

**NCALHD ATTENDANCE ROSTER
MARCH 17, 2000**

Initial County/Health Director

JTG Alamance/Tim Green
 Alexander/Shelley Carraway
 Anson/James Roosen
NZ Appalachian Dist/Danny Staley
 Beaufort/Pamara Hower Williams *Griff*
 Bertie/John Shaw *ASB*
MW Bladen/Myra Johnson
DP Brunswick/Don Yousey
GR Buncombe/George Bond
 Burke/David L. Rust
 Cabarrus/Dr. William Pilkington
 Caldwell/Douglas W. Urland
 Carteret/Dr. J.T. Garrett
 Caswell/Vacant
WV Catawba/Barry Blick
GR Chatham/Wayne Sherman
 Cherokee/Elaine Russell
 Clay/Janice Patterson
 Cleveland/Denese Stallings
 Columbus/Marian Duncan
MS Craven/Wanda Sandele
 Cumberland/Jesse Williams *Phyllis*
 Currituck/John B. Sledge *Walters*
 Dare/Anne B. Thomas
DC Davidson/Diane Crouse
YB Davie/Barry Bass
 Duplin/Dr. Harriette Duncan
 Durham/Brian Letourneau
OB Edgecombe/James Baluss
SB Forsyth/Sherman Kahn, MD
 Franklin/Keith Patton
 Gaston/Bruce Parsons
 Graham/Marlene Orr
 Granville-Vance Dist/Rodwell Drake, MD
 Greene/Douglas Harr, PhD
GV Guilford/Harold Gabel, MD
 Halifax/Chris Szwagiel, PhD
AW Harnett/Wayne Raynor
 Haywood/Robert Wood
 Henderson/Tom Bridges
 Herford-Gates Dist/Curtis Dickson
 Hoke/Donald Womble
 Hyde/Linda Mayo
ML Iredell/Raymond Rabe
 Jackson/Randall Turpin
 Johnston/L.S. Woodall, MD
 Jones/Ruth Little
 Lee/Mike Hanes

Initial County/Health Director

Lenoir/Joel Huff
MD Lincoln/Margaret Dollar
 Macon/Ann Hyder
 Madison/Ken Ring
 Martin-Tyrrell-Wash Dist/Russ Childers
KS Mecklenburg/Peter Safir
 Montgomery/Vacant
 Moore/Robert Wittman
MC Nash/William Hill, Jr.
 New Hanover/David Rice
 Northhampton/Sue Gay, Acting
JSD Onslow/George O. Daniel
AW Orange/Dr. Rosemary Summers
JP Pamlico/Jenny Lassiter
 PCC Dist/Howard Campbell
 Pender/Jack Griffin, PhD
ZAK Person/Marc Kolman
 Pitt/John Morrow, MD
MLK Randolph/Mimi Cooper
TV Richmond/Tommy Jarrell
YS Robeson/Bill Smith
 Rockingham/Glenn Martin
 Rowan/Leonard Wood
 Rutherford-Polk-McDowell Dist/Joyce Sluder
W Sampson/John Rouse
 Scotland/Curtis Holloman
W Stanly/Jim Jones
 Stokes/Colleen Bridger
 Surry/Walter Linz, MD
 Swain/Emma Waldroup
 Toe River Dist/Tommy Singleton, Acting
 Transylvania/Terry P...
 Union/Lorey White, Jr.
 Wake/Lou Brewer
 Wayne/Kevin Watkins, MD
 Warren/Vacant
 Wilkes/Beth Lovette
EW Wilson/Dr. Louis Latour
 Yadkin/Gayle Brown
SW Susan Smith-Wharton, NCALHD Exec. Dir.

NCALHD ATTENDANCE ROSTER
MARCH 17, 2000

OTHERS IN ATTENDANCE

Steve Clark, DPH - Epi

RICK MUMFORD, DPH - DENTAL

Dennis Harrington - DPH - Local H.

