publications**

1. **Hsu CE**, Liu LC, Juon H, Bawa J, Tillman U, **Miller J**, **Wang MQ**. A Hepatitis B Education and Screening Program for 9 Asian American Communities in Maryland. Journal of the National Medical Association 2007; 99(8): 900-907.
2. **Hsu CE**, Soto Más F, Jacobson HE, Harris AM, Hunt V, Nkhoma E. Public Health Preparedness of Health providers: Meeting the Needs of Diverse, Rural Communities. Journal of National Medical Association. 98 (11). P 1784-1791. 2006. PMID: 17128688
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