

Tri-State Stroke Data Summit

Atlanta, Georgia

February 26, 2002

Meeting Report

The Second Tri-State Stroke Data Summit was hosted by Georgia and held in Atlanta on February 26, 2002. The purpose of the meeting was to discuss ways of improving stroke-related surveillance in North Carolina, South Carolina, and Georgia. The following report summarizes the topics presented at the meeting.

I. Overview of stroke-related surveillance (Moderator: Ken Powell)

Ken Powell of Georgia presented a logic model for stroke, which depicts the chain of events leading to stroke and outcomes after a stroke has occurred. Conference participants commented on the logic model both during the session and after the Summit had concluded. Comments were incorporated into a revised logic model (Appendix C).

Also presented was a list of events, risk factors, policies, and environmental conditions pertaining to stroke-related surveillance activities. The list corresponds to the logic model and includes potentially available data sources (Appendix D). We briefly discussed deficiencies in data related to both stroke outcomes, such as inadequate information on type of stroke (e.g., hemorrhagic vs. ischemic), and contributing factors, such as nonexistent information on the statewide prevalence of uncontrolled hypertension.

The remainder of the session was devoted to a discussion of policy and environmental indicators for cardiovascular health.

Potential policy and environmental indicators of cardiovascular health (CVH)

Dyann Matson Koffman, CDC, presenter

Several Divisions at the CDC are collaborating to develop indicators designed to enhance the capability of CVH State Programs to track policy and environmental actions in their states. Presently, 31 indicators are being evaluated for surveillance purposes; CDC does not yet recommend routine use of these proposed indicators. The process for identifying policy and environmental indicators for cardiovascular health is challenging because there is limited scientific evidence for or against many of these indicators.

Phase 1 (1999): 72 potential CVH indicators were identified from a variety of sources. Working groups comprised of staff from CDC, state CVH Programs, and subject matter experts prioritized the indicators according to their quality, feasibility, acceptability to public health settings, and effectiveness.

Phase 2 (2000-2001): Representatives from four Divisions within CDC's Center for Chronic Disease Prevention and Health Promotion pared the list of indicators to 31, with an emphasis on feasibility (e.g., cost, ease of data collection). Subsequently, CDC funded the Alabama and South Carolina state health departments to identify data sources for each indicator in their respective states and to determine the feasibility of collecting information about each indicator.

Phase 3 (2002 and beyond): The list of indicators will be revised based on the reports from Alabama and South Carolina and current evidence (e.g., Guide for Community Preventive Services, Physical Activity Chapter). Indicators needing further validation will be identified and projects to help finalize the list will be pursued. The list is expected to be finalized by December 2005.

The 31 indicators currently under evaluation are listed in Appendix E.

II. Programmatic needs for surveillance data (Moderator: Youjie Huang)

In this session, the cardiovascular health (CVH) program coordinators from North Carolina, South Carolina, and Georgia explained the objectives, activities, and data needs of their CVH programs.

The North Carolina Cardiovascular Health (NC CVH) Program

Sara Hawkes, NC, presenter

The North Carolina Cardiovascular Health Program funds eight local health departments and primarily focuses on increasing opportunities for healthy eating and physical activity through implementing policy and environmental change strategies. The three primary objectives of the program are to: 1) increase yearly the number of facilities or environments to promote healthy eating/physical activity (e.g. build sidewalks and bike lanes, provide salad bars in schools); 2) increase yearly the number of cues to action promoting healthy eating/physical activity, (e.g. restaurant labeling of healthy items, labeling of healthy foods in schools); and 3) increase yearly the number of policies, practices, and incentives to promote healthy eating/physical activity (e.g. increase funding for bicyclist and pedestrian safety, adoption of nutrition guidelines by after-school programs). Other cardiovascular risk factors are addressed in NC's Plan to Prevent Heart Disease and Stroke.

Georgia's Cardiovascular Disease Prevention Initiative

Pam Wilson, GA, presenter

Georgia's Cardiovascular Disease Prevention Initiative focuses on increasing physical activity and improving nutritional choices by changing policy and the environment. The program works to influence policy and environment in four settings: schools, worksites, communities, and health care institutions. Examples of projects include establishing school health advisory committees, promoting 10,000 steps per day, and funding park improvements/enhancements in priority population neighborhoods.

South Carolina's Cardiovascular Health Program

Meg Jordan Ellis, SC, presenter

The mission of South Carolina's Cardiovascular Health Program is to promote policy and environmental changes in the areas of physical inactivity, poor nutrition, tobacco use, hypertension, and high cholesterol. The program focuses on use of local level data to monitor changes. The state program provides local health districts with training on uses of data, annual county mortality and morbidity reports, customized data reports on request, assistance in identifying and targeting priority populations, and evaluation of community-based initiatives.

III. Policy and environmental indicators of cardiovascular health (Moderator: Ken Powell)

This session described several ongoing projects designed to identify methods of conducting surveillance on policy and environmental characteristics influencing cardiovascular health. Projects discussed included methods of monitoring spending on sidewalks and bikeways; planning for sidewalks and bikeways; surveys of worksites, restaurants, smoking ordinances, school policies and practices; and environmental supports for physical activity.