Guy Reed, DPH, OPH&PA



North Carolina Association of Local Health Directors
Treasurer's Report
March 17, 2000

	Checking	Savings	Money Market	CD
Account Balance Brought Forward	\$ 25,833.02	\$ 33.65	\$ 318.94	\$ 40,000.00
Receipts:				
Interest Payments:				
January 2000 (not available)				
February 2000	\$ 64.77	\$ 0.10	\$ 1.24	\$ 0.00
Federal Back-up Withholding:				
January 2000 n/a				
February 2000	\$ (18.29)	\$ (0.03)	\$ 0.00	\$ 0.00
Maintenance/Service Fee:				
January 2000 n/a				
February 2000	\$ (1.00)	\$ 0.00	\$ 0.00	\$ 0.00
Deposits:				
Transfer from Checking	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Transfer from Money Market	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Transfer to Checking (interest From Certificate) Jan. 2000 n/a February 2000	\$ 178.36	\$ 0.00	\$ 0.00	\$ 0.00
Dues	\$ 14,728.26	\$ 0.00	\$ 0.00	\$ 0.00
Total	\$ 40,785.12	\$ 33.72	\$ 320.18	\$ 40,000.00
Expenses:				
#0813 Susan S. Wharton	\$ 3,178.94			
#0814 Susan S. Wharton	\$ 31.42			
#0815 4 Season Trophy	\$ 53.14			
Total Expenses	\$ 3,263.50			
Account Balance as of 02/17/00	\$ 37,521.62	\$ 33.72	\$ 320.18	\$ 40,000.00

May

(Per Jay Read
NCA LTD Mar 17 2000, 2000)

2000

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2 EDS Dental Training for all providers - Wilmington	3	4	5	6
7	8 EDS Training - Flat Rock	9 EDS Training - Hickory	10	11	12	13
14	15 EDS Training - Greenville EDS Dental Training for all providers - Raleigh	16	17	18 EDS Dental Training for all providers - Salisbury	19	20
21	22 EDS Training - Raleigh	23 EDS Training - Wilmington	24 EDS Training - Raleigh	25	26	27
28	29	30	31 HSIS Training - Jackson County Community College EDS Dental Training for all providers - Hickory			

June

2000

2000

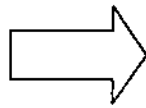
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				EDS Training - Winston Salem 1		2
				HSIS Training (continued) - Jackson 1		3
4	EDS Training - Raleigh 5	EDS Training - Burlington 6 HSIS Training - Raleigh	HSIS Training continued - Raleigh 7	EDS Training - Williamston 8 HSIS Training continued - Raleigh		9
11	EDS Training - Raleigh 12	HSIS Training - Raleigh 13	EDS Training - New Bern 14 HSIS Training continued - Raleigh	HSIS Training continued - Raleigh 15		16
18		HSIS Training - Raleigh 20	EDS Training - Salisbury 21 HSIS Training continued - Raleigh	HSIS Training continued - Raleigh 22		23
25	EDS Training - Fayetteville 26	HSIS Training - Raleigh 27	EDS Training - Goldsboro 28 HSIS Training continued - Raleigh	HSIS Training continued - Raleigh 29		30

HEALTH TRUST

- 25% OF PHASE I TOBACCO SETTLEMENT MUST GO TO HEALTH
- TRUST TO BE ADMINISTERED BY AN INDEPENDENT FOUNDATION
- TRUST TO FUND PREVENTION, EDUCATION AND TREATMENT OF DISEASE
- PRIORITY TO BE PLACED ON PREVENTING, REDUCING, AND REMEDYING THE NEGATIVE EFFECTS OF TOBACCO USE WITH AN EMPHASIS ON REDUCING YOUTH TOBACCO USE.
- PRIORITY ON ADDRESSING HEALTH NEEDS OF VULNERABLE AND UNDERSERVED POPULATIONS
- TRUST FUNDS ARE NOT TO BE USED TO SURPLANT PRESENT PUBLIC HEALTH FUNDING

PHASE I FUNDS

(as proposed by House PCS for SB 6)

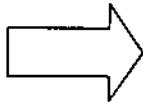


50%

Nonprofit Corporation

Fifty percent of the Phase I funds go to the nonprofit corporation created in the Consent Decree to provide economic assistance to tobacco dependent or economically-affected communities.

Total payments estimated at \$2.3 billion over 25 years



25%

Trust Fund

Expresses intent of General Assembly to appropriate 25% of the Phase I funds to trust fund to benefit tobacco growers, allotment holders, and those in tobacco-related employment. Direct financial assistance is authorized to extent allowed by law.

Total payments estimated at \$1.15 billion over 25 years

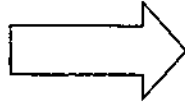


25%

Trust Fund

Expresses intent of General Assembly to appropriate 25% of the Phase I funds to a trust fund to benefit health.

