

## PUBLIC HEALTH GIS NEWS AND INFORMATION

July 2002 (No. 47)

*Dedicated to CDC/ATSDR scientific excellence and advancement in disease control and prevention using GIS*



**Selected Contents:** Events Calendar (pp.1-2); (p.7); Public Health and GIS Literature (pp.7-Website(s) of Interest (pp.21-22); Final

News from GIS Users (pp.2-7); GIS Outreach 12); DHHS and Federal Update (pp.12-21); Thoughts (pp.22-25)

### I. Public Health GIS (and related) Events SPECIAL NCHS/CDC/ATSDR GIS LECTURES

**September-October 2002. To be announced.** NCHS Cartography and GIS Guest Lecture Series programs are held at the NCHS Auditorium, RM1100, Hyattsville, MD; They have been presented continuously since 1988. Envision is available to offsite CDC/ATSDR locations; Web access is available to all others at site <http://video.cdc.gov/ramgen/envision/live.rm> (link becomes active approximately 30 minutes prior to the event and viewing requires RealPlayer installation). Cosponsors to the NCHS Cartography and GIS Guest Lecture Series include CDC's Behavioral and Social Science Working Group (BSSWG) and Statistical Advisory Group (SAG). [All NCHS Cartography and GIS presentations are open to the public. Contact: Editor, *Public Health GIS News and Information*]

[Note: Calendar events are posted as received; for a more complete listing see NCHS GIS website]

\* Joint ISPRS Commission IV 2002 Symposium, the Spatial Data Handling 2002 Symposium and the 95th Annual Geomatics Conference of the Canadian Institute of Geomatics (CIG), July 8-12, 2002, Ottawa, Canada [See: <http://www.geomatics2002.org>]

\* The Secretary's National Leadership Summit on Eliminating Racial and Ethnic Disparities in Health: "Closing the Health Gap Together," U.S. Dept. of Health and Human Services, Office of Minority Health/Office of Public Health and Science, July 10-12, 2002, Washington, D.C. [See: <http://www.omhrc.gov>]

\* National Association of County and City Health Officials Annual 2002, "Working in a Changed World:

Strengthening Public Health Preparedness," July 10-13, 2002, New Orleans, LA [See: <http://www.naccho.org>]

\* XXIth International Biometric Conference 2002, July 21-26, 2002, University of Freiburg, Germany [See: <http://www.abc2002.uni-freiburg.de>]

\* GML Developers Conference 2002, July 22-26, 2002, Vancouver, B.C. [See: <http://www.gmldev.org>]

\* Council of Geographic Names Authorities Annual Conference, July 23-27, 2002, Baltimore, MD [See: <http://www.geocities.com/cogna2002baltimore>]

\* 19th Annual HBCU Summer Faculty GIS Workshop, August 4-10, 2002, Washington, D.C. [See: <http://www.con-ed.howard.edu>]

\* 9th Annual ASHA Summer Institute: "Healthy Kids-Healthy Schools-Healthy Communities," August 5-7, 2002, Columbus, OH [See: site <http://www.ashaweb.org/conferences.html>]

\* 2002 International Conference of the Royal Statistical Society, September 3-6, 2002, University of Plymouth, UK [See: [www.tech.plym.ac.uk/math/research/stats/RSS2002.html](http://www.tech.plym.ac.uk/math/research/stats/RSS2002.html)]

\* International Conference on Chemical Mixtures 2002, Agency for Toxic Substances and Disease Registry, September 10-12, 2002, Atlanta GA [See: <http://www.erg.com/iccm>]

\* Inaugural National Conference on Birth Defects,

## PUBLIC HEALTH GIS NEWS AND INFORMATION

July 2002 (No. 47)

2

Developmental Disabilities, and Disability and Health: "Charting the Course: Birth Defects, Developmental Disabilities, and Disability and Health," CDC's National Center on Birth Defects and Developmental Disabilities (NCBDDD), September 17-19, 2002, Atlanta, GA [See: <http://www.cdc.gov/ncbddd/conference.htm>]

\* X Congress of Quantitative Methods, Geographical Information Systems and Remote Sensing, September 17-20, 2002, Valladolid, Spain [See website at URL: <http://gramola.fyl.uva.es/geografia/Xcongreso/index.htm>]

\* GIScience 2002: Second International Conference on Geographic Information Science, September 25-28, 2002, Boulder, CO [See: <http://www.giscience.org>]

\* 2002 National Asthma Meeting: Living Well with Asthma, Centers for Disease Control and Prevention, October 23-25, 2002, Atlanta, GA [<http://www.cdc.gov/nceh/airpollution/asthma/2002mtg.htm>]

\* 40th Annual Conference of the Urban and Regional Information Systems Association (URISA), "Looking Back, Moving Forward," October 26-30, 2002, Chicago, IL [See: <http://www.urisa.org/annual.htm>]

\* First Annual TISP (The Infrastructure Security Partnership) Congress on Infrastructure Security in the Built Environment, November 5-7, 2002, Washington, DC [See: <http://www.tisp.org>]

\* The 10th ACM International Symposium on Advances in Geographic Information Systems (ACM-GIS 2002), November 8-9, 2002, McLean VA [See website at: [http://www.cs.fiu.edu/ACM\\_GIS2002](http://www.cs.fiu.edu/ACM_GIS2002)]

\* Brownfields 2002: Investing in the Future, International City/County Management Association (ICMA), November 13-15, 2002, Charlotte, NC [See site: <http://icma.org>]

\* International Conference on Questionnaire Development, Evaluation, and Testing Methods (QDET), November 14-17, Charleston, SC [See website at: <http://www.jpsm.umd.edu/qdet/qdet-set.html>]

\* Ninth Annual Biopharmaceutical Applied Statistics Symposium, December 9-13, 2002, Savannah, GA [See: <http://views.vcu.edu/bis/bass>]

## II. GIS News

(You are encouraged to communicate directly with colleagues referenced below on any items; note that the use of trade names and commercial sources that may appear in Public Health GIS News and Information is for identification only and does not imply endorsement by CDC or ATSDR)

### A. General News and Training Opportunities

1. From **John Moeller**, Federal Geographic Data Committee (**Notice of Standards Development and Call for Participation**): All members of the geospatial information community are invited to participate in the development of data content standards and models for National Spatial Data Infrastructure (NSDI) Framework data (see website <http://www.fgdc.gov/geo-one-stop>). The standards are being developed as part of the **President's Geospatial One-Stop**, a White House initiative to spatially enable the delivery of government services and to improve access and use of geospatial information. The approved standards will become national in scope and applicability. The goal is to engage stakeholders from all sectors and use the widest range of technical expertise possible. There are seven thematic data layers for NSDI. Framework requiring content standards and models: **cadastral, geodetic control, hydrography, digital orthoimagery, transportation, elevation and government units**. This call is directed at all organizations, which collect or use geospatial data in any of the Framework themes. It provides an opportunity to participate in the standards process and to help ensure that the standards and models that are developed meet the communities needs. [Contact: Julie Binder Maitra, FGDC Standards Coordinator, at [jmaitra@usgs.gov](mailto:jmaitra@usgs.gov)]

2. From **Elaine Quesinberry**, Census Bureau (**Survey Quality Report**): "Demonstrating Survey Quality," a new report released June 3, 2002, summarizes measures of survey quality for the Census 2000 Supplementary Survey, using the 1990 and 2000 census long forms and other surveys as benchmarks. The report includes measures of coverage error, unit and item nonresponse,

## PUBLIC HEALTH GIS NEWS AND INFORMATION

July 2002 (No. 47)

3

and sampling error. The report is available on the American Community Survey web site at <http://www.census.gov/c2ss/www/Methodology/Reports.htm>.

The first data from the 2001 Supplementary Survey (SS01) will be released later this summer. The first release will include percent change profiles for 50 states, the District of Columbia, and the nation, as well as for areas of 1 million or more population. The data will be available on the American FactFinder web site at <http://factfinder.census.gov>.

The Census 2000 Supplementary Survey Public Use Microdata Sample PUMS data are now available. You can access the PUMS files on the Internet at site <http://www.census.gov/c2ss/www/Products/PUMS.htm>. Scroll to the bottom of the page to select the Housing or Population data and the state. [Contact: Elaine at [elaine.v.quesinberry@census.gov](mailto:elaine.v.quesinberry@census.gov); source: American Community Survey Alert, Number 5]

3. From **Fred Broome**, Census Bureau (**TIGER Update**): As announced at the June 18, 2002 meeting of the FGDC's Subcommittee on Cultural and Demographic Data (SCDD), the Census Bureau is in the midst of a large-scale update of TIGER. Under this program, TIGER boundaries will become current, being no more than one year old at any given time, **with positional accuracy within 5-10 meters, and will provide spatial coordinates for every structure in the U.S., including all housing and building structures.** [Contact: Fred, Chief, Geospatial Research and Standards Staff, at [fbroome@geo.census.gov](mailto:fbroome@geo.census.gov)]

4. From **Zhong Liu**, George Mason University: The Hydrology Data Support Team at NSAS/GSFC/DAAC (NASA Goddard) and SIESIP have prepared a web page for online visualization and analysis of several global data sets at site [http://esip.gmu.edu/esip/ES\\_gridded\\_online\\_analysis\\_gmu.html](http://esip.gmu.edu/esip/ES_gridded_online_analysis_gmu.html). Currently we have the following data sets: 1) Observations (1950-1999) from Willmott et al.: precipitation; air temperatures; water budgets; and moisture indices; 2) Satellite remote sensing: TRMM daily precipitation (1998-present); TRMM monthly precipitation (1998-present); Pathfinder NDVI (1981-2001); and TOMS aerosol indices (1996-present). We plan to add more products and analyses in the future. For

many non-professionals, or even professionals, it is very difficult and often frustrated to process earth science data due to many reasons, such as, data formats, incomplete information, etc. I personally found these tools are very useful in my environmental and health studies and applications. [Contact: Zhong at [zliu@daac.gsfc.nasa.gov](mailto:zliu@daac.gsfc.nasa.gov); For more information about the Goddard DAAC and its services please visit web site <http://daac.gsfc.nasa.gov>]

B. Department of Health and Human Services  
(<http://www.hhs.gov>)

**President Bush Signs Bioterrorism Response Bill**  
**Secretary Thompson joined President Bush, Homeland Security Director Tom Ridge, and members of Congress in the White House Rose Garden on June 12 for the signing of the Public Health Security and Bioterrorism Response Act of 2002. The bill has four objectives: Enhance the nation's ability to prevent and detect bioterrorist attacks; Strengthen the communications networks that link health care providers with public health authorities; Strengthen the ability of the health care system to expedite treatments across our country; and, Develop better vaccines, medicines, and diagnostic tests.** [See site <http://www.hhs.gov/news/newsletter/weekly>]

**Agency for Toxic Substances  
and Disease Registry**  
(<http://www.atsdr.cdc.gov>)

5. ATSDR hosted a June 25, 2002 presentation **“Development of a Public Health Research and Degree Program at Dine' College, Navajo Nation,”** by Edward R. Garrison, Dine' college. Tuesday, June 25, 2002 This presentation described how a Tribal College is using its cooperative agreement funding to develop a degree program, which includes the use of GIS, in Environmental Health. [Contact: Alan Crawford at [apc4@cdc.gov](mailto:apc4@cdc.gov)]

6. **International Conference on Chemical Mixtures 2002**, September 10-12, 2002, Atlanta, GA. The Agency for Toxic Substances and Disease Registry (ATSDR) is sponsoring this conference that will bring together

## PUBLIC HEALTH GIS NEWS AND INFORMATION

July 2002 (No. 47)

4

international academic and government researchers, public health professionals, and industry groups to exchange scientific and public health information on chemical mixtures and to address the scientific developments and progress made in the toxicology of chemical mixtures. [See: <http://www.erg.com/iccm>]