Monitoring spending on sidewalks and bikeways

Phil Bors, NC, presenter

A bill passed in North Carolina in 1945 to provide funding for roadway improvement was modified in 1994 to allow municipalities to use the funds to build sidewalks and bikeways as well. Routinely collected information for this source of funding indicates that 30 of 502 municipalities spent 6.2% of the total funds allotted for sidewalks and bikeways. The number of municipalities and percentage of funds used for these purposes can be routinely monitored. Pertains to draft community indicator #1 (see Appendix E).

Survey of municipal planning efforts for bicycles and pedestrians

Phil Bors, NC, presenter

North Carolina has contracted with NC State University Institute for Transportation Research and Education to survey local planners. Focus groups helped develop the survey instrument and a sample of municipal planners is being surveyed. Community indicators pertaining to sidewalks, green space, and possibly others could be monitored through periodic surveys. Pertains to draft community indicators #2, #3, and #4.

Worksite surveys

Phil Bors, NC, and Susan Bricker, GA, presenters

Both North Carolina and Georgia are conducting worksite surveys. The content of the surveys is similar. They differ in terms of origin of sample (NC=Employment Security Commission, GA=Dunn & Bradstreet), worksites included (NC=private and public, GA=private only), and sampling frame (NC=size only, GA=size and industry type). Lessons learned to date include: brief surveys are better, adequate staffing for follow-up is necessary, and the NC Employment Security Commission list of businesses and phone numbers appears to be less current than the list from Dunn & Bradstreet. If successfully completed these surveys can provide information on a number of worksite policy and environmental characteristics presumed to be important to cardiovascular health. Pertains to draft worksite indicators #1, #2, #3, #4, #5, #6, and #8.

Tobacco ordinance survey

Dafna Kanny, GA, presenter

Taking advantage of a recent state law requiring all municipalities of >5,000 people to provide a list of all ordinances to the State of Georgia Law Library, the Georgia Division of Public Health is contracting with the University of Georgia's Carl Vinson Institute of Government to search the lists for ordinances pertaining to tobacco. Topics covered include smoking restrictions in various sites (e.g., restaurants, public buildings), access by minors, taxes, licensure, and advertising. Pertains to draft community indicator #8.

Restaurant survey

Phil Bors, NC, presenter

In NC, restaurant smoking policies and heart healthy menu items are being assessed by 23 local health departments by a variety of health department workers (environmental health staff, health promotion staff) or community volunteers. Preliminary results indicate that of about 1,600 restaurants, 34% provide adequate protection from tobacco smoke (smoke-free or separately ventilated nonsmoking area) and 26% identify heart healthy items on the menu. Pertains to draft community indicator #7.

Surveillance of environmental supports for physical activity

Barbara Ainsworth, SC, presenter

The Center for Prevention Research, University of South Carolina School of Public Health, is conducting a study of environmental supports for physical activity in Sumter County, SC. Environmental supports are mapped using GIS techniques and residents are surveyed about their awareness and use of the supports. The process is slow and labor intensive but appears likely to provide useful surveillance methods for environmental supports for physical activity for the future.

School Health Education Profile

Dafna Kanny, GA, and Phil Bors, NC, presenters

The School Health Education Profile (SHEP) is a survey of school principals and health education teachers from sampled schools. The survey is conducted every other year by the Department of Education (DOE) and concerns policies and practices related to health topics such as tobacco and physical activity. Response rates in Georgia have been inadequate. To improve response, the Division of Public Health is collaborating with the Georgia DOE, providing monetary incentives to respondents, and using district health personnel to encourage participation. Response rates in NC have been satisfactory, and supplementary questions have been added to this year's survey. Pertains to draft school indicators #1, #3, #8, #9, and #10.

School policy survey

Ken Powell, GA, presenter

The Georgia Division of Public Health mailed a survey about physical education programs to every public school in the state in the fall of 2000. The response rate was 30% at 2 months, and 36% at 4 months after a reminder postcard was sent. A second mailing of the survey was done for a sample of non-responders. District chronic disease prevention coordinators were asked to contact schools to encourage survey participation. The total response rate one year after the initial mailing was 51%; seven of 19 public health districts, however, had response rates >60%. A legislative subcommittee to support legislation mandating physical education in schools used results from these seven districts.

IV. Stroke registries as a tool to improve stroke surveillance (Moderator: Kristen Mertz)

This session focused on the new Paul Coverdell National Stroke Registry, which was funded by the U.S. Congress in 2000 to track and improve the delivery of care to patients with acute stroke. CDC manages the Registry.

The Paul Coverdell National Acute Stroke Registry

Wendy Wattigney, CDC, presenter

The goal of the Paul Coverdell National Acute Stroke Registry is to improve rapid diagnosis and treatment of stroke by monitoring medical practice and targeting areas for improvement in medical care. In 2001, CDC awarded one-year grants to four states, each with a different data collection and analysis prototype. Each of the four states will collect information on acute care for stroke patients from a statewide sample of hospitals. Data collected includes information on demographics, symptoms, transport, hospital ER triage, diagnostic tests, evaluation, and management.