Total payments estimated at \$1.15 billion over 25 years



100%

PHASE II FUNDS

Payments made directly to growers and allotment holders from a National Trust Fund.

Total Payments estimated at \$1.9 billion over 12 years.

(7)

Youth Tobacco Survey: Providing State and National Data

- The North Carolina Youth Tobacco Survey (NCYTS) was conducted in the fall of 1999 by the NC Department of Health and Human Services and the Department of Public Instruction in collaboration with the Centers for Disease Control and Prevention.
 - More than 12,000 middle and high school students completed a 72-item self-administrated questionnaire that included questions about tobacco use, knowledge and attitudes, exposure of environmental tobacco smoke, access to tobacco products, marketing and advertising and school-based prevention.
- The National Youth Tobacco Survey (NYTS) was conducted in 1999 by the American Legacy Foundation in collaboration with the Centers for Disease Control and Prevention to evaluate tobacco use among US high school students and middle school students. The survey provided the first-ever national data on tobacco use among middle schoolers.
- The surveys provide clear evidence that teenage tobacco use continues to be a major public health problem in the United States and especially in North Carolina.
- The NCYTS and the NYTS will provide important baseline data fro developing and evaluating the effectiveness of youth tobacco use prevention programs in North Carolina.
- The surveys provide an excellent tool to compare NC survey results with national data.
- The survey underscores the importance of government and nonprofit tobacco use prevention organizations partnering together to prevent/reduce tobacco use among young people.



Tobacco Use Among Middle and High School Students—North Carolina Youth Tobacco Survey (NCYTS) compared to the National Youth Tobacco Survey (NYTS) Results, 1999

Middle School Students:

- Percentage of middle school students reporting use of some form of tobacco in the past month.

North Carolina	18.4%
National	12.8%

- Percentage of middle school students reporting cigarette smoking in the past month.

North Carolina	15.0 %
National	9.2 %

High School Students:

- Percentage of high school students reporting use of some form of tobacco in the past month.

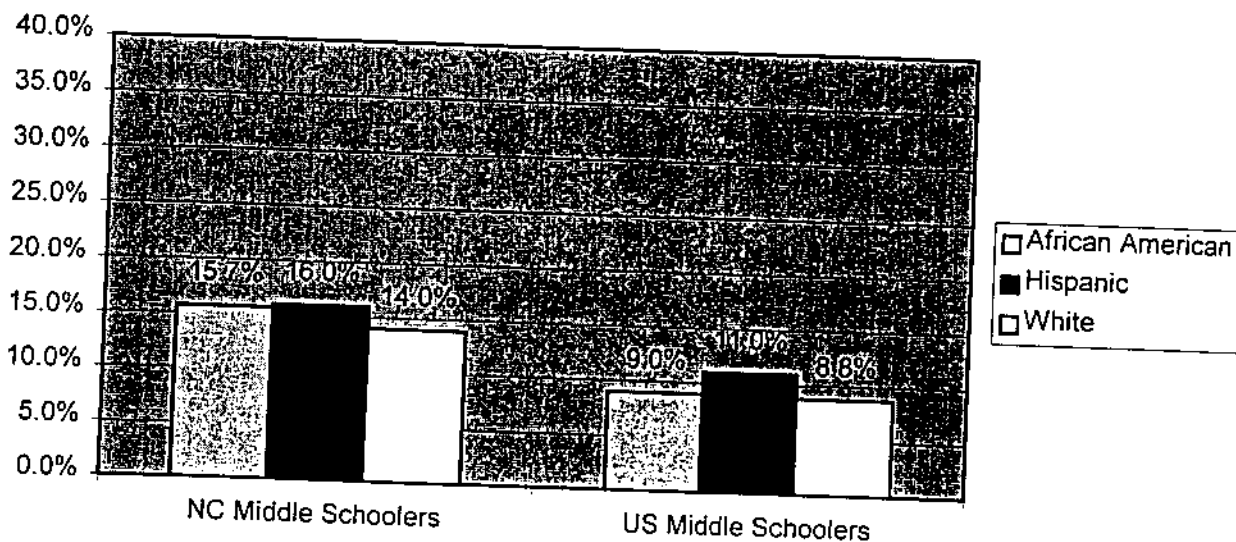
North Carolina	38.3%
National	34.8%

- Percentage of middle school students reporting cigarette smoking in the past month.