### Centers for Disease Control and Prevention (<http://www.cdc.gov>)

7. From **Lillian Lin**, NCHSTP-2003 Symposium on **Statistical Methods**: Call for Abstracts. Statisticians, epidemiologists, and others with an interest in the application of statistical methods to public health are invited to participate in the 9<sup>th</sup> Biennial Symposium on Statistical Methods, sponsored by the Centers for Disease Control and Prevention (CDC) and the Agency for Toxic Substances and Disease Registry (ATSDR), to be held January 28-29, 2003, in Atlanta, Georgia. The theme for the Symposium is "Study Design and Decision Making in Public Health." A short course on a related topic will be offered on January 27, 2003, in conjunction with the Symposium. The Symposium will include invited talks and contributed papers. [To request registration and abstract information and forms, or for additional information regarding the scientific content of the Symposium, please visit the Symposium web site at [www.cdc.gov/od/ads/sag](http://www.cdc.gov/od/ads/sag)]

### Centers for Medicare and Medicaid Services (<http://www.hcfa.gov>)

8. The **Centers for Medicare & Medicaid Services**, formerly the Health Care Financing Administration (HCFA, renamed CMS 2001), has a new website (see [cms.hhs.gov](http://cms.hhs.gov)). CMS runs the **Medicare** and **Medicaid** programs—two national health care programs that benefit about 75 million Americans. And with the Health Resources and Services Administration, CMS runs the **State Children's Health Insurance Program** (SCHIP), a program that is expected to cover many of the approximately 10 million uninsured children in the United States. CMS also regulates all laboratory testing (except research) performed on humans in the United States. Approximately 158,000 laboratory entities fall within CMS's regulatory responsibility. And CMS, with the Departments of Labor and Treasury, helps millions of

Americans get and keep health insurance coverage, and helps eliminate discrimination based on health status for people buying health insurance. [CMS data and statistics, such as trends in health and aging, may be found at site <http://www.hcfa.gov/stats/default.htm>]

9. From **James Summe**, Office of Research, Development & Information (**Mapping SSA's Geographic Codes into FIPS Codes**— excerpts, presentation to the FGDC Subcommittee on Cultural and Demographic Data (SCDD), June 18, 2002): Data for CMS' programs are obtained from a variety of sources and the geographic codes used for the data varying depending on the source. Codes used include ZIP, FIPS state and county, and SSA's state and county. CMS uses SSA's codes for states and counties to: locate and spatially group Medicare beneficiaries and providers, link to contextual and complementary data, and employ GIS resources. Applications also include determination of provider reimbursement, definition of health plan coverage areas, research and policy, and program statistics. At issue is most contextual and complementary data, as well as GIS resources are indexed by FIPS codes. Mapping from SSA into FIPS codes is complicated by the inclusion in SSA's state codes of codes for countries and continents, CMS' extensions to SSA's state codes to support identifiers for institutional providers, and periodic changes in the definitions of counties, states, countries and their equivalents.

In the future, CMS analysts hope to locate canonical definitions of counties, states, and, perhaps, countries at least since 1990 and ideally back to 1965. We hope to find data structure(s) for the codes for these entities that permit the identification of the entities in existence on any date from 1965 to the present. We would like to encode the code sets in a form that could be accessed on a range of computing platforms from a variety of applications. We hope to obtain standard metadata that are necessary and sufficient to understand and access the codes and their descriptions. The metadata would be most useful to us if they were accessible by both humans and computers. [Contact: Jim at [Jsumme@cms.hhs.gov](mailto:Jsumme@cms.hhs.gov); appreciation is extended to Jim for his presentation to SCDD]



**National Institutes of Health**

(<http://www.nih.gov>)

10. From **Stephen Drigotas**, Office of Behavioral and Social Sciences Research (Research on Ethical Issues in Human Studies): The National Institutes of Health (NIH) invite research grant applications (R01) to investigate ethical issues in human subjects research (see web site at <http://grants.nih.gov/grants/guide/pa-files/PA-02-103.html>). The Code of Federal Regulations-Protection of Human Subjects (45 CFR, Part 46) provides a regulatory framework that all NIH-supported researchers must follow. Recent developments in biomedical and behavioral research, however, including the rapid growth of new interventions and technologies (e.g., stem cells, genetics research), increasing involvement of foreign populations in clinical research, and concerns about financial conflicts of interest among researchers, challenge investigators' abilities to interpret and apply the regulations. Other situations (e.g., research with vulnerable populations, the use of data banks or archives, research on stigmatizing diseases or conditions) may present difficulties for identifying strategies, procedures, and/or techniques that will enhance/ensure the ethical involvement of human participants in research. The purpose of this program announcement is to solicit research addressing the ethical challenges of involving human participants in research in order to inform and optimize protections for human participation in research. [Contact: Stephen at [drigotas@od.nih.gov](mailto:drigotas@od.nih.gov)]

**C. Historically Black Colleges and Universities (HBCUs) and Other Minority Program Activities**

[A listing of Historically Black Colleges and Universities (HBCU) may be found at <http://www.smart.net/~poppe/hbcu/hbculist.htm> ]

11. **The Secretary's National Leadership Summit on Eliminating Racial and Ethnic Disparities in Health: "Closing the Health Gap Together,"** U.S. Dept. of Health and Human Services, Office of Minority Health/Office of Public Health and Science, July 10-12, 2002, Washington, D.C. (see <http://www.omhrc.gov>). The Office of Minority Health, U.S. DHHS is excited to be sponsoring the first **National Leadership Summit**. The Summit seeks to draw national attention to the existence of health disparities and to innovative approaches being implemented in our communities and at

the local, State, National, Federal and Tribal levels which address these disparities. The mission of the Summit is to stimulate action at all levels to enhance program outcomes which can lead to the elimination of health disparities. [See workshop program this edition]

12. From **Pamela R. Bingham**, Howard University's NOAA Center for Atmospheric Sciences (**Announcing the 19th Annual HBCU Summer Faculty GIS Workshop**): The 19th Annual HBCU Summer Faculty GIS Workshop will be held August 4-10, 2002. It will be coordinated by the Howard University Continuing Education, Urban Environment Institute (see program at [www.con-ed.howard.edu](http://www.con-ed.howard.edu)) and hosted by the Washington GIS Consortium at the National Capital Planning Commission ([www.ncpc.gov](http://www.ncpc.gov)), in Washington, D.C. The HBCU Summer Faculty GIS Workshop has been hosted by Howard University's Urban Environment Institute since 1997. For a complete history of the workshop, which the U.S. Geological Survey initiated in 1983, see "Historically Black Colleges and Universities as a Public Health Resource," De Cola L, Warrick C, *Public Health GIS News and Information*, (44): JAN 2002, 11-15.

The 2002 opening session features speakers from the White House Initiative on HBCU's; U.S. Department of Education; U.S. Congress; National Capital Planning Commission; Department of Interior, Office of Surface Mining; Department of Commerce, National Oceanic and Atmospheric Administration; District of Columbia Government; and Howard University. GIS training for the workshop is provided by ESRI. In addition to ESRI and WGIS/NCPC, this year's sponsors include the Office of Surface Mining and Bureau of Land Management of the Department of Interior, Howard University's Continuing Education and NOAA Center for Atmospheric Sciences (NCAS), and the U.S Army Corps of Engineers Engineer Research and Development Center/Topographic Engineering Center. Many of the nation's HBCU's have had faculty and staff trained in GIS through this program. Over 30 federal agencies and private companies have participated in the workshops as sponsors, presenters, and exhibitors. Sponsorship is open to all interested parties. [Contact: Pamela, GIS Workshop Coordinator, at [site.pbingham@physics1.howard.edu](mailto:site.pbingham@physics1.howard.edu)]

## PUBLIC HEALTH GIS NEWS AND INFORMATION

July 2002 (No. 47)

6

13. From **Eileen Robertson-Rehberg**, Cornell University: Each of the below five papers from the California Endowment (see <http://www.calendow.org>) focuses on a significant racial/ethnic population in California. The goal of these papers is to go beyond the epidemiology in order to explain or hypothesize factors that give rise to these data and to better understand how health impacts the content and context of people's lives. This series is a five volume set: **The Health Status of American Indians in California, April 1997; The Health Status of African Americans in California, April 1997; The Health Status of Asian and Pacific Islander Americans in California, April 1997; The Health Status of Latinos in California, April 1997; and The Health Status of Whites in California, April 1997** [Contact: Eileen at ear5@cornell.edu]

14. From **Dabo Brantley**, NCEH, CDC (**American Indian And Alaska Native Diabetes Atlas**): The National Diabetes Prevention Center, Division of Diabetes Translation, CDC, sponsored a June 25, 2002, GIS presentation on the new American Indian and Alaska Native Diabetes Atlas. Developed by the National Indian Council on Aging's Geographic Information System (GIS) mapping team, the Atlas is to use GIS to display, analyze, and interpret existing data relevant to the problem of diabetes in American Indian/Alaska Native populations, with the intention of stimulating action at the local/tribal level. The mapping team demonstrated the capabilities of the interactive diabetes atlas, utilizing the Internet Mapping Service and Scalable Vector Graphics. Presenters included **Dave Baldrige**, Executive Director, National Indian Council on Aging, **Heather Mann**, Program Manager, National Indian Council on Aging, **Kurt Menke**, Earth Data Analysis Center, University of New Mexico, **Mario Garrett**, Director, Data Analysis Service, and **JoAnne Pegler**, Team Leader, National Diabetes Prevention Center, Division of Diabetes Translation, Centers for Disease Control and Prevention. [Contacts: Kurt at kmenke@spock.unm.edu or Mario at das@unm.edu]

15. The **8th Annual Summer Public Health Research Institute and Videoconference on Minority Health**,

was held June 17-21, 2002. This year's Institute and Videoconference was presented by the University of North Carolina School of Public Health Minority Health Project and Center for Health Statistics Research, the UNC Program on Ethnicity, Culture, and Health Outcomes, and the Morgan State University Drug Abuse Research Program. This annual Institute and Videoconference cover issues and solutions related to: collecting, analyzing and interpreting data for racial/ethnic populations; disentangling and assessing relationships among race, ethnicity, genetics, and socioeconomic status; community-based research; and partnerships between minority-serving universities and research universities. Funding was provided by the CDC National Center for HIV, STD, and TB Prevention in collaboration with the Association of Schools of Public Health, the CDC National Center for Health Statistics, the CDC National Center for Infectious Diseases Office of Minority and Women's Health, and the National Institute on Drug Abuse. [See web site at : [www.minority.unc.edu/institute/2002](http://www.minority.unc.edu/institute/2002)]

### D. Other Related Agency or Business GIS News

16. From **Urban and Regional Information Systems Association (URISA)-Revision to the GIS Certification Proposal of 2001**: The GIS Professional Certification Committee spent the months of February and March, 2002, reviewing the public comments made by GIS professionals since the Certification proposal was first posted to the web in December, 2001. In addition to reviewing the hundreds of written comments posted at the GuestBook, members of the committee presented the proposal and discussed its content at GIS professional meetings in the states of Washington, Wisconsin, and Michigan as well as the Towson State University GIS Conference in Baltimore. The public input has been very informative and helpful to the Committee in attempting to refine the proposal.