The Georgia Stroke Registry

Mike Frankel, GA, presenter

To date, the Georgia Stroke Registry has recruited 46 hospitals throughout the state to submit photocopies of stroke patients' medical records to the Georgia Medical Care Foundation (GMCF), which will abstract the required data elements. The data will be used to generate quality management reports, which will be sent to participating hospitals. These reports will provide the basis for educational interventions to improve quality of care.

V. **Stroke-related data sources and their uses** **(Moderator: Sara Huston)**

This session focused on the potential uses of new data sources, data sources that have not been previously widely used, and new methods of using these data to begin to fill in our gaps in stroke surveillance. The data sources discussed in this session covered primarily clinical data (e.g., clinical risk factors, acute stroke care).

A proposed hypertension registry: from patients to protocols *Karen Sigmon-Smith, NC, presenter*

The Wake Forest University Baptist Medical Center has proposed a pilot project to monitor the burden of high blood pressure through an emergency department-based hypertension registry. Preliminary data show that 51% of adult ED patients have blood pressures at Stage 1 hypertension or above and many of those cases are not fully addressed if unrelated to the chief complaint. The objectives of the proposed registry are to 1) survey the current status of delay in seeking treatment for high blood pressure, 2) survey the current status of diagnosis and treatment of hypertension in EDs, 3) provide background data for evaluations of intervention projects, 4) facilitate the comparison of hypertension, its diagnosis and control, between North Carolina and other states, and 5) facilitate the examination of race, age, and geographic differences in hypertension treatment.

South Carolina EMS data *Yujie Huang, SC, and Andrea Washington, CDC, presenters*

In South Carolina, ambulance services are required to complete a standard form (SC-DHEC form 1050) for all ambulance calls, and to send a copy to the EMS office within the SC Department of Health and Environmental Control (SC-DHEC) on a monthly basis. These calls can be linked with hospital data. To examine EMS-related factors among stroke patients, a sample (16%) of all emergent calls and medical inter-hospital transfers relating to stroke during 2000 was drawn. For 91.4% of these calls, the time from when the call was received to when EMS arrived on the scene was less than 30 minutes; for 8.6% of calls the time was 30 minutes or more, including 3.7% for which the time was 120 minutes or more. This is just one example of how these data can be used to examine EMS-related factors among stroke patients.

Introducing the North Carolina Rapid Response to Stroke Project *Kelly Evenson, NC, presenter*

North Carolina Rapid Response to Stroke is designed to improve out-of-hospital services for acute stroke in North Carolina. The project is organized into three phases. Phase I includes an assessment of policies, procedures, and training within EMS systems and dispatch centers in NC. Phase II includes the creation of computer-based stroke identification and training programs for EMS and dispatch personnel to improve identification and response to stroke, and the implementation and evaluation of this intervention in up to 10 counties in the state. Phase III includes further refinement of the training modules and statewide dissemination. The project is currently in Phase I. The website for more information is <http://www.ncrapidresponse.com>.

Uses of Quality Improvement Organization data for stroke surveillance *Louise Henderson, NC, presenter*

The Center for Medicare and Medicaid Services (CMS) contracts with Quality Improvement Organizations (QIO) to assure the quality of Medicare services. QIO Medicare data sources include beneficiary/enrollment data (dynamic database that follows a beneficiary over time), hospitalization data (almost "real-time" with a three-month lag), outpatient services data (available by special request to CMS), and health care quality improvement project data (collected by

medical record abstraction). QIO data can be used to monitor patterns of hospitalizations (visit <http://www.mrnc.org/surveillance>), measure quality of care, and conduct other analyses. Medicare data are available and comparable across states, and provide the ability to follow beneficiaries over time to examine trends in readmission and case fatality rates. Since the burden of stroke is high among the Medicare population, these data sources can be very useful for the surveillance of stroke hospitalizations.

Sources and uses of data in managed care

Dennis Tolsma, GA, presenter

While the words “surveillance” and “epidemiology” may not be heard much in managed care, managed care organizations do have well-defined denominators, they track rates and trends in many areas, and they conduct quality improvement studies, which are really applied epidemiology. Quality is the driver for these efforts in managed care. Sources of clinical information in managed care settings include automated data (e.g., “encounter”, pharmacy scripts, referrals), quasi-automated data (e.g., laboratory results, tracking systems such as those for mammography), and other sources (e.g., chart reviews, member surveys). These are all linkable by a unique member number. Organizations and researchers wishing to work with managed care organizations need to realize that it may not be simple for these organizations to provide datasets to outside organizations, managed care organizations may sometimes be unable to provide datasets or analyses free of charge, research priorities may be driven by the potential for quality improvement, and there are some limitations to managed care data, such as a lack of information on race and socioeconomic status. This should not deter efforts to explore collaboration around surveillance goals, as a number of examples exist showing that fruitful collaboration around surveillance is possible.