North Carolina	31.6 %
National	28.4%

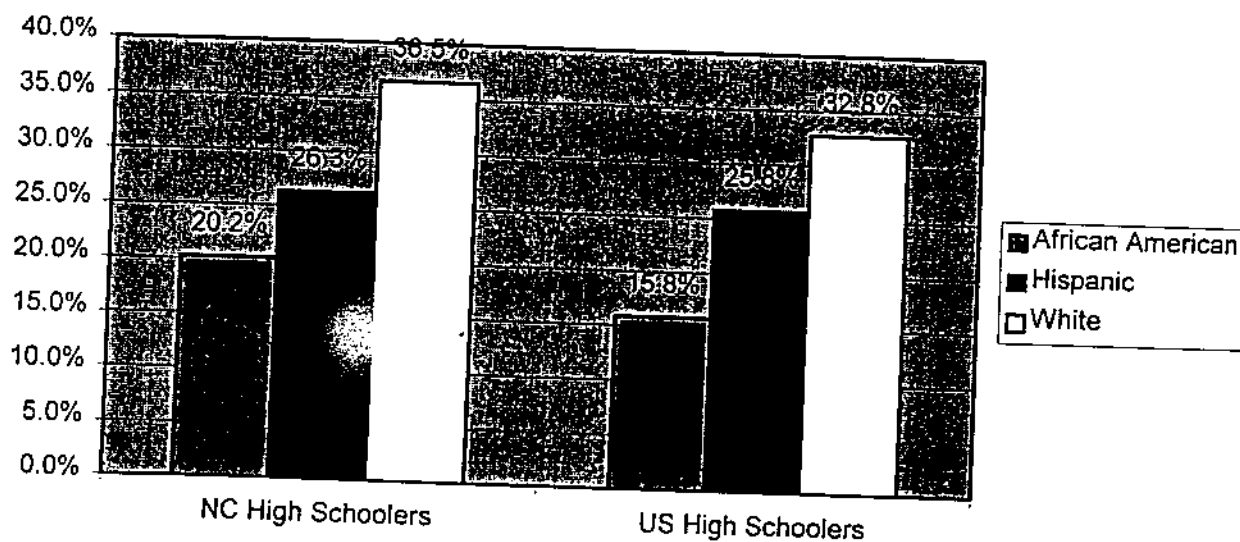
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Current* Cigarette Smoking Among Middle School Students by Race and Ethnicity—North Carolina Youth Tobacco Survey (NCYTS) Compared to the National YTS Data, 1999



*Used cigarettes on 1 or more of the past 30 days preceding the survey.

Current* Cigarette Smoking Among High School Students by Race and Ethnicity—North Carolina Youth Tobacco Survey (NCYTS) Compared to the National YTS Data, 1999



*Used cigarettes on 1 or more of the past 30 days preceding the survey.

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North Carolina Accreditation Project

Since 1997, the North Carolina Public Health system has become interested in developing an accreditation process, including local program standards and outcomes based on national standards, for all Local Public Health Departments. The Division of Public Health, with Dr. Ann Wolfe as Director, was formed in 1998, with Dr. A. Dennis McBride as the State Health Director and Assistant Secretary for Health of the Department of Health and Human Services. The North Carolina Association of Local Health Director's also determined their first priority from their strategic planning process to be that of Accreditation--to assure that quality services are provided in a consistent and standardized way with accountability to the state and locals for use of public funding. Finally, Paul Halverson, DrPH, on January 20, 2000, addressed the Local Health Directors about the national standards for local health departments and their communities based on Core Public Health Functions and Essential PH Services. Strong commitment for accreditation has been given from The State Health Director, The Director of the Division of Public Health and the Local Health Directors.