The committee (see <http://www.urisa.org>) found that experience is the most important factor in applying skills to real-world problems, and education plays an important role in providing the knowledge and intellectual maturity required to approach problems systematically and critically. In addition, the committee stated that professionals must contribute to the advancement of the

## PUBLIC HEALTH GIS NEWS AND INFORMATION

July 2002 (No. 47)

7

profession by donating their skills in professional efforts to maintain the fundamental health of the profession, rather than focusing on individual compensation. The committee stated that a "typical" GIS Certified Professional has the following characteristics: **\*a formal degree with several specific GIS and GIS-related courses or the equivalent coursework in professional development courses and other educational opportunities; \*at least four years of experience in a position that involves data compilation, teaching, etc. (fewer years if in GIS analysis, design or programming, and more years if in a GIS user position); \*and a modest record of participating in GIS conferences, publications or GIS-related events (such as GIS Day).**

17. From **Mark Reichardt**, Open GIS Consortium, Inc: **OGC's FEMA-sponsored Multi-Hazard Mapping Initiative Phase 1** (MMI-1) concluded with a successful demonstration on May 9, 2002 of a standards-based framework for discovery, access, and distribution of multi-hazard map data. Until now, the diversity and non-interoperability of geographic information systems has hampered data sharing. Now the Internet can be used as a medium to locate, retrieve and exploit multi-hazard map data from many different organizations, regardless of their software vendor. One MMI-1 demonstration scenario depicted development of a land use plan combining multi-source information about land use, population, transportation, earthquake susceptibility, historical data on faults, tsunamis, and wildfires. The second scenario demonstrated how flood maps and maps of roads, hazard probabilities, demographics and historic storm paths could be rapidly accessed from different organizations to aid hurricane response efforts. FEMA's online HazardMaps resource represents one of the technologies resulting from the MMI initiative. It can be viewed at <http://www.hazardmaps.gov>. Other interested agencies are invited to participate. [Contact: Mark at [webmreichardt@opengis.org](mailto:wmreichardt@opengis.org)]

18. From **Milton Ospina**, ESRI: The upcoming **Second Annual ESRI Education User Conference** will highlight a number of Graduate and Professional programs

at this year's conference in San Diego, July 5-7, 2002. Public Health and Medical professionals may be particularly interested in two sessions whose topics include academic programs, institutional implementation, community partnerships, and risk communication. There is a GIS Education for Health and Human Services Special Interest Group meeting scheduled, and there will be 2 sessions (seven papers) on GIS in Health Sciences. Additional information and online registration for EdUC2002 is available at site <http://www.esri.com/educ>. [Contact: Milton, Higher Education Solutions Manager, at [mospina@esri.com](mailto:mospina@esri.com)]

### III. GIS Outreach

*[Editor: All requests for Public Health GIS User Group assistance are welcomed; readers are encouraged to respond directly to colleagues]*

**F** From **Ric Skinner**, Baystate Medical Center: I would like to hear from organizations who recognize and are pursuing the role of GIS in preparing for the Health Insurance Portability and Accountability Act (HIPAA) requirements, particularly as they relate to preserving patient confidentiality and identifying/de-identifying patients records. I will sum relevant responses. [Contact: Ric, Health Geographics & Spatial Analysis Program, at [ric.skinner@bhs.org](mailto:ric.skinner@bhs.org)]

### IV. Public Health GIS Presentations and Literature

*NCHS Cartography and GIS Guest Lecture Series*  
(to be announced)

#### CDC Emerging Infectious Diseases and MMWR *Emerging Infectious Diseases*

**Emerging Infectious Diseases** is indexed in Index Medicus/Medline, Current Contents, Excerpta Medica, and other databases. Emerging Infectious Diseases is part of CDC's plan for combating emerging infectious diseases; one of the main goals of CDC's plan is to enhance communication of public health information about emerging diseases so that prevention measures can be implemented without delay. The **June 2002** edition is available at the website <http://www.cdc.gov/ncidod/EID/index.htm> and has several potential GIS related articles of interest: Epidemiology of Malaria in Western Kenya; Drought



PUBLIC HEALTH GIS NEWS AND INFORMATION

July 2002 (No. 47)

8

Effects on Saint Louis encephalitis virus, Florida; Cyclosporiasis and Cryptosporidiosis in Peruvian Children; *M. tuberculosis* in Free-Ranging Wildlife; Detecting Malaria Epidemics in Western Kenya; Water-Supply-Associated Cryptosporidiosis Outbreak; article on Drinking-Water-Associated Cryptosporidiosis Outbreaks; and Hantavirus Infection with Sinus Bradycardia, Taiwan.

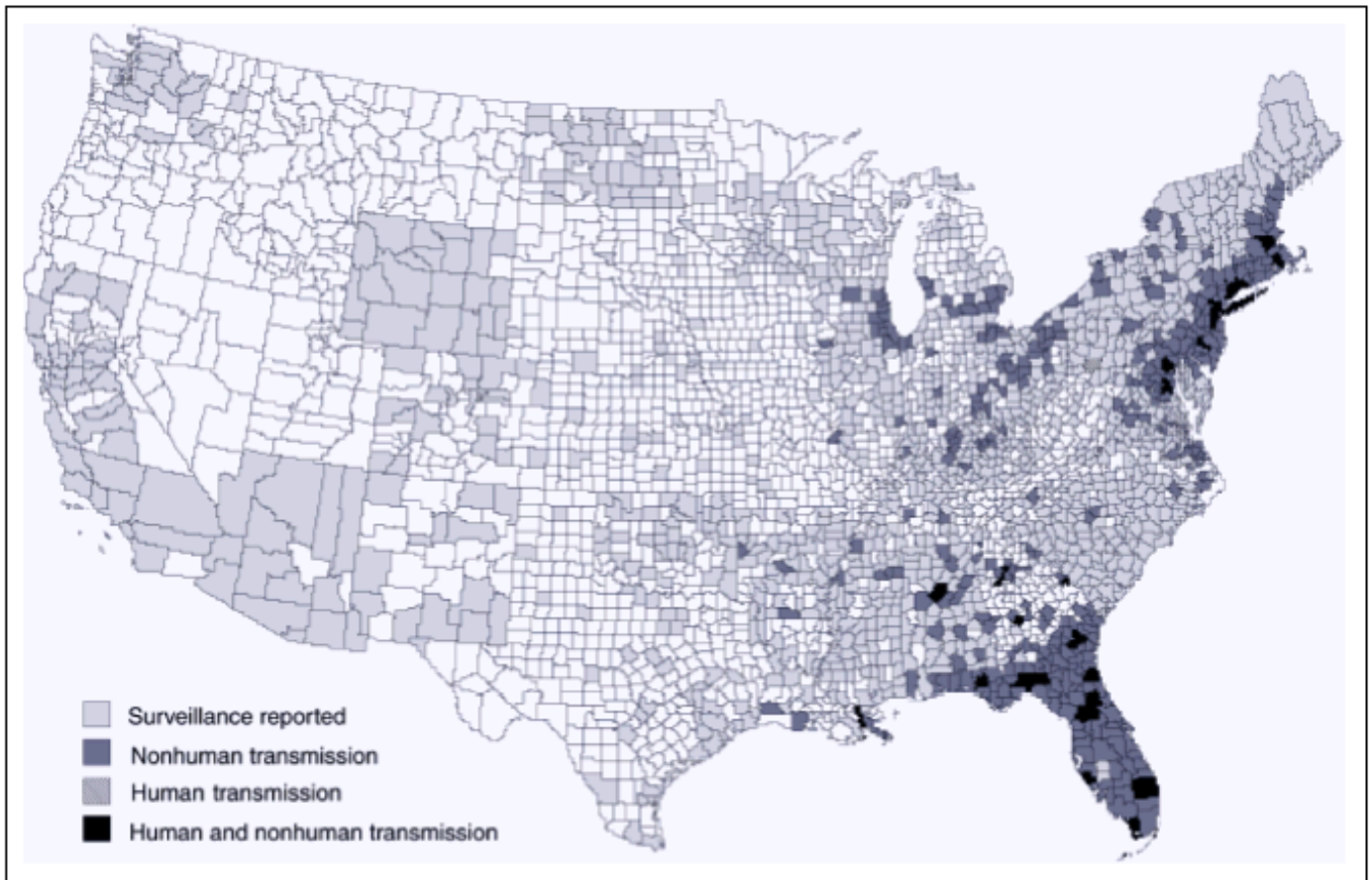
The **July 2002** edition also is available and contains articles with potential relationships to GIS

<http://www.cdc.gov/ncidod/EID/upcoming.htm>.

*Morbidity and Mortality Weekly Report*

Selected articles from CDC's *Morbidity and Mortality Weekly Report* (MMWR): [Readers may subscribe to MMWR and other CDC reports, without cost, at <http://www.cdc.gov/subscribe.html> and access the MMWR online at <http://www.cdc.gov/mmwr>]: Vol. **51**,

**FIGURE 1. Reported West Nile virus (WNV) activity, by county — United States, 2001**



applications including Emergence of *Usutu virus*, an African Mosquito-Borne *Flavivirus* of the Japanese Encephalitis Virus Group, Central Europe; Ecologic Niche Modeling and Potential Reservoirs for Chagas Disease, Mexico; Time-Space Clustering of Human Brucellosis, California, 1973-1992; and others.. The **August 2002** is currently available at the CDC web site

No. **25**- Achievements in Public Health: Hepatitis B Vaccination-United States, 1982-2002 Vol. **51**, No. **24**- Progress Toward Poliomyelitis Eradication-Pakistan and Afghanistan, January 2000-April 2002; Cancer Death Rates-Appalachia, 1994-1998; Vol. **51**, No. **23**- West Nile Virus Activity-United States, 2001 (Figure 1); Vol.



51, No. 22- Rabies in a Beaver-Florida, 2001 Vol. 51, No. 21- Occupational Exposures to Air Contaminants at the World Trade Center Disaster Site-New York, September-October, 2001; State-Specific Trends in Self-Reported Blood Pressure Screening and High Blood Pressure-

*the Elimination of Tuberculosis.*

\*\*\*\*\*

#### Other Literature: *Special Reports*

### The Primary Care Service Area (PCSA) Project

Steven B. Auerbach, M.D., M.P.H.

#### Health Resources & Services Administration

The goal of the Primary Care Service Area (PCSA) Project is to provide information about primary care resources and populations within small standardized areas that reflect patients' utilization patterns. The definition of PCSA boundaries and the description of these areas are contained within a database linked to an Internet-based geographic information system (GIS) to allow federal, state, and academic users easy access.

**Background.** The effective delivery of primary care remains one of the most important challenges facing the US health care system. Despite a national consensus that primary care is an essential component of quality and cost-effective health care, disparities remain in primary care service availability and utilization. Efforts to improve primary care service delivery have been impeded by limitations in available information. Several weaknesses stand out. Information about primary care resources and utilization are often difficult and expensive to access. Data are frequently outdated by the time it is available and updating the information is not always feasible. Most importantly, data are usually summarized to geographic levels (e.g., counties, states) that poorly reflect utilization patterns. As a result, per capita measures of clinician supply are often biased by patient travel to primary care services across geopolitical boundaries such as counties. States, on the other hand, are too large to be useful measures of primary care, which is the most localized type of medical service. Current measurement systems also lack standardization. While some states have individually developed internal measurements for primary care utilization and distribution, they are not part of a national measurement system that allows for comparability across states and regions.

**The PCSA Project.** The PCSA Project improves the deficiencies in the existing primary care data infrastructure by creating service areas using

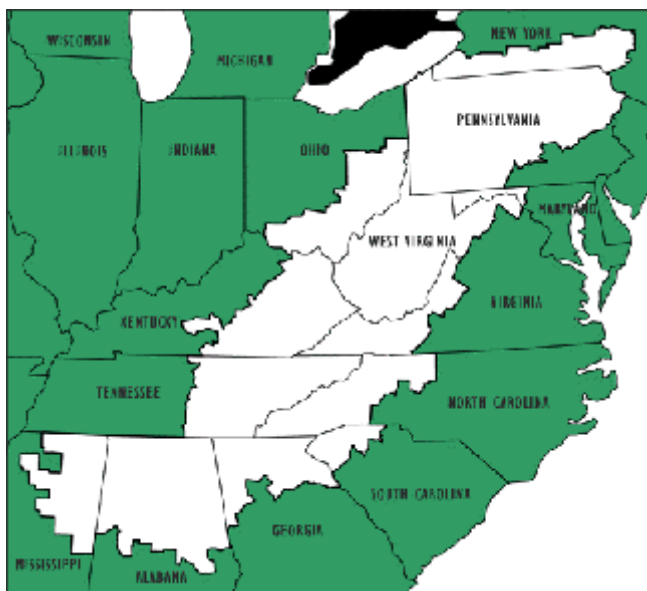


Figure 2. High lung cancer rates in rural Appalachia:

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5124a3.htm>

United States, 1991-1999; Nonfatal Physical Assault-Related Injuries Treated in Hospital Emergency Departments-United States, 2000 Vol. 51, No. 20- State-Specific Mortality from Stroke and Distribution of Place of Death-United States, 1999; Nonfatal Self-Inflicted Injuries Treated in Hospital Emergency Departments-United States, 2000; Vol. 51, No. 19: Trends in Cigarette Smoking Among High School Students-United States, 1991-2001; Notice to Readers: Buckle Up America Week, May 20-27, 2002; Vol. 51, No. 17- Tropical Storm Allison Rapid Needs Assessment-Houston, Texas, June 2001; Notice to Readers: Interpretation of Provisional Data Presented in Morbidity and Mortality Weekly Report Tables; Notice to Readers: Satellite Broadcast- Enhancing Environmental Health Services in the 21st Century; Notice to Readers: Applied Epidemiology; Vol. 51, Number RR-5 *Progressing Toward Tuberculosis Elimination in Low-Incidence Areas of the United States: Recommendations of the Advisory Council for*

nationwide claims data to reflect actual utilization patterns for primary care clinical service. PCSAs build on the hospital service area approach that has been successfully employed by Dr. John Wennberg and his Dartmouth associates to produce the Dartmouth Atlas of Health Care series. A PCSA is the smallest area that represents a discrete service region for primary care utilization. The development method balances the interest in small localized areas with a minimization of area border crossing.