Data linkage

Youjie Huang, SC, presenter

Three types of data linkage activities were discussed: linking data on an individual basis, linking data on a population basis, and linking medical data and non-medical data. A SC examination of multiple hospitalizations for diabetes by the same individual (multiple hospital records for the same individual were linked using a patient ID) was used to illustrate linking data on an individual basis. Linking data on a population basis was illustrated through an analysis using numerator data from SC hospital discharge data on the number of individuals age 65+ hospitalized for diabetes and denominator data from Medicare on the number of individuals age 65+ who have diabetes, to estimate the rate of hospitalizations for diabetes among Medicare beneficiaries age 65+ who have diabetes. An examination of the geographic distribution of multiple diabetes hospitalizations and county-level racial distributions in SC was used as an example of linking medical data and non-medical data (e.g., environmental data, census data). These kinds of data linkage activities are applicable to stroke-related data and may help us make the most of the data we have available.

VI. Review of stroke-related surveillance list

Participants were asked for final comments and suggestions for the logic model and the list of stroke surveillance data sources. There was some discussion about whether we had spent the day talking just about numerators or about numerators and denominators. Everybody agreed that the latter is what matters. Participants were also asked to list their top five priorities for stroke surveillance; very few such lists were submitted. Two sample priority lists are attached (Appendix F). The meeting was adjourned and thanks extended to all participants and speakers.

APPENDIX A
Meeting Agenda

- 8:30 Breakfast
- 9:00 Welcome and introductions (Jim Brannon, Ken Powell)**
- 9:15 Overview of stroke-related surveillance (Moderator: Ken Powell)**
- Potential policy and environmental indicators of cardiovascular health: Dyann Matson Koffman (CDC)
- 10:00 Programmatic needs for surveillance data (Moderator: Youjie Huang)**
- The North Carolina Cardiovascular Health Program: Sara Hawkes (NC)
 - Georgia's Cardiovascular Disease Prevention Initiative: Pam Wilson (GA)
 - South Carolina's Cardiovascular Health Program: Meg Jordan Ellis (SC)
- 10:30 Break
- 10:45 Policy and environmental indicators of cardiovascular health (Moderator: Ken Powell)**
- Monitoring spending on sidewalks and bikeways: Phil Bors (NC)
 - Survey of municipal planning efforts for bicycles and pedestrians: Phil Bors (NC)
 - Worksite surveys: Susan Bricker (GA), Phil Bors (NC)
 - Tobacco ordinance survey: Dafna Kanny (GA)
 - Restaurant survey: Phil Bors (NC)
 - Surveillance of environmental supports for physical activity: Barbara Ainsworth (SC)
 - School Health Education Profile: Dafna Kanny (GA), Phil Bors (NC)
 - School policy survey: Ken Powell (GA)
- 12:15 Lunch (provided)
- 1:30 Stroke registries as a tool to improve stroke surveillance (Moderator: Kristen Mertz)**
- The Paul Coverdell National Acute Stroke Registry: Wendy Wattigney (CDC)
 - The Georgia Stroke Registry: Michael Frankel (GA)
- 2:00 Stroke-related data sources and their uses (Moderator: Sara Huston)**
- A proposed hypertension registry: from patients to protocols: Karen Sigmon Smith (NC)
 - South Carolina EMS data: Youjie Huang (SC), Andrea Washington (SC)
 - Introducing the NC Rapid Response to Stroke Project: Kelly Evenson (NC)
- 3:00 Break
- 3:15 Stroke-related data sources and their uses (continued)**
- Uses of Quality Improvement Organization data for stroke surveillance: Louise Henderson (NC)
 - Sources and uses of data in managed care: Dennis Tolsma (GA)
 - Data linkage: Youjie Huang (SC)
- 4:15 Review of stroke-related surveillance list (Moderator: Ken Powell)**
- Reassess data needs, discuss collaboration and follow-up
- 4:45 Adjourn

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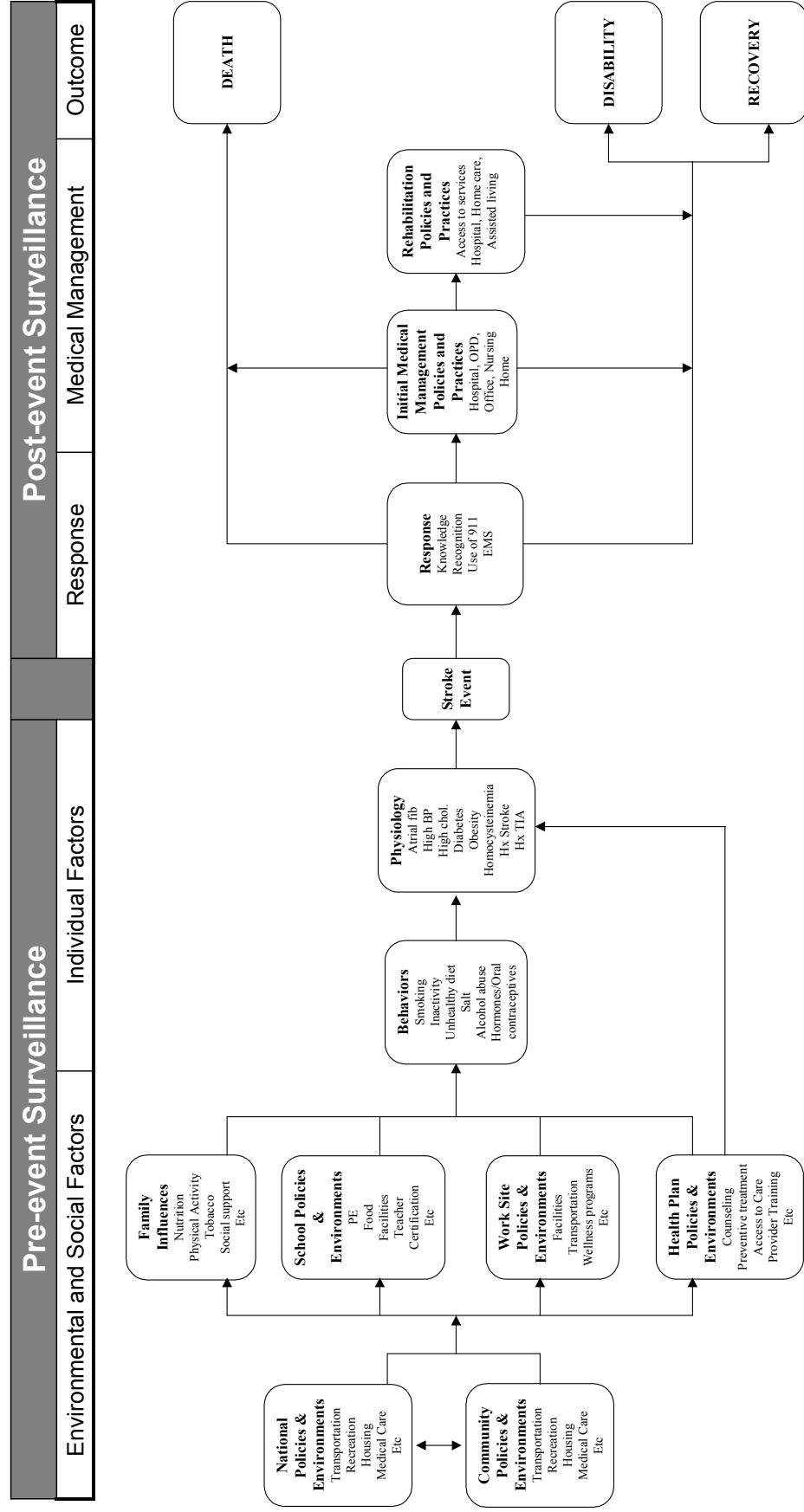
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APPENDIX C

Logic Model: Stroke-Related Surveillance



APPENDIX D
Stroke-Related Surveillance
Events, Risk Factors, Policies, and Environmental Conditions

TOPIC	POSSIBLE DATA SOURCES	AVAILABILITY: SC	AVAILABILITY: GA	AVAILABILITY: NC	ISSUES
Mortality					
Stroke deaths	Vital statistics	Y	Y	Y	TIA as cause of death Ischemic versus hemorrhagic
Morbidity					
Stroke events	Stroke registry	N	In progress	In progress	Topics?
	Hospital discharge data	Y	Y	Y	Unique ID's (deduplication), access to data
	Emergency department data	Y	N	Piloting	Do ED data measure events?
	Office visit surveys	N	N	N	Do office data measure events?
	EMS records	Y	Partially	N	Data quality, population based?
	Medicare	Y	Y	Y	Access to data, cost of data
	Medicaid	Y	Y	Y	Access to data, population based?
Stroke burden					
Direct med costs	Hospital discharge data, charges	Y	Y	Y	Charges versus costs
	Medicare	Y	Y	Y	Access to data, cost of data
	?	N	N	N	What to include?
Time to treatment					
Awareness of symptoms	BRFSS style surveys	N	Y	Y	
Transport	EMS records	Y	Partially	N	Data quality, population based?
Hospital readiness	Registry	In progress: Operation Stroke	N	? 1998 survey of hospital stroke facilities	How is this measured? What does it include?
Appropriate Rx received	Registry	N	In progress	In progress	

TOPIC	POSSIBLE DATA SOURCES	AVAILABILITY: SC	AVAILABILITY: GA	AVAILABILITY: NC	ISSUES
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Risk Factors

A. Pathophysiologic

Atrial fib ~2-10*	Medicare	Y	Y	Y	Accuracy, importance: high risk-low PAR
Hypertension ~20-40*	? Pharmacy, BRFSS	Self report	Self report	Self report	Self report inadequate, need info on control
Hyperchol ~25*	? Pharmacy, BRFSS	Self report	Self report	Self report	Self report inadequate, need info on control
Diabetes ~20*	? Pharmacy, BRFSS	Self report	Self report	Self report	Need info on control
Obesity ~12-20*	BRFSS, YRBS	Y	Y (YRBS not yet available)	Y, + NC-NPASS (physical measures)	Accuracy of self-reported heights and weights among kids
Hx of Stroke	? Registry, BRFSS	Y (BRFSS)	Y (BRFSS)	Y (BRFSS)	
Hyperhomocysteinemia ~25-35*	? BRFSS	N	N	N	Is it for real?

B. Behavioral

Smoking ~24*	BRFSS, YTS, YRBS	Y	Y (YRBS not yet available)	Y	
Inactivity ~30*	BRFSS, YRBS	Y	Y (YRBS not yet available)	Y	
Alcohol abuse ~2-30*	BRFSS??, YRBS	Y	Y	Y	Probably low PAR
Drug abuse ~?	BRFSS??, YRBS	Y (YRBS)	N (YRBS not yet available)	Y (YRBS)	
Hormone replacement Rx ~?*	BRFSS	Y	Y	Y	Unknown risk
Oral contraceptives ~<0.1*	BRFSS	Y	Y	Y	Low PAR

Social/environmental

A. Community

X	Percent of highway funds for transportation alternatives	National Transportation Enhancement Clearinghouse	Web	Web	Powell Bill
X	Percent of counties/municipalities with policies requiring sidewalks in new or redeveloped communities	Survey county policies	Planned	Planned	Planner's survey (In progress)
X	Percent of counties/municipalities with	Survey county policies	Planned	Planned	Planner's survey

TOPIC POSSIBLE DATA SOURCES AVAILABILITY: SC AVAILABILITY: GA AVAILABILITY: NC ISSUES

	policies promoting recreational facilities					
X	State policies promoting bicycle transportation	Review state policies	None	State codes on web	?	
X	Percent of county/municipalities with policies promoting bicycle transportation	Survey county policies	Planned	Planned	Planner's survey	
X	Percent of milk sales in state that are <1% fat	Survey of stores	N	Not routine	N	
X	Per capita farmers' markets in state	USDA directory	Web	Web	Web	
X	State clean indoor air laws for restaurants, day care centers, and other public places	Review state policies	Planned	State codes on web	Y	
X	Proportion of smokers with smoking not allowed inside their home	BRFSS, YTS	Y	Y	Y	

B. School policies & features

X	State policy requiring daily PE for K-12	SHPPS, Code of Law, Code of Regulation, DOE standards	Y			
X	State policies that require schools to assess students per PE standards	"	No policy in place			
X	State policies requiring foods and beverages outside of school meal to be healthy	"	N			
X	State policies requiring newly hired school food service managers to be certified in food service	"	No policy in place			
X	State policies requiring newly hired PE staff to be certified in PE	"	No policy			
X	State policies requiring newly hired HE teachers to be certified in HE	"	No policy			
X	State policies that require schools to assess students per HE standards	"	N			
X	Percent of schools that provide HE instruction that includes physical activity, nutrition, and tobacco use prevention topics from CDC School Health Index	SHEP	SHEP in progress	Will be available	SHEP in progress	
X	Percent of schools with School Health	SHEP	Will be available	Will be available	SHEP in progress	

TOPIC	POSSIBLE DATA SOURCES	AVAILABILITY: SC	AVAILABILITY: GA	AVAILABILITY: NC	ISSUES
		2002-03			
X	Percent of schools with tobacco-free school policies	SHEP	Will be available	Will be available	SHEP in progress
		2002-03			
C. Worksite policies & features					
X	Percent supporting physical activity during work time	Worksite survey	Planned 2003	Will be available	In progress
X	Percent providing showers and changing facilities	Worksite survey	Planned 2003	Will be available	In progress
X	Percent providing and promoting on-going on-site physical activity programs	Worksite survey	Planned 2003	Will be available	In progress
X	Percent with vending machines and/or snack bar with heart-healthy food and beverage	Worksite survey	Planned 2003	Will be available	In progress
X	Percent with cafeteria offering heart-healthy food and beverages	Worksite survey	Planned 2003	Will be available	In progress
X	Percent offering nutrition or weight management classes/counseling	Worksite survey	Planned 2003	Will be available	In progress
X	State has clean indoor laws for government and private worksites	Code of Law, Code of Regulation	Web	Web	Y
X	Percent where employee health insurance covers smoking cessation programs	Worksite survey	Planned 2003	Will be available	In progress
D. Health Care Plans					
X	Percent of plans that adopt CVD primary prevention guidelines	Survey of health insurance companies	Planned 2002-03	Not routine	N
X	Percent of plans that adopt CVD treatment guidelines	Survey of health insurance companies	Planned 2002-03	Not routine	N
X	Percent of plans that provide/reimburse for assessment/counseling for physical activity, diet, tobacco	Survey of health insurance companies	Planned 2002-03	Not routine	Y
X	Percent of current and recent smokers who received advice to quit smoking by a health professional	BRFSS	Y	Y	Y

APPENDIX E

Pilot Indicators for CVH State Surveillance: Community

1. Percent of highway funds devoted to transportation alternatives (e.g., bicycle lanes linked to public transportation, mass transit systems, facilities and roadway changes, supports such as parking hubs and bicycle racks). [HP 2010 22-2, 22-6, 22-14, and 22-15]
2. Percent of counties or municipalities with policies requiring sidewalks in all new and redeveloped residential and mixed-use communities. [HP 2010 22-2, 22-6, 22-14]
3. Percent of counties or municipalities with policies that promote recreation facilities (e.g., bikeways, parks, fields, gyms, pools, tennis courts, and playgrounds) in new and redeveloped residential and mixed-used communities. [HP 2010 22-2, 22-6, 22-14, 22-15]
4. States policies and percent of counties or municipalities with policies and strategic plans to promote bicycle use for transportation purposes. [HP 2010 22-2, 22-6, 22-14] (no data source, per DNPA)
5. Percent of milk sales in the state that are low-fat (1% or less). [HP 2010 19-8, 19-9]
6. Number of farmers' markets per capita in the state. [HP 2010 19-5, 19-6, 19-7, 19-8, 19-9]
7. State with laws on smoke-free indoor air that prohibit smoking or limit it to separately ventilated areas in restaurants, day care centers, and other public places.
[HP 2010 27-1, 27-2, 27-3, 27-10, 27-13; Data Source: STATE System]
8. Proportion of smokers who report that smoking is not allowed anywhere inside their home.
[HP 2010 27-1, 27-2, 27-3, 27-10; Data Source: BRFSS Optional Module]

Pilot Indicators for CVH State Surveillance: Schools

1. State policies that require daily physical education, or its equivalent in minutes per week, for all students in K-12, with no substitution of other courses or activities for physical education. [HP 2010 22-6, 22-8, 22-9]
2. State policies that require schools to assess students on the knowledge and skills specified by the state's physical education standards, frameworks, or guidelines. [HP 2010 22-6, 22-9]
3. States policies requiring that the foods and beverages available at schools outside of the school meal programs reinforce the principles of the *Dietary Guidelines for Americans*. [HP 2010 19-5, 19-6, 19-7, 19-8, 19-9, 19-10]
Note: This would be operationalized in an instrument that would assess whether schools have in place one or more of the following:
 - a. State policies that require a substantial proportion of the foods and beverages offered for sale outside of the school meal program meet specified nutrition standards.
 - b. State policies that prohibit the sale of low-nutritive snack choices (such as soda, fried chips, and candy) on school campuses.
 - c. State policies that prohibit the sale and distribution of foods and beverages of low nutritional value in elementary schools; and state policies that restrict foods and beverages of low nutritional value for sale and distribution in secondary schools until the end of the school day or after the end of the last lunch period.

4. State policies that require newly hired school food service managers to have a nutrition-related baccalaureate or graduate degree and certification/credentialing in food service from either the state or the American School Food Service Association. [HP 2010 19-5, 19-6, 19-7, 19-8, 19-9, 19-10]
5. State policies that require all newly hired staff who teach physical education to be certified, licensed, or endorsed by the state to teach physical education. [HP 2010 22-6, 22-9, 22-14, 22-15]
6. State policies that require all newly hired staff who teach health education to be certified, licensed, or endorsed by the state to teach health education. [HP 2010 7-2]
7. States policies that require schools to assess students on the knowledge and skills specified by the state's health education standards, frameworks, or guidelines. [HP 2010 7-2, 19-5, 19-6, 19-7, 19-8, 19-9, 19-10, 22-6, 22-9, 22-14, 22-15, 27-2, 27-3]
8. Percent of schools that provide health education instruction that includes the physical education, nutrition, and tobacco use prevention topics, listed in CDC's School Health Index. [HP 2010 7-2, 19-5, 19-6, 19-7, 19-8, 19-9, 19-10, 22-6, 22-9, 22-14, 22-15, 27-2, 27-3]
9. Proportion of schools with School Health Councils. [Data Source: School Health Education Profiles]
10. Proportion of schools that have adopted tobacco-free school policies that meet CDC recommendations.

Pilot Indicators for CVH State Surveillance: Worksite

Note: Indicators for physical activity and nutrition are contained in the HeartCheck instrument.

1. Percent of worksites that have policies supporting the engagement of all employees in physical activity during work time (e.g., flexible scheduling, relaxed dress codes). [HP 2010 22-2]
2. Percent of worksites that provide showers and changing facilities to support physically active employees. [HP 2010 22-2]
3. Percent of worksites that provide and promote on-going on-site employee physical activity programs (e.g., walking, stretching, aerobics) during the previous 24 months. [HP 2010 22-2, 22-13]
4. Percent of worksites with vending machines and/or snack bars that offer the heart-healthy* food and beverage choices, including water or flavored water, 1% fat or less milk products, 100% juice products, fruits, vegetables, and products labeled low or reduced calorie, low or reduced sodium, and those labeled three grams or less of fat per serving. [HP 2010 19-5, 19-6, 19-7, 19-8, 19-9, 19-10]
Note: This item is not easy to collect but is doable with training; having a checklist of foods and beverages makes it easier. A substitute: Percent of worksites that provide labels to identify heart-healthy foods* in the vending machines.
5. Percent of worksites with cafeterias that offer heart-healthy* food and beverage choices including water or flavored water, 1% fat or less milk products, 100% juice products, fruits, vegetables, and products labeled low or reduced calorie, low or reduced sodium, and those labeled three grams or less of fat per serving. [HP 2010 19-5, 19-6, 19-7, 19-8, 19-9, 19-10]
Note: This item is not easy to collect but is doable with training; having a checklist of foods and beverages makes it easier. A substitute: Percent of worksites that provide labels to identify heart-healthy foods* in the vending machines.
6. Percent of worksites that offer nutrition or weight management classes or counseling. [HP 2010 19-5, 19-6, 19-7, 19-8, 19-9, 19-10, 19-16]

7. States with laws on smoke-free indoor air that prohibit smoking or limit it to separately ventilated areas in government and private worksites. [HP 2010 27-1, 27-10, 27-12, 27-13; Data Source: STATE System; some states have local policy tracking systems; Survey data (e.g., BRFSS and ATS) measures public awareness of laws.]
8. Proportion of worksites (segmented by number of employees) that cover smoking cessation programs. [HP 2010 01-03, 27-1, 27-5, 27-10; Data Source: HeartCheck]

Pilot Indicators for CVH State Surveillance: Healthcare

1. **Percent of managed care organizations that adopt a policy to incorporate nationally accredited guidelines (e.g., the AHA *Guide to Primary Prevention of Cardiovascular Disease*) as part of their standard care package. [HP 2010 01-03, 12-1, 12-6, 12-7, 12-9, 12-10, 12-11, 12-12, 12-13, 12-14, 12-15, 12-16, 19-1, 19-2, 19-3, 19-5, 19-6, 19-7, 19-8, 19-8, 19-9, 19-10, 19-17, 22-2, 22-6]
2. **Percent of managed care organizations that adopt a policy to incorporate nationally accredited guidelines (e.g., the AHA *Guide to Comprehensive Risk Reduction for Patients with Coronary and other Vascular Disease*) as part of their standard care package. [HP 2010 01-03, 12-1, 12-6, 12-7, 12-9, 12-10, 12-11, 12-12, 12-13, 12-14, 12-15, 12-16, 19-1, 19-2, 19-3, 19-5, 19-6, 19-7, 19-8, 19-8, 19-9, 19-10, 19-17, 22-2, 22-6]
3. Percent of managed care organizations (e.g., health maintenance organizations, independent provider organizations, and preferred provider organizations) that have policies or guidelines to routinely provide or reimburse for assessments and counseling for physical activity, medical nutrition therapy, and tobacco cessation to plan members as part of their standard care package, according to the *Guide to Clinical Preventive Services*. [HP 2010 01-03, 12-1, 12-2, 12-6, 12-7, 12-8, 12-9, 12-10, 12-11, 12-12, 12-13, 12-14, 12-15, 12-16, 19-5, 19-6, 19-7, 19-8, 19-9, 19-10, 19-17, 22-2, 22-6, 27-1, 27-2, 27-3, 27-5, 27-7]
4. Percent of health insurance plans that have policies or guidelines to routinely provide or reimburse for assessments and counseling for physical activity, medical nutrition therapy, and tobacco cessation to plan members as a covered benefit, according to the *Guide to Clinical Preventive Services*. [HP 2010 01-03, 12-1, 12-2, 12-6, 12-7, 12-8, 12-9, 12-10, 12-11, 12-12, 12-13, 12-14, 12-15, 12-16, 19-5, 19-6, 19-7, 19-8, 19-9, 19-10, 19-17, 22-2, 22-6, 27-1, 27-2, 27-3, 27-5, 27-7]
5. Proportion of current and recent smokers who received advice to quit smoking from a health professional. [HP 2010 01-03, 12-1, 12-6, 12-7, 27-1, 27-2, 27-3, 27-5, 27-7, 27-8; Data Source: BRFSS Optional Module, ATS]

* The American Heart Association has sponsored a program since 1995 to help consumers identify heart-healthy foods. The Food Certification Program was implemented in partnership with the Food and Drug Administration to help consumers make food selections. The following program guidelines are based on a single serving of the food product and follow FDA guidelines:

- Low fat: less than or equal to 3 grams/reference amount
 - Low saturated fat: less than or equal to 1 gram/reference amount
 - Low cholesterol: less than or equal to 20 milligrams/reference amount
 - Have sodium value of less than or equal to 360 milligram/reference amount for individual foods
 - Must contain at least 10 per cent of the Daily Value of one or more of these nutrients: protein, vitamin A, vitamin C, calcium, iron or dietary fiber
- Special levels for the above criteria are also in place for main dishes and meals.

** AHA guidelines address management of cholesterol and hypertension treatment and management.

APPENDIX F
Priorities for stroke surveillance

List #1

1. Mortality (death certificate data)
2. Incidence (hospital discharge data)
3. Prevalence of uncontrolled hypertension (not currently available)
4. Prevalence of smoking (BRFSS, YTS)
5. Mortality/incidence by stroke type (good data not currently available)
6. Regular physical activity (BRFSS, YRBS)

List #2

1. Mortality
2. Prevalence of hypertension (controlled and uncontrolled)
3. Health system preparedness for acute stroke treatment
4. Acute stroke treatment (percent of patients receiving appropriate, timely treatment)
5. Incidence