Opportunities now available for consideration to further this effort include the following:

1. Paul Halverson, DrPH, has indicated there is a strong possibility for North Carolina to participate in the piloting process for the development of National Public Health Performance Standards. This includes the development of a comprehensive performance measurement tool to measure the Local Public Health System, using the ten Essential Public Health Services as a foundation. Ten counties have already volunteered for this assessment as a result of Dr. Halverson's presentation in January.
2. State level -- State staff from all Divisions will be asked to participate in the development of the program standards, as well as, the assessment of the DPH capacity to provide Core Functions at the state level. At this point, there is no funding available to support this effort. Current state resources will need to be redirected to accomplish this effort.
3. Development of local program standards for North Carolina is also an opportunity in the accreditation arena. Michigan has Year 2000 standards already developed for many of the same programs in North Carolina Public Health Departments. Missouri is in the draft process for core functions, staff roles and minimum staffing for local health departments. Kansas has a project with performance standards similar to the Michigan format. Wisconsin has Administrative code statutes directing the Local Health Departments to meet various community assessment requirements. Illinois has implemented the Health Improvement Plan requirement of Local Health Departments.

All of the above must occur for accreditation to become a reality. Resources are very limited at all levels for such expanded activity. However, to insure the integrity of the system and to provide the PH services our citizens need and deserve, accreditation based on program standards and national core PH function standards must move forward.

NCALHD COMMITTEE MINUTES

NCALHD COMMITTEE: Community Health

CHAIR: Elaine Russell

DATE SUBMITTED: March 6, 2000

DATE OF COMMITTEE MEETING: February 17, 2000

COMMITTEE MEMBERS PRESENT: Shelly Carraway, Jenny Lassiter, Bill Smith, Wayne Sherman, Curtis Holliman, Debbie Gumpton, Al Eisele, Rick Mumford, Brenda Motsinger, Leah Devlin, Elaine Russell

GUESTS/OTHERS: See above

I. ACTION ITEMS

None

II. INFORMATION ITEMS

A. Rick Mumford addressed the question of using State Dental Hygienists in the day care setting. Under temporary rules 21 NCAC 16W.0103, this position can be used in a day care setting for educational and preventive procedures, but are subject to the training provisions required by 21 NCAC 16W.0102. The position must maintain CPR certification and complete other training as may be required by the Dental Health Section of DHHS. Reallocating existing state dental hygienists to this task would involve suspending other initiatives.

The question of designation as a "government facility" for LHDs was addressed. Tribal facilities and VA hospitals have this designation that allows dentists licensed in other states to operate within their facilities. Dr. Mumford indicated this was not an option for LHDs due to the conflict federal and state laws.

B. Leah Devlin presented YTD state-wide BCCCP performance data. Only 27% of the counties are at 50% or greater of their projected contract at mid-year. A variety of factors may influence this fact: changes in program admission standards, staff turn-over, recruitment difficulties, poor data management through HSIS etc. Health Directors need to take notice of their county's performance and make any possible corrections. For counties still performing below 50% of projected contract as of January 1, 2001, their remaining BCCCP funds will be reallocated to an agency that can provide the service within the area.

C. Leah Devlin reported that Turning Point would focus on social marketing as opposed to accreditation.

D. Sally Malek reported on the Teen Tobacco Summit. The committee was supportive of the teen's resolution for a "Tobacco Free Campus".

E. Al Eisele gave a presentation on Forensics Test for Alcohol Branch.

III. NEXT MEETING: Thursday, March 16th at 11:00 am 1330 St. Mary's G1-A

21 NCAC 16W.0103 is proposed as a temporary rule as follows:

.0103 TRAINING FOR PUBLIC HEALTH HYGIENISTS PERFORMING PREVENTIVE PROCEDURES

- (a) Public health hygienists who provide only educational and preventive procedures such as application of flourides, flouride varnishes and sealants shall be subject to the training provisions set out in paragraph (b) of this rule instead of the training provisions required by 21 NCAC 16W.0102.
- (b) A public health hygienist may perform preventive-clinical procedures such as application of flouride, flouride varnishes and sealants under the direction of a duly licensed public health dentist if the hygienist:
- (1) maintains CPR certification;
 - (2) completes such other training as may be required by the Dental Health Section of the Department of Health and Human Resources.

History Note: Authority G.S. 90-223; 90-233(a);
Temporary Adoption Eff.

February 15, 2000

This is the latest addendum to the temporary rules published by the NC Board of Dental Examiners. SMT is planning a retreat March 15 and 16 to discuss this and many other Dental Public Health issues. This rule became effective February 8th, 2000.

Stay Tuned!

Rick

NCALHD COMMITTEE MINUTES

NCALHD COMMITTEE: Community Health/Dental Health

CHAIR: Elaine Russell

DATE SUBMITTED: March 29, 2000

DATE OF COMMITTEE MEETING: March 16, 2000

COMMITTEE MEMBERS PRESENT: David Rust, Elaine Russell, Rick Mumford, Jenny Lassiter, Wayne Sherman, Leah Devlin, Bill Smith

GUESTS/OTHERS: Victoria Talton-Parish, DMA-Dental Reimbursement

I. ACTION ITEMS

Motion from Community Health for the NCALHD to support statewide access for the application of fluoride varnish given the crisis state of dental health among the state's children.

II. INFORMATION ITEMS

A. Leah Devlin presented the items from the Division which were presented for inclusion in the expansion budget: \$150,000 Osteoporosis; \$100,000 for "Strike Out" Stroke Control; \$175,000 infrastructure for "Too Cool to Smoke/Spit" Campaign. Rick Mumford reported a "Preschool Hygienists Staffing Plan" was presented by the Dental Division. **None of the items made the expansion budget.** The State Health Director presented the following items for the expansion budget: \$3.4million to support minority students in public health internships; \$930,000 to support "thin prep" technology for the State Lab; and \$350,000 for the Genetics Birth Defects Registry. It will be necessary to work from the grassroots level to secure special appropriations for public health initiatives.

B. Rick Mumford led a discussion of expanding fluoride varnish to the counties not involved in the "Smart Smiles Project," which serves 11 western counties. The health directors in the east have adamantly requested access to the fluoride varnish training. The dental statistics of the east are as discouraging as those in the west. The "Smart Smiles Project" is a national pilot and data from the east was intended as the control group. The committee stressed the importance of providing service to a major health concern. Evaluation measures can be reworked.

The conversion to ADA codes for dental services has been delayed until October 1, 2000. A series of workshops will be offered in May. The workshops will be repeated in August/September. January 1, 2001, is the projected date for achieving 80% of UCR.

C. Leah provided an update on BCCCP. Program performances continue to reflect only 23% of counties on target. Site visits are encouraged. Mid-year performance reports will be distributed to health directors at the Association meeting. Elaine will fax reports to health directors not in attendance. There is

a concern that health directors do not see these reports until the close of the fiscal year.

- D. Leah reported the BeActive Summit has been rescheduled for June 21-22 in Cary. The Health Promotion Workshops have been scheduled for April 14th in Goldsboro and April 17th in Hickory.
 - E. Leah reported on tobacco prevention activities. The Governor continues to be interested in the "Smoke Free Campus Initiative." With regard to funding, the Legacy Foundation will require a 1:1 match. Project ASSIST will require a 4:1 match. This represents about \$8 million from the tobacco settlement dollars that would need to be allocated.
- III. NEXT MEETING: Conference Call Thursday, April 27th at 2:30 pm.



STATE OF NORTH CAROLINA
OFFICE OF THE GOVERNOR
20301 MAIL SERVICE CENTER • RALEIGH, NC 27699-0301

JAMES B. HUNT JR.
GOVERNOR



March 10, 2000

Dear Friend:

I am writing to ask for your strong support in helping our state meet an ambitious goal: cutting overall teen tobacco use and teen smoking in half by 2010.

The 1999 North Carolina *Youth Tobacco Survey* shows that 18.4 percent of middle school students and 38.3 percent of the state's high school students use tobacco products, including cigarettes, cigars and smokeless tobacco. Our student rates of tobacco use are alarmingly higher than national levels.

Recently, I met with a group of diverse North Carolina teen leaders as a follow-up to my "Summit to Prevent Teen Tobacco Use." I was very impressed with their leadership and motivation. The students presented me with a petition calling for all schools to be 100 percent tobacco-free at all times in all areas. They shared many good reasons for the policy, but the most compelling was that "students need positive role models in schools."

I encourage your school district to adopt a "Tobacco-Free School Zone." I am asking each school district to send a clear prevention message by adopting policies that prohibit use of tobacco products on all school grounds and during school events. I believe that every adult in every school, during the school day and school-sponsored events, ought to be setting a good example for our youth.

I want to thank the school districts that have already adopted a 100 percent tobacco-free school policy: Caldwell County, Carteret County, Hickory City, New Hanover County, Chapel Hill-Carrboro, and Rowan-Salisbury. They are providing clear leadership in our efforts to discourage teen tobacco use.

Soon you will receive a *Grassroots Guide* for developing a tobacco-free school policy. I hope you will find this guide helpful in your efforts to create a tobacco-free school.

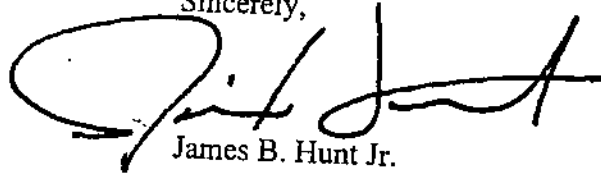


Page 2
March 10, 2000

If you have any questions about developing a tobacco-free school policy or about our efforts to reduce teen smoking, please contact Jim D. Martin, State Advisor on Preventing Teen Tobacco Use, at 919-733-1343.

My warmest personal regards.

Sincerely,

A handwritten signature in black ink, appearing to read "Jim Hunt", written in a cursive style.

James B. Hunt Jr.

JBH:lf

CC: State Superintendent Mike Ward
Phil Kirk, Chairman, State Board of Education

(17)

James B. Hunt Jr.
Governor



State of North Carolina
Office of the Governor

For Release: IMMEDIATE
Date: February 18, 2000

Contact: Kirsten Weeks
Phone: (919) 733-5612

GOV. HUNT: SLASH TEEN SMOKING IN HALF BY 2010

RALEIGH – Gov. Jim Hunt today met with high school students from across North Carolina, and asked for their help in meeting an ambitious goal: Cutting overall teen tobacco use and teen smoking in half by 2010.

To get there, Hunt announced the creation of a Statewide Youth Advisory Team to guide state efforts to prevent teen tobacco use. He directed Jim Martin, newly appointed State Advisor on Teen Tobacco Use, to work with the team to put together a comprehensive, youth-focused plan to cut teen tobacco use in half, and to present the plan to him in April.

Today's meeting was a follow up to the state's first Governor's Summit to Prevent Teen Tobacco Use, held in Charlotte last January. Survey results released at the summit showed that 18.4 percent of the state's middle schoolers and 38.3 percent of the state's high schoolers use tobacco products.

"We have got to do more to stop this unhealthy trend among our teenagers, and to keep tobacco out of the hands of our kids," Hunt told students at today's meeting. "We need your help to make sure we are doing the right things, and communicating an effective message of prevention to all our students."

During today's meeting, Doug Paletta, a student from the N.C. School of Math and Science in Durham, presented Hunt with a petition signed by more than 300 students at the summit. It calls for state and local leaders to push for schools to be 100 percent tobacco-free at all times in all areas, including after-school events like ball games, and designated smoking areas on campuses for faculty and visiting adults.

In response to the petition, Hunt pledged to encourage all local school boards, superintendents, principals and parent teacher associations to take a close look at putting a 100 percent tobacco-free policy in every school.

Hunt also committed to helping implement a Tobacco Use Prevention Plan in every school. The state will train students and school faculty to set up tobacco prevention programs in their schools and communities, and provide a web site where teenagers can learn about model programs and resources available for their efforts.

To fund these and future programs, Hunt will support allocating a significant portion of the Phase I Tobacco Health Trust to fight teen tobacco use.

-more-

Governor's Press Office
State Capitol, Raleigh, NC 27603-8001
(919) 733-5612 - Toll Free 1-800-662-7005
FAX (919) 733-5166
I:\RELEASES\2000\02-feb\Teen Tobacco Release.dot

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Last year, North Carolina received nearly \$2 million from the Robert Wood Johnson Foundation, the nation's largest philanthropy devoted exclusively to health and health care, to set up four regional centers to focus on teen smoking prevention.

The centers, and efforts announced at today's meeting, will build on a fight against teen smoking that is gaining momentum in North Carolina. Efforts to reduce tobacco sales to minors were strengthened in 1997, when Hunt signed Senate Bill 143 into law, making it tougher for youth to purchase tobacco products in North Carolina. Later that year, Hunt directed the N.C. Division of Alcohol Law Enforcement to work with local authorities to educate retail merchants about new laws governing the sale of tobacco to minors and to increase local enforcement of those laws.

Under a federal mandate, North Carolina was required to reduce the rate at which minors could purchase tobacco products to 28 percent of retail outlets in 1999. The state exceeded this goal by reducing the rate to 25 percent, meaning minors were sold tobacco products in only one-fourth of the 800 North Carolina retail stores surveyed last year.

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Tobacco Use Among Middle and High School Students—