PCSAs are defined by aggregating ZIP Codes on the basis of primary care utilization patterns derived from Medicare ambulatory claims data. PCSA boundaries are then adjusted in order to establish geographic contiguity. Subsequently, Medicaid and commercial insurance primary care claims in selected states are analyzed to assess the soundness of the PCSA regions for representing primary care utilization of younger populations. Primary Care Service Areas are linked in a GIS to data characterizing the regions using demographics, primary health care resources and utilization measures.

The unique features of the Primary Care Service Areas include: service areas that encompass actual patterns of local primary care use between patients and providers derived from uniform nationwide Medicare claims data; links between each PCSA and specific primary care resources, like physician workforce measures; links between each PCSA and population characteristics; links between each PCSA and primary care utilization; opportunities for each PCSA to be cast into the larger framework of relevant political, sociologic, and economic characteristics; and a flexible database and software system to allow users to add local information and adjust PCSA definitions according to specific planning needs, such as rational service area definition.

Here's a list of some research projects and policy applications that could be based on the PCSA database.

**Identification of regions with low levels of primary care resources; Assessment of policies designed to improve primary care resources; Access to primary care for vulnerable populations; Understanding of relationship between primary care resource availability and health; Impact of levels of primary care resources on the use of preventive care; and,**

**Measurement of travel time from given population to nearest primary care provider, etc.**

**Information Access.** This web site (see <http://pcsa.hrsa.gov>) is the primary means of dissemination of PCSAs and associated data. In addition to viewing PCSAs and their attributes, registered users can examine the underlying ZIP Code assignment data, link the areas to their own data, and adjust area definitions to specific analytic purposes.

An important goal of the PCSA project is to develop systems for the dissemination of primary care-related data in forms suitable for widely diverse users with differing needs and computing resources. Novice users may gain access with a simple Internet browser to an internet-based Geographic Information System based on ArcIMS that is easy-to-use, detail-oriented, and multi-user accessible. More advanced users may download ArcView project files and files in ascii and .dbf formats.

Public users will have access to detailed information about the development and potential uses of PCSAs and the associated data. An Excel file with the assignments of ZIP Codes to PCSAs is available to all users in the Methods Library. In order to comply with data license agreements, access to the PCSA attribute data and geographic files is available only to registered users.

**The Role of States.** State primary care offices and associations have had a critical evaluation role in the PCSA project. Nine states have served as official pilot states (ME, NH, VT, MO, KS, FL, UT, MI), although many others have also contributed valuable suggestions. States are also important end users. For some states, the PCSA database will be a starting point for organizing their own primary care analyses, and for others it will supplement existing sophisticated efforts. Over the long term, the project's aim is to incorporate data from states and other sources to continually improve the quality and generalizability of the PCSA information.

**Updating and Improving the PCSA Database.** The development process used in the creation of the PCSA database was designed to allow for relatively simple additions to the associated data as well as updating of the PCSA definitions. The project will exploit the advantages of Internet dissemination to continually update the PCSA data in the coming years.

## PUBLIC HEALTH GIS NEWS AND INFORMATION

July 2002 (No. 47)

11

Planned additions include measures of geographic accessibility, numbers of mid-level providers, Census 2000 data, and incorporation of existing county-based health care and population information. [Contacts: Steve at sauerbach@hrsa.gov, **David Goodman**, Principal Investigator, Dartmouth Medical School, at pcsa@dartmouth.edu, and **Stephen Mick**, Co-Principal Investigator, Virginia Commonwealth University, at micks@hsc.vcu.edu; The PCSA project is funded by the Bureau of Health Professions and the Bureau of Primary Health Care, HRSA]

\*\*\*\*\*

### Other Literature and Meetings

#### **Selected GIS-related presentations at the North American Association of Central Cancer Registry (NAACCR), Annual Meeting and Work Shops Toronto, Ontario June 8-15, 2002**

“Cancer clusters: the myth and the method,” Aldrich TE; “Statistical methods for detecting global and local clustering of cancer,” Aldrich TE, Puett R, Bolick-Aldrich SW, Drane JW; “Peer county comparisons across three Southeastern states for cancer patterns,” Aldrich TE, Ramirez S, LaRosa RH, Sanders LC; “An atlas of prostate cancer in New York State,” Boscoe FP, Kielb CL, Schymura MJ, “Introduction to GIS: a demonstration using MapInfo GIS software,” Boscoe FP; “Evaluation of risk factors for prostate cancer and their spatial distribution in the District of Columbia,” Davies-Cole JO, Kofie V, Kidane G; “Reassessment of access to cancer care in Kansas using GIS technology,” Lai SM, Van Ness C, Ranasweera N, Keighley J; “Spatial analysis of late stage breast cancer in California,” Laurent AA, Cress RD, Wright WE; “Geographical science for beginner GIS users in cancer registries,” Rushton G; “Preparing Minnesota geocoded data for analysis of cancer occurrence by SES,” Schult T, Bushhouse S, Perkins C; “Innovative cancer registry products to support comprehensive cancer control,” Scruggs NC, Aldrich TE, Bolick-Aldrich SW, Sander LC, Spitler H (See: Interactive Map Services, at web site <http://scangis.dhec.state.sc.us/extranet>, includes maps by Election District); “Geographic disparities in colorectal cancer staging,” Sherman-Seitz RL, Shipley DK, Hedberg K; “Detection of colorectal cancer clusters in District of Columbia: a GIS based approach,” Tao X, Kofie V,

Matanoski GM, Lantry D, Schwartz; “Cancer mapping the EUROHEIS way,” Theriault M-E; and “Using geographic information systems technology in the collection, analysis, and presentation of cancer registry data: introduction to basic practices,” Wiggins L.

\*\*\*\*\*

### Journal Articles and Other Submissions

**Spatial filtering using a raster geographic information system: methods for scaling health and environmental data**, Ali M, Emch M, Donnay JP, *Health & Place*, 8 (2): 85-92 JUN 2002. Abstract: Despite the use of geographic information systems (GIS) in academic research, it is still uncommon for public health officials to use such tools for addressing health and environmental issues. Complexities in methodological issues for addressing relationships between health and environment, investigating spatial variation of disease, and addressing spatial demand and supply of health care service, hinder the use of GIS in the health sector. This paper demonstrates simple spatial filtering methods for analyzing health and environmental data using a raster GIS. Computing spatial moving average rates reduces individual affects and creates a continuous surface of phenomena. Another spatial analytical method discussed is computation of exposure status surfaces e.g., neighbors' influences weighted by distance decay. These methods describe how health and environmental data can be scaled in order to better address health problems. Spatial filtering methods are demonstrated using health and population surveillance data within a GIS that were collected for nearly 210,000 people in Matlab, Bangladesh.

\*\*\*\*\*

**Integration of GPS with remote sensing and GIS: Reality and prospect**, Gao J, *Photogrammetric Engineering and Remote Sensing*, 68 (5):447-453 MAY 2002. Abstract: The advent of the Global Positioning System (GPS) technology has not only enhanced the ease and versatility of spatial data acquisition, but has also diversified the approaches by which it is integrated with remote sensing and geographic information systems (GISs). In this paper the necessity of integrating GPS, remote sensing, and GIS is discussed following their definition, The current status of integration is reviewed under four proposed models:

linear, interactive, hierarchical, and complex. Applications of integration are reviewed under three categories: resources management and environmental monitoring, emergency response, and mobile mapping. This paper reveals that linear integration is the most common. Hierarchical integration has found applications in precision farming and environmental modeling. The complex mode of integration is most valuable in disaster mitigation, emergency response, and mobile mapping. With limited cases in hierarchical and complex models, the full potential of integration has not been achieved. The prospects of integration are distributed mobile GISs and location-aware multi-media digital personal assistants. As mobile communications technologies improve, full integration will find more applications in many new fields after removal of the obstacles in integration. **Key Words:** Geographic Information Systems, environmental applications, aerial triangulation, management, satellite, technologies, photographs, precision, accuracy, imagery.

#### Titles

**Environmental risk factors associated with the incidence of visceral leishmaniasis in Teresina, Brazil: A case-control study using geographic information systems and remote sensing**, Werneck G, Costa CHN, Maguire J, *Am J Epidemiol* 155 (11): 416 Suppl. S JUN 1 2002; **Changing area socioeconomic patterns in U.S. Cancer mortality, 1950-1998: part I-all cancers among men**, Singh GK, Miller BA, Hankey BF, Feuer EJ, Pickle LW, *J Natl Cancer Inst*, 2002 JUN 19;94(12):904-15; **Evaluating site investigation quality using GIS and geostatistics**, Parsons RL, Frost JD, *J of Geotechnical and Geoenvironmental Engineering*, 128 (6): 451-461 JUN 2002; **The urban spread of visceral leishmaniasis: Clues from spatial analysis**, Werneck GL, Costa CHN, Walker AM, David JR, Wand M, Maguire JH, *Epidemiology*, 13 (3): 364-367 MAY 2002; **Geographic information systems in transportation research by Thill JC**, Shaw SI, *J of Regional Science*, 42 (2): 418-421 MAY 2002; **Exposure simulation for pharmaceuticals in European surface waters with GREAT-ER**, Schowanek D, Webb S, *Toxicology Letters*, 131 (1-2): 39-50 MAY 10 2002; **When is a map not a map? Task**

**and language in spatial interpretation with digital map displays**, Davies C, *Applied Cognitive Psychology*, 16 (3): 273-285 APR 2002.; **Examining GIS decision utility for natural hazard risk modelling**, Zenger A, *Environmental Modelling & Software*, 17 (3): 287-294 2002; **Location/allocation/routing for home-delivered meals provision**, Johnson MP, Gorr WL, Roehrig SF, *International J of Industrial Engineering-theory Applications And Practice*, 9 (1): 45-56 MAR 2002; **Land use change analysis in the Zhujiang Delta of China using satellite remote sensing, GIS and stochastic modelling**, Weng QH, *Journal of Environmental Management*, 64 (3): 273-284 MAR 2002.

\*\*\*\*\*

#### V. Related Census, HHS, FGDC and Other Federal Developments

**The Secretary's National Leadership Summit on Eliminating Racial and Ethnic Disparities in Health: "Closing the Health Gap Together,"** U.S. Department of Health and Human Services (HHS), Office of Minority Health/Office of Public Health and Science, July 10-12, 2002, Washington, D.C. Research/Data Plenary Session and Workshops to be held during the Summit [For full program and registration see <http://www.omhrc.gov>]

#### Wednesday July 10

#### *Assessment 101: The Research That You Too Can Do*

This workshop will provide participants with a basic working knowledge of why assessments should be conducted of needs and resources within their community, what questions to ask and how, how to piggy back onto other efforts, how to use existing resources, and how to feed back this information to funders, stakeholders and the community. **Moderator: "How Is It That You Assess What You Have?"** Brian Richmond MPH, Academy for Educational Development, Washington, DC (Invited); "Assessing Needs and Resources Within Your Community" Janice Bowie, Johns Hopkins University, Baltimore, MD (Invited); and "Rapid Assessments: Crisis Response Teams Initiative" Dadera Moore, Office



## PUBLIC HEALTH GIS NEWS AND INFORMATION

July 2002 (No. 47)

13

of HIV/AIDS Policy, U.S. Department of Health and Human Services (Invited)

### *How to Access and Use National Data*

This hands-on workshop will give examples of how to access and use national data from the Census, Current Population Survey, National Health Interview Survey, vital statistics and other data sources. **Instructor:** Pat Golden, recently retired from the National Center for Health Statistics, Hyattsville, MD (Invited)

### *Use of Geographic Information Systems (GIS) to Reduce Minority Health Disparities"*

This workshop is designed to instruct public health professionals in the growing uses of GIS to help improve disease surveillance and prevention among minority populations. Attendees will learn: 1) how U.S. communities are beginning to cost-effectively allocate scarce public health resources to long-standing minority health issues such as environmental lead and rodent exposures, and access to care; 2) new skills in geocoding and the linkage and use of georeferenced information with census geographic and minority population data files and; 3) new skills in basic easy-to-perform spatial analytic functionality common to all GIS software. **Instructors:** Frederick R. Broome MS, Chief, Geospatial Research, U.S. Census Bureau, Geography Division, Washington, DC (Invited); Charles M. Croner PhD, Editor, Public Health GIS News and Information, Geographer & Survey Statistician, National Center for Health Statistics, Centers for Disease Control and Prevention, Hyattsville, MD (Invited); and Jonathan Sperling PhD, Manager, Geographic Information & Analysis, U.S. Department of Housing and Urban Development, Office of Policy Development and Research, Washington, DC (Invited)

### **Thursday July 11**

#### *Evaluation 101: How Do I Evaluate My Project?*

This session is intended for those who are new to evaluating their projects. The session will provide participants with a basic working knowledge of why evaluations should be conducted of their projects, how to establish what change the program intervention/efforts have made, how to piggy back onto other efforts, how to use existing resources, and how to feed back this information to funders, stakeholders and the community.

**Moderator:** Patti Tucker DrPH, RN, Centers for

Disease Control and Prevention, Atlanta, GA (Invited); "Incorporating Evaluation Into Service Programs: Lessons Learned?," Brad Boekeloo PhD, University of Maryland, College Park (Invited); "How to Make Evaluation Work for You and Your Program," Pablo A. Olmos-Gallo PhD, Mental Health Corporation of Denver, Denver, CO (Invited); "How to Recruit and Utilize Local Evaluators," Elvis Fraser, PhD, Academy for Educational Development, Washington, DC (Invited).

### *Assessment 102: Improving Your Assessment Skills*

This session is intended for those who have already conducted a preliminary needs and resource assessment of their community and would like to improve their assessment skills. REACH 2010 grantees will present a brief description of how they assessed the needs and resources within their community, and how they communicated this information to policy makers, stakeholders and the community. Experts in need assessment will provide suggestions on how to improve their assessments. **Presenters:** Carolyn Jenkins, DrPH, FAAN, Medical University of South Carolina, Mt. Pleasant, SC (Invited); Sidney Liang, Cambodian Community Health 2010 of Lowell Community, Lowell, MA (Invited); Janine Walker Dyer, Center for Community Health, Education & Research, Metro Boston Haitian REACH 2010 Coalition, Dorchester, MA (Invited); and David G. Schlundt, Ph.D., Department of Psychology, Vanderbilt University, Nashville, TN (Invited). **Panel Responders:** Brad Boekeloo, PhD, University of Maryland, College Park (Invited); Pablo A. Olmos-Gallo PhD, Mental Health Corporation of Denver, Denver, CO (Invited); and Dadera Moore, Office of HIV/AIDS Policy, U.S. Department of Health and Human Services (Invited).

### *\*Proposed Public Comment Session for the National Academy of Sciences' Review of DHHS Data Collection on Race and Ethnicity*

In December 2000, the Congress passed the A Minority Health and Health Disparities Research and Education Act of 2000. Title III of that act specifies that the National Academy of Sciences (NAS) shall conduct a comprehensive study of the Department of Health and Human Services data collection or reporting systems

## PUBLIC HEALTH GIS NEWS AND INFORMATION

July 2002 (No. 47)

14

required under any of the programs or activities of the Department, relating to the collection of race and ethnicity, including other Federal data collection systems (such as the Social Security Administration) with which the Department interacts to collect relevant data on race and ethnicity. This session will provide an opportunity for participants of the National Leadership Summit to provide comments to this NAS committee relating to race and ethnicity data collection for DHHS data systems.

**Moderators:** Ed Perrin PhD, University of Washington, Seattle (Invited) and Shelly Ver Ploeg PhD, National Academy of Sciences, Washington DC (Invited)

### *\*Proposed Disparities in Access to Genetic*

### *Testing Services: A Town Meeting with the*

### *Secretary's Advisory Committee on Genetic Testing*

Genetic testing services encompass the evaluation, pre- and post-test counseling, testing, management and treatment of genetic conditions in the prenatal, pediatric and adult populations. Disparities in access to health insurance and medical care may act as a barrier to the development and provision of culturally appropriate genetic testing services available to individuals and groups. The Secretary's Advisory Committee on Genetic Testing (SACGT) is currently studying the extent and impact of healthcare disparities on access to genetic testing services. This proposed workshop would provide an opportunity for individuals to inform SACGT about issues pertaining to the accessibility of genetic testing services in States and local communities and to share their perspectives with SACGT on how the problem should be addressed. The town meeting format would also enable participants to share perspectives about other issues in genetic testing. **Moderators:** SACGT Members Judith A. Lewis, PhD, RN (Invited); Victor Penchaszadeh, MD (Invited); and Vence Bonham, Jr., J.D (Invited).

### *Strengthening Community-Academic Partnerships for Research*

Panelists will describe success stories of academic partnerships which truly involve the communities studied, including the informed consent process, recruitment of individuals into a study, data collection, analysis, interpretation, and dissemination of findings back to the community. The Strong Heart Study, the Jackson Heart Study, and the Urban Child Research Center will be

highlighted. **Moderator:** Sarena D. Seifer, The Center for the Health Professions, Seattle WA (Invited); "Urban Child Research Center," Wornie Reed PhD, Urban Child Research Center, Cleveland State University, Cleveland, OH (Invited); "Jackson Heart Study," Donna Antonine-Lavigne, MPH, MSED, Jackson State University, Jackson, MS (Invited); and "Strong Heart Study," Jeff Henderson, Black Hills Center for American Indian Health, Rapid City, SD (Invited).

### *Where Are We Now with the Federal Standards for Racial and Ethnic Data?*

In October 1997, the Office of Management and Budget announced the first revision of the Federal standards for racial and ethnic data in twenty years. Multiracial persons can now report more than one race for Federal data collection efforts. This session will briefly discuss the new standards as well as discuss the issues the Office of Management and Budget grappled with during its extensive research and public comment period leading to its decision. New data on the sociodemographics and health status of multiracial persons from the Census and national health surveys will be shared. In addition, information on how the Bureau of the Census and the National Center for Health Statistics will tabulate data and study trends over time using the new Federal standards will be presented. **Moderator:** Ed Sondik PhD, National Center for Health Statistics, Hyattsville, MD (Invited); "What Did We Learn From Census 2000?," Claudette Bennett, Bureau of the Census, Suitland, MD (Invited); "Multiracial Births and Deaths" Brady Hamilton, PhD, National Center for Health Statistics, Hyattsville, MD (Invited); and "Health Status of Multiracial Persons" Jacqueline Wilson Lucas, National Center for Health Statistics, Hyattsville, MD (Invited)

### *Do We Know What We Need to Know to Eliminate Disparities in Health Outcomes?*

Research agendas to address disparities in health outcomes will be presented and discussed by representatives from the National Institutes of Health, Centers for Disease Control and Prevention and the McArthur Research Network on Socioeconomic Status and Health. **Moderator:** "Disease Prevention

## PUBLIC HEALTH GIS NEWS AND INFORMATION

July 2002 (No. 47)

15

Research” Walter Williams PhD, Centers for Disease Control and Prevention, Department of Health and Human Services, Atlanta, GA (Invited). “Behavioral Research,” Raynard Kington PhD, Office of Behavioral and Social Sciences Research, National Institutes of Health, Department of Health and Human Services, Bethesda, MD (Invited); “How the Social Environment Impacts Health Inequities,” Nancy E. Adler, MacArthur Research Network on Socioeconomic Status and Health, San Francisco, CA (Invited); “Environmental Research,” Allen Dearry, National Institute of Environmental Health Sciences of Health, National Institutes of Health, Department of Health and Human Services, Research Triangle Park, NC (Invited); and “RWJ Perspective,” Kimberly Lochner Sc.D., The Robert Wood Johnson Foundation, Princeton, NJ (Invited).

### *Do We Know What We Need to Know to Eliminate Disparities in Health Care Access and Quality?*

This session will discuss data gaps and research needs to help answer questions of why disparities in health care access and quality exist, even within similarly insured populations. Representatives from the Institute of Medicine, Centers for Medicare and Medicaid Services, Agency for Healthcare Quality and Research, Health Resources and Services Administration, and the Academic Medicine and Managed Care Forum will share their perspectives on this panel. **Moderator:** “Health Care Disparities Research,” Brian Smedley PhD, Institute of Medicine, Washington, DC (Invited); “AHRQ Perspective” Dr. Francis Chesley, Agency for Healthcare Quality and Research, U.S. Department of Health and Human Services, Rockville, MD (Invited); “HRSA Collaboratives” Denice Cora-Bramble MD, Health Resources and Services Administration, Rockville, MD (Invited); “CMS Perspective” Daniel Waldo, Centers for Medicare and Medicaid Services, U.S. Department of Health and Human Services, Baltimore, MD (Invited); “Academic Medicine and Managed Care Forum Perspective” Dennis Oakes, Academic Medicine and Managed Care Forum, Blue Bell, PA (Invited)

### *Special Research Issues for Tribal Governments*

Many researchers and funding organizations are not aware that they need to consult with tribal governments

prior to planning and conducting research on American Indians or Alaska Natives. This session will discuss the special relationship that American Indian tribes have with the Federal government and how that impacts how research is funded and conducted. Examples of strong partnerships to improve vital events data in Michigan and recruit American Indians for the California Health Interview Survey will be highlighted. In addition, methods for small populations will be discussed.

**Moderator:** Carole Heart, Aberdeen Area Tribal Chairman’s Health Board, Aberdeen, SD (Invited); “Improving Michigan Vital Events Data for American Indians,” Richard Havertake MPH, Inter-Tribal Council of Michigan Inc., Saulte Ste Marie, MI (Invited); “Lessons Learned from the California Health Interview Survey,” Delight Satter MPH, University of California, Los Angeles, CA (Invited); “Methods for Small Populations” Tam Lutz, NW Portland Area Indian Health Board, Portland, OR (Invited).

### *Birthplace, Generation, and Health: What Have We Learned?*

Studies have documented that rapid acculturation to American values and behaviors could result in negative health outcomes for immigrants and their families. It is increasingly realized that newcomers to the United States bring with them certain culturally protective factors from their countries of origin. These protective factors serve to shield them from many high-risk health behaviors. For example, Latino newcomers tend to live longer, have less heart disease and exhibit lower rates of breast cancer among women. The “Hispanic paradox” demonstrates that the effects of social economic status on health indicators is modified by the acculturation status of the individual. In other words, health behaviors for Latinos worsen with increased levels of acculturation, regardless of SES. While this “paradox” has not been fully analyzed, the “Healthy Migrant” effect appears to be the result of the socioeconomic and psychological selectivity of the immigration process. This session will discuss the latest findings on the health of immigrants and their descendants so that health professionals and researchers can identify strategies and interventions to preserve culturally determined protective factors that maintain high levels of wellness.

**Moderator:** Olivia Carter-Pokras, PhD, Office of

## PUBLIC HEALTH GIS NEWS AND INFORMATION

July 2002 (No. 47)

16

Minority Health, U.S. Department of Health and Human Services, Rockville, MD (Invited); "Influence of Nativity on Mortality Among Black New Yorkers" Michael Alderman, Ph.D. Albert Einstein College of Medicine, Bronx, NY (Invited); "Cancer Among Asian Immigrants to the United States and Their Descendants" G.K. Singh PhD, National Institutes of Health, Bethesda, MD (Invited); "Birthplace, Generation and Health Among Latinos" Alexander N. Ortega PhD, Yale School of Public Health, New Haven, CT (Invited).

### Friday July 12

#### **Research and Data Plenary Session: How to Involve Communities in Research and Data**

In the last ten years, traditional population-based biomedical research methods have been challenged due to limited community participation. Proponents for change explain that community participation, as an active partner in the research process, provides numerous benefits to research findings and public health intervention outcomes. In addition, community participation builds and strengthens the capacity of community residents to address future health risks, through education, outreach and training. Increased community involvement in the design, data collection, analysis and interpretation, and in the dissemination phases of research is one approach which has been used successfully to improve survey response rates and increase cost effectiveness. Furthermore, previous reports containing recommendations to improve racial and ethnic data have acknowledged the importance of involving the community in research and data efforts. This panel will examine useful ways of incorporating communities, especially racial and ethnic groups, into the research process to improve data on racial and ethnic groups.

This session will discuss how representatives of community-based organizations, public health agencies, health care organizations and educational institutions can work together to ensure that research is conducted which will enhance our understanding of issues affecting the community, and develop, implement and evaluate, as appropriate plans of action that will address those issues in ways that benefit the community. Panelists will describe success stories involving the communities studied, including the informed consent process, recruitment of individuals into a study, data collection,

analysis, interpretation, and dissemination of findings back to the community. Success stories using these methods to translate research into action to reduce disparities in mental health will also be shared.

**Moderator:** "Why Involve Communities in Research and Data Efforts," John Ruffin, Ph.D. (Invited) , Director of the National Center on Minority Health and Health Disparities (NCMHD) at NIH will set the stage for this discussion of how to involve communities in research and data, and will include a brief summary of Departmental efforts to develop guidance for community based participatory research.

**Panelists:** "Overview of CBPR and Examples from the Detroit Community- Academic Urban Research Center," Barbara Israel, Dr.P.H., (Invited) is a Professor in the Department of Health Behavior and Health Education with the University of Michigan. Dr. Israel will give an overview of CBPR and provide real life examples of developing, implementing and evaluating CBPR through their CDC-funded Detroit Community-Academic Urban Research Center. Starting with about \$300,000 annually from CDC, they have worked together to develop this into a 12 million dollar CBPR enterprise; "CBPR and Lay Health Workers," Eugenia Eng, Dr.P.H. (Invited) is a Professor at the University of North Carolina School of Public Health. She will share her experience in community based participatory research and the training of health care workers; "An American Indian and Rural Perspective on Community Based Participatory Research," Judy Gobert (Invited), Dean of Math and Science of Salish Kootenai College will share an American Indian and rural perspective on community based participatory research; and "Translating Research into Action to Reduce Disparities in Mental Health," Sergio Aguilar-Gaxiola, MD, PhD (Invited), Professor of Psychology, California State University, Fresno CA.

#### **Evaluation 102: How Do I Improve My Evaluation?**

This session is intended for those who have started evaluating their projects and would like to learn how to improve their evaluations. REACH 2010 grantees will present a short description of their project and evaluation approach and will receive feedback from evaluation experts. Participants will have an opportunity to ask



**PUBLIC HEALTH GIS NEWS AND INFORMATION**

July 2002 (No. 47)

17

questions of their own evaluations. Presenters: Dr. Adewale Troutman, Principal Investigator for the Atlanta REACH for Wellness Initiative, Atlanta, GA (Invited); Barbara Ferrer, Boston REACH 2010 Breast and Cervical Cancer Project, Boston, MA (Invited); Mona Fouad, Principal Investigator, REACH 2010, and Associate Professor of Medicine, University of Alabama at Birmingham, AL (Invited); and Marcus Plescia, MD MPH, Dept of Family Medicine, Charlotte, NC (Invited).

**Panel Responders :** Pablo A. Olmos-Gallo, PhD, Mental Health Corporation of Denver, Denver, CO (Invited); Pattie Tucker, DrPH, RN, Centers for Disease Control and Prevention, Atlanta, GA (Invited); Linda Silka, PhD, University of Massachusetts, Lowell, MA (Invited); and Tom Arcury, PhD, Wake Forest University School of Medicine, Winston-Salem, NC (Invited).

***State Plans To Improve Racial  
And Ethnic Data***

Best practices to improve the collection, analysis, dissemination and use of racial and ethnic data at the state level will be presented. **Moderator:** William Walker, New Hampshire Office of Minority Health, Concord, NH (Invited); “New England Model: Private/Public Collaboration Using Data to Eliminate Racial and Ethnic Health Disparities,” Vania Brown-Small, Rhode Island Office of Minority Health, Providence, RI (Invited); “Best Practices in Arkansas,” Tara Clark-Hendrix, Arkansas Department of Health, Little Rock, AR (Invited); “Ohio Minority Health Data Initiative,” Dr. Frank Holtzhauer, Ohio Department of Health, Columbus, OH (Invited).

**[Conference Contact and Organizer, Olivia Carter-Pokras, Ph.D., Director, Division of Policy and Data, HHS Office of Minority Health, at [ocarter@osophs.dhhs.gov](mailto:ocarter@osophs.dhhs.gov)]**

\*\*\*\*\*

**Federal Geographic Data Committee (FGDC)**

[The Federal Geographic Data Committee (FGDC) is an interagency committee, organized in 1990 under OMB Circular A-16, that promotes the coordinated use, sharing, and dissemination of geospatial data on a national basis. The FGDC is composed of representatives from seventeen Cabinet level and independent federal agencies. The FGDC coordinates the development of the National Spatial Data Infrastructure (NSDI). The NSDI encompasses policies, standards, and procedures for organizations to cooperatively produce and share geographic data. The 17 federal agencies that make up the FGDC, including HHS, are developing the NSDI in cooperation with

organizations from state, local and tribal governments, the academic community, and the private sector. See <http://www.fgdc.gov>]

**Statement of Mark A. Forman, Associate Director for Information Technology and Electronic Government, Office of Management and Budget, Before the Committee on Government Reform, Subcommittee on Technology and Procurement Policy, U.S. House of Representatives- June 7, 2002 (Excerpts). **Public Trust****

A successful E-government strategy must deploy risk-based and cost-effective controls to ensure the security of the Federal government’s operations and assets. Security is integral to both the E-Government and Homeland Security initiatives. Additionally, all E-government and homeland security initiatives, where applicable, must comply with security requirements in law, OMB policy, and technical guidelines developed by the National Institute of Standards and Technology. These initiatives must also ensure privacy for personal information that is shared with the Federal government. Achieving a secure homeland must be accomplished in a manner that builds trust, preserves liberty, and strengthens our economy. The Administration’s e-Authentication project addresses security and privacy concerns by enabling mutual trust to support widespread use of electronic interactions between the public and government and across government by providing common avenues to establish “identity”. It will provide a secure, easy to use and consistent method of proving identity to the Federal government that is an appropriate match to the level of risk and business needs of each e-gov initiative. In addition, project teams will address privacy concerns regarding the sharing of personal information. E-Government depends on confidence by citizens that the government is handling their personal information with care. Agencies are working on building strong privacy protections into both E-government and Homeland security initiatives and OMB is focusing on government wide privacy protections by all agencies.

**Steps to Overcome  
Information Stovepipes**

New agency information technology investments must specify standards that enable information exchange and resource sharing, while retaining flexibility in the choice of suppliers and in the design of work processes. They

**PUBLIC HEALTH GIS NEWS AND INFORMATION**

July 2002 (No. 47)

18

must also address security needs. As you know, the President has given a high priority to the security of government assets including government information systems and the protection of our nation's critical information assets from cyber threats and physical attacks. We believe that protecting the information and information systems that the Federal government depends upon requires agencies to identify and resolve current security weaknesses and risks, as well as protect against future vulnerabilities and threats. OMB will continue to monitor and measure agency security performance through their annual security reports and the budget process.

The Administration's ongoing effort to establish the Federal enterprise architecture is helping to identify, locate, and establish mechanisms to share across government the information required to protect the Nation's borders and to prepare for, mitigate, and respond to terrorist activities. Over time, every agency has developed its own set of business processes and supporting IT systems. These "stovepiped" systems were built with the intention of supporting a specific business unit or function and never contemplated data exchanges with other systems in the organization. E-Government and homeland security requires us to exchange data across organizations at the federal level as well as with our partners in State and local governments, and the citizen. To overcome these rigid systems, we are using enterprise architecture best practices. This will enable us to develop simpler, more efficient business processes. Best practices combined with information technologies allow us to quickly develop and implement simple and more efficient business processes including processes for homeland security initiatives.

\*\*\*\*\*

**FGDC Coordination Meeting Summary: Agency Geospatial Data Use,**

**Activities and Expenditures June 4, 2002**

The following are brief summaries of geospatial activities by lead FGDC agency representatives. More complete reports were provided to attending Office of Management and Budget (OMB) examiners. **Janet Irwin**, OMB, spoke of the importance of the FDGC, which is receiving high profile attention due to the Geospatial One Stop Initiative (see *Public Health GIS News and Information*

(44): JAN 2002). Data is moving towards being collected according to FGDC standards. OMB and FGDC need to demonstrate the value of spatial data, standards and interoperability. There was guidance in the FY 03 Passback directing agencies to spend money on data collected to FGDC standards. The OMB examiners met June 4, 2002, to learn more about the value of geospatial data at the following agencies..

**NOAA**- All of The National Oceanic and Atmospheric Administration's (NOAA) work is predicated on the use of geospatial data. Satellites and Data; Ocean and Atmosphere Research; Ocean Service; Fisheries Service and Weather Services are sources of coastal mapping information in NOAA. Categories of marine and coastal spatial data include spatial frameworks; meteorological and oceanographic; ecosystem; and human activities. NOAA's Clearinghouse participation includes: NOAA's Coastal Services Center which is one of the FGDC Clearinghouse's six gateways, maintenance of 15 FGDC Clearinghouse nodes and metadata training at NOAA's Coastal Services Center. NOAA has active leadership and participation on a number of FGDC subcommittees and working groups. For Geospatial One Stop NOAA is heading up the Geodetic Theme Development and is contributing to efforts of three other framework layers. [Report: **Howard Diamond**]

**Census Bureau**- All of the Census Bureau's information is tied to geospatial data. The TIGER (Topologically Integrated Geographic Encoding and Referencing) System is at the heart of the Census Bureau's geospatial data support for its statistical programs. TIGER content: Streets, lakes, streams, railroads, boundaries, housing, key geographic locations (airports, schools, etc.), ZIP codes and address ranges. The MAF (Master Address Files) is a comprehensive database for each housing unit in the entire United States, Puerto Rico, and the associated Island Areas. Census is the Governmental Unit Boundary theme lead for the Geospatial One Stop. [Report: **Frederick Broome**]

**USGS**- The US Geological Survey (USGS) has many programs with a geospatial component including: Cooperative Topographic Mapping, Geologic Mapping,



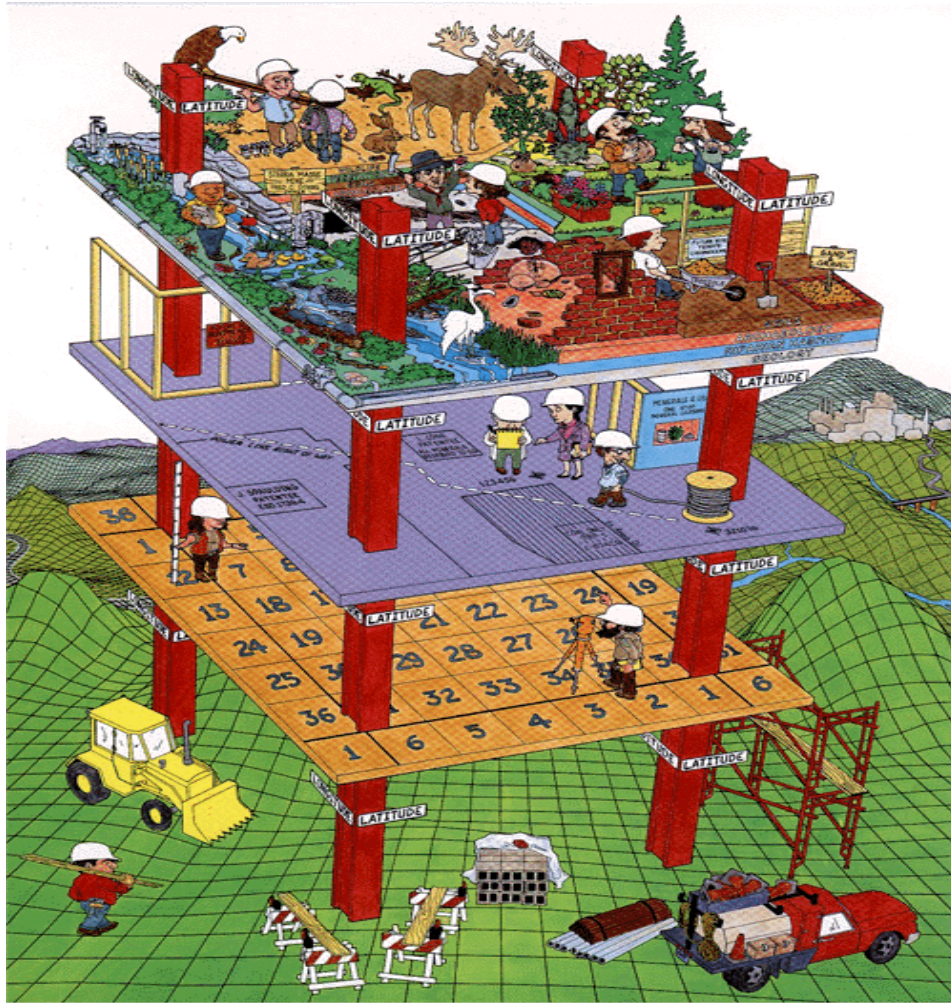
## PUBLIC HEALTH GIS NEWS AND INFORMATION

July 2002 (No. 47)

19

Land Remote Sensing, Energy, Minerals, Hazards, Coastal and Marine Geology, Surface Water, Water Quality, Ecosystems, Fisheries and Aquatic Resources, Invasive Species, and Wildlife and Terrestrial Resources. USGS is the Geospatial One Stop Theme lead for three framework layers: orthoimagery, elevation, and

resources. Although the National databases are already standardized, the research databases are works in progress with regard to standardization. As the metadata tools become easier to use, the more the scientists will be able to document their data according to FGDC standards. [Report: **Hedy Rossmeissl**]



Courtesy of Bon Buhler, Bureau of Land Management (BLM). Depicts cadastral, or legal rights of land use and ownership, information based on early township surveys of western lands into 6 miles square (girder to girder). Spatial data today used in virtually all land use decisions by BLM and key component for managing Public, Indian and adjoining lands.

hydrography. Roughly half of the USGS budget is spent on geospatial activities. OMB Circular A-16 designates USGS as the lead for digital orthoimagery, elevation/terrestrial, hydrography, geologic, earth cover, geographic names, watershed boundaries, and biological

**BLM-** The Bureau of Land Management (BLM) has used geospatial data since 1785 when the West began to be surveyed into 6-mile square townships. BLM provides cadastral data expertise (cadastral data is the record of our decisions on the land). Approximately 78% of BLM business practices use geospatial data to support mission related land and resource decision-making including inventories, permitting, leasing, land tenure and planning. Much of the spatial data the BLM uses is provided by other federal, state, and local organizations. States and locals also provide input for cadastral standards. BLM fully supports the Geospatial One Stop's vision. [Report: **Don Buhler**]

**NIMA-** Prior to September 11 the National Imagery and Mapping Agency (NIMA) did not have a domestic mission, so participation in FGDC activities is a new role for the agency. NIMA provides financial support to the Geospatial One Stop and co-chairs the FGDC Homeland Security Working Group. On July 11 NIMA will host a Model Driven Architecture (MDA) Tutorial. Geospatial One Stop Theme leads or people involved in standards development may find this unclassified tutorial helpful. [Report: **Shel Sutton**]

**DOT-** The US Department of Transportation (DOT) creates and maintains transportation specific

## PUBLIC HEALTH GIS NEWS AND INFORMATION

July 2002 (No. 47)

20

spatial data for highway, railroad, transit, airport facilities and airspace and intermodal facilities and produces cartographic products, aeronautical charts, tools, and publications. DOT collaborates with State organizations and gets some spatial information (such as pipeline data) from non-Feds. DOT chairs the FGDC Ground Transportation Subcommittee and is the Geospatial One Stop Theme Lead for road, rail, and air transportation. DOT has approximately 20 FTEs working on geospatial activities. DOT has a 6-year cycle for appropriations and during the next cycle the Department hopes to leverage the States' geospatial data by integrating them with each other as well as the Geospatial One Stop Portal. [Report: **Carol Brandt** and **K. Thirumalai**]

**USDA/FSA**- The Farm Service Agency (FSA) administers over 40 programs in farm commodity, credit, conservation, environmental, and emergency assistance. Its business directly involves the use and maintenance of maps and geospatial information. FSA is involved in reengineering business processes to eliminate redundant processes. The FSA is building a GIS training program for FSA employees in the field. FSA participates with FGDC activities regarding Metadata, Data Standards, Clearinghouse, Interoperability Specifications and Geospatial One Stop. [Report: **Shirley Hall**]

**USDA/NRCS**- The Natural Resources Conservation Service (NRCS) provides leadership in a partnership effort to help conserve, maintain, and improve our natural resources. Geotechnology tools support many NRCS programs. NRCS has data development activities and partnerships related to soils, orthoimagery, critical program management themes, and watershed boundaries. The NRCS collects and generates data at the local level, with much of the data stored locally. The NRCS has developed a Customer Service Toolkit (CST) geared towards customers at the local level. [Report: **Christine Clarke**]

**USDA/USFS**- Roughly 60% of the US Forest Service (USFS) budget goes towards collecting, maintaining and using geospatial data, and approximately 80-90% of USFS business involves geospatial data. The 2003 USFS Strategic Plan will include more details about geospatial data than past strategic plans. Approximately 1000 USFS employees are involved with geospatial data

and each district office has several GIS people. The Geospatial Service and Technology Center (GSTC) produce much of the standardized forest-level geospatial products for the USFS. The GSTC is also responsible for updating approximately 600 topographic maps per year. USFS has a Geospatial Executive Board and a Geospatial Advisory Committee that deal with issues regarding geospatial investments. USFS will have an active FGDC Clearinghouse node by FY03. USFS supports the Geospatial One Stop. [Report: **Susan DeLost**]

**USACE**- The U.S. Army Corps of Engineers (USACE) is a decentralized organization with a very limited mapping mission. USACE's only mapping mission is the Inland Waterways. USACE participates with FGDC regarding metadata, Clearinghouse, and data standards development and coordination. USACE is supporting the Geospatial One stop by developing transportation theme for waterways and is providing funding to OGC and ANSI. [Report: **Nancy Blyler**]

**FEMA**- The Federal Emergency Management Agency (FEMA) works to reduce loss of life and property and protect our critical infrastructure from all types of hazards. A significant amount of resources are directed toward geospatial data use and activities due to the geographic nature of hazards and disasters. For example, 50-70% of the Flood Mapping Program's budget goes toward the creation, collection, evaluation, processing, production, distribution, and interpretation of geospatial data, as well as standards and procedures development to support these activities. FEMA's NSDI activities are related to standards development and the Multi-Hazard Mapping Initiative. [Report: **Scott McAfee**]

**EPA**- The Environmental Protection Agency (EPA) completed a Geospatial Activities Baseline in June 2001. The baseline describes how Agency business is supported and documents current data sets, hardware and software, applications, users, and expenditures. The baseline also identifies stakeholder issues. EPA geospatial data supports: Superfund, tribal activities, emergency response, water quality and water standards, compliance, environmental justice, air, risk assessments, performance measurement and growth. The EPA is developing a geospatial blueprint that will describe an



## PUBLIC HEALTH GIS NEWS AND INFORMATION

July 2002 (No. 47)

21

approach to more effectively organize, coordinate, and leverage geospatial data activities on an enterprise-level within the EPA. The EPA is contributing to the Geospatial One Stop and has a Clearinghouse node. [Report: **Ivan DeLoatch**]

**NASA** - The National Aeronautics and Space Administration (NASA) participates in FGDC through participation on the standards teams, Chairing the Geospatial Applications and Interoperability Working Group and fully supporting the Geospatial One Stop. NASA uses geospatial data in spacecraft and airborne measurement programs, data distribution and handling systems, and earth science research, composed of both science and the applications. The latest applications strategy focuses on National Applications through partnerships. NASA supports the NSDI through the Clearinghouse:Global Change Master Directory; Agency-wide coordination; OGC Strategic Membership and ISO TC211 participation. Direct contribution to Geospatial One-Stop will be in the areas of program management, outreach and portal design. [Report: **Myra Bambacus** ]

### Web Site(s) of Interest for this Edition

<http://www.sdi.gov> **Interagency Working Group on Sustainable Development Indicators (the "SDI Group")**. In the SDI Group, people from a number of Federal Agencies work together to create indicators of sustainable development for the United States. On this site is a downloadable version of our first report "Sustainable Development in the United States, An Experimental Set of Indicators". In the future, we plan to post an updated version with further thoughts on the framework for indicators, a revision of the set of 40 and comments on indicator projects at the community and corporate level. There are also many links to other Government and non-Government sites related to indicators. The U.S. Interagency Working Group on Sustainable Development Indicators welcomes public participation in the discussion and selection of indicators for sustainable development.

<http://www.hazardmaps.gov/atlas.php> **FEMA's Muthazard Mapping Initiative**. The vision of FEMA's Muthazard Mapping Initiative is to maintain a living atlas

of hazards data and map services for advisory purposes supplied from a network of hazard and base map providers. The initiative is an implementation of Section 203(k) of the Disaster Mitigation Act of 2000, which calls for the creation of Multihazard Advisory Maps, or maps "on which hazard data concerning each type of natural disaster is identified simultaneously for the purpose of showing areas of hazard overlap."

<http://www.oceansatlas.org/index.jsp> **United Nations Atlas of the Oceans**. The UN Atlas of the Oceans is an Internet portal providing information relevant to the sustainable development of the oceans. It is designed for policy-makers who need to become familiar with ocean issues and for scientists, students and resource managers who need access to databases and approaches to sustainability. The UN Atlas can also provide the ocean industry and stakeholders with pertinent information on ocean matters.

<http://www.urban.uiuc.edu/ce/02events/standards/standards.html> GIS Standards Workshop at University of Illinois, August 5-8, Champaign, IL.

<http://www.spes.iss.it/Report.htm> Regarding the measles outbreak in Campania, Italy in the period January-April 2002 data from the sentinel pediatric surveillance show an incidence of approximately 1600 cases per 100,000 population, which corresponds to more than 15,000 cases in children less than 15 years of age. The highest incidence is in the age group 5-9 years, followed by 10-14 years. These data refer only to Campania and are based on the observation of 41,000 children less than 15 years of age (that is 4 percent of the regional total of the same age group). The epidemic is attributable to a poor vaccination coverage (the most recent estimate refers to the 1998 birth cohort, and is 53 percent for those 24 months of age). For readers who are interested in seeing the monthly incidence data with an excellent mapping by region, select the month of interest: for disease (malaria) put in "morbillo" for measles. The data on the website are very well presented and readable even for those of us who do not read Italian. As clearly stated in the above summary, the ongoing outbreak is related to low vaccination coverages with a resultant large cohort of

**PUBLIC HEALTH GIS NEWS AND INFORMATION**

July 2002 (No. 47)

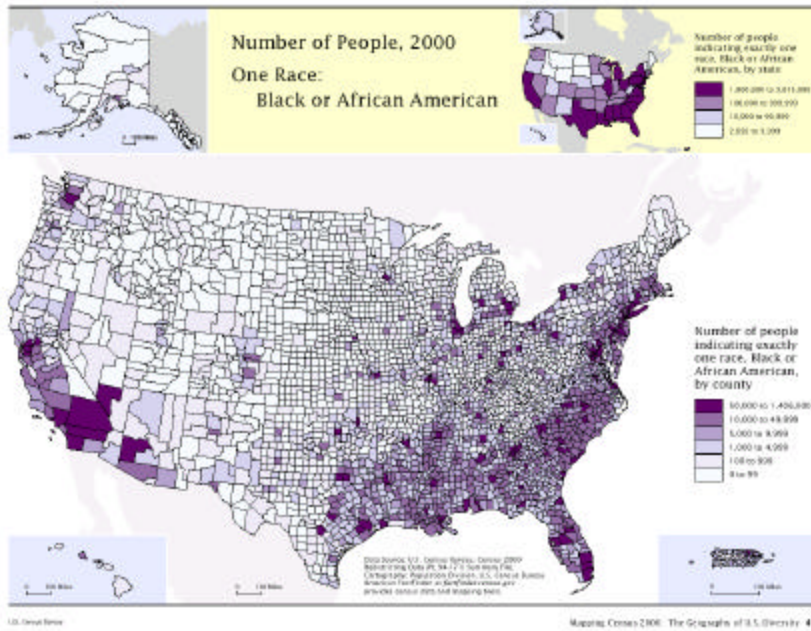
22

susceptibles, a situation in which a resultant outbreak is not unexpected. The measures taken to start immunization at 6 months of age with follow-up dose after 12 months of age are prudent.

**Final Thoughts**

**Minority Health Disparities and GIScience**

The timing is now to bring full attention to the many uses of GIScience to help address minority health disparities. The power of GIS technology allows geospatial data to be of prime importance to help study the differential burden of disease among our minority populations. The fact that health disparities are so pervasive among minorities, and especially for African American or Black Americans, makes this concern a high public health and national priority.



GIScience and technology, with the capacity to detect spatial and space-time inequalities, has an important contributing role to play in the growing national effort to eliminate human health disparities. First we must comprehend the dimensions and extent of this human crisis in America.

The recent 8<sup>th</sup> Annual Summer Public Health Research Institute and Videoconference on Minority Health, June 17-21, 2002 (see [www.minority.unc.edu/institute/2002/agenda.htm](http://www.minority.unc.edu/institute/2002/agenda.htm)), clearly conveyed the message of disparities. For example, in his opening talk

**“Racial and Ethnic Disparities in Health: An Overview of National Data and NIH Future Directions in Behavioral and Social Causal Factors,”** Raynard Kington, National Institutes of Health (NIH), demonstrated that in spite of the great improvements in the health of the American people over the past hundred years, there remain persistent and large differences in health status across racial and ethnic populations. National trends show that compared with all other groups, Black population differentials persist in key measures of life expectancy at birth, infant mortality, coronary heart disease, and age-adjusted death rates. Additionally, infant mortality rates, when controlling for education of mother, are highest for black females even when comparing most educated black females with the least educated of other groups.

**“Health care disparity is the most significant Civil Rights issue America must face...”** Joseph L. Graves, Jr., Professor of Evolutionary Biology, Arizona State University West, 8<sup>th</sup> Annual Summer Public

The picture is as bleak in other areas. Kington reported Black and Hispanic populations have highest percentages of related children below 150 percent of poverty, the percentage of Black male smokers is highest, and

**PUBLIC HEALTH GIS NEWS AND INFORMATION**

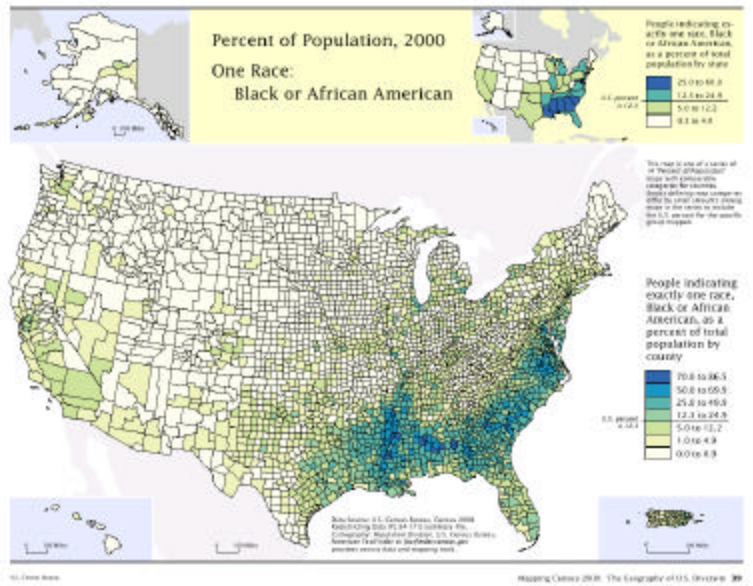
July 2002 (No. 47)

23

respondent-assessed health status is highest in the categories of “fair” or “poor” among Blacks. Among those without health insurance under age 65, Hispanics and Blacks are the most vulnerable reaching 35 and 20 percent, respectively. Although rates of health insurance coverage for their children are better, the differentials still persist and are a major issue.

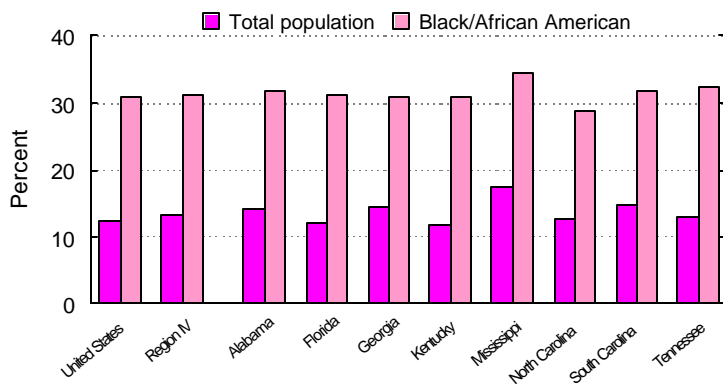
Minority disparities exist for other areas of public health care such as differentials in diagnostic tests, therapeutic and specialty care, referrals, routine medical procedures, and other treatments. The issue of environmental discrimination was raised in that the percent of population living in EPA non-attainment air quality counties was highest for Hispanics and Blacks, respectively. Obesity, while prevalent among all groups, is especially high among Mexican Americans and Blacks. For Blacks, risk factors have been identified which help explain about 1/3rd of the difference with other groups, including smoking, systolic blood pressure, diabetes, cholesterol, body mass, alcohol, family income, and education. Much work remains to be done here.

There exist less visible dimensions of disparity. Readers will recall the recent Harvard University study (JAMA, March 13, 2002) on racial disparities on quality of care. Black Medicare HMO patients were found to receive lower quality medical care than their white counterparts. The most striking difference was found in psychiatric care, though blacks also received poorer



diabetes-related eye care, fewer beta-blockers, and a lower rate of breast cancer screening. And the list goes on.

**Percent of households that are headed by females\*:  
United States and Region IV States, by race, 2000**



\*No spouse present.  
Source: Census 2000 Summary File 1, US Bureau of the Census.

Other presentations in the 8<sup>th</sup> Annual Summer Public Health Research Institute and Videoconference on Minority Health addressed a variety of related issues of disparity. These included: **SES, Ethnicity, Culture: Toward Understanding the Sources Of Disparity in Academic and Mental Health Outcomes; Recent developments in improving racial & ethnic data; Perinatal Health Of Mexican American/Latino Women: Implications For Research, and Health Service Delivery; Assessing the Health of Asian American Youth: A Multidisciplinary Approach; Tobacco Control in American Indian communities;** and others.

## PUBLIC HEALTH GIS NEWS AND INFORMATION

July 2002 (No. 47)

24

Other important national forums and initiatives are occurring. The Department of Health and Human Services (HHS) will host **The Secretary's National Leadership Summit on Eliminating Racial and Ethnic Disparities in Health: "Closing the Health Gap Together"**, July 10-12, 2002 (see Section V, this edition). The program includes a GIS workshop designed to convey the role of geospatial information and how these tools can be used to help reduce minority health disparities. Other federal initiatives include HHS' Eliminating Disparities Goal for Healthy People 2002, National Goals and Objectives for Disease Prevention and Health Promotion, National Academy of Science Study of HHS Collection of Race and Ethnicity Data, 2001-2003, NIH Research Plan to Eliminate Health Disparities, and others.

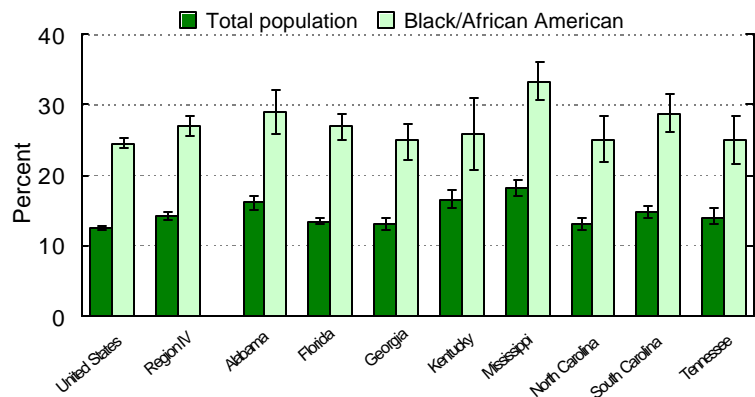
GIS tools have much to offer in the scientific study of disparity. Georeferencing of disease events and human condition has a rich history in geography, epidemiology and related public health sciences. We are not new to health disparity and inequity in disease etiologies, environmental exposures, access to care, disease predisposition and related measures. But several things are different than in the past. One there is a growing urgency to recognize minority health disparities as a public health and national priority. The data presented at these national forums on health disparity clearly illuminate the persistent divide in our society on key conditions, quality of care and other parameters of wellbeing. Two we now have more computing and supercomputing power to better study and analyze existing health disparities in time and space. Perhaps more than ever we are positioned as a scientific community to better decipher associations and outcomes that drive these disparities of minority health. GIS has a role to play and one possibly bigger than we ever envisioned. We need to make minority disparities in public health a national GIS priority.

The empowerment of minority scientists to bring GIScience to bear upon this effort is important. Few programs nationally exist with this express purpose. There is one that merits our attention and can serve as a role model for similarly creative initiatives. The 19th Annual HBCU Summer Faculty GIS Workshop will be held August 4-10, 2002. It will be coordinated by the Howard University Continuing Education, Urban Environment Institute (see program at [www.con-ed.howard.edu](http://www.con-ed.howard.edu)) and hosted by the Washington GIS Consortium at the National Capital Planning Commission ([www.ncpc.gov](http://www.ncpc.gov)), in Washington, D.C.

Since its beginnings in 1983, this workshop has trained many faculty at many of our Historically Black Colleges and Universities. Their accomplishments, using GIS technology with their students and in their communities, attests to the success of this effort (see Special Report, *Public Health GIS News and Information* (44): JAN 2002). Agencies are especially welcome to help sponsor and assure the continuation and excellence of this program (see p. 6, this report).

Addressing minority disparities in public health is a shared responsibility of all scientists. We can make it a defining moment for GIS in public health. [Appreciation is extended to Richard J. Klein, Lead Statistician, *Healthy People 2010*, Office of Analysis, Epidemiology, and Health Promotion, NCHS, for graphics in this section]

**Percent of population below the federal poverty level :  
United States and Region IV States, by race, 2000**



I = 90% confidence interval.  
Percentages are based on income in the past 12 months.  
Source: Census 2000 Supplementary Survey, US Bureau of the Census.



**PUBLIC HEALTH GIS NEWS AND INFORMATION**

July 2002 (No. 47)

25



*Recipient of the “2002 NCHS Director's Award for Equal Employment Opportunity and Civil Rights Program Activities”*

Charles M. Croner, Ph.D., Editor, *Public Health GIS News and Information*, Office of Research and Methodology, National Center for Health Statistics at [cmc2@cdc.gov](mailto:cmc2@cdc.gov). While this report is in the public domain, the content should not be altered or changed. This is the 47<sup>th</sup> edition with continuous reporting since 1994.

**Our GIS home page contains current GIS events, archived reports and other links**

<http://www.cdc.gov/nchs/gis.htm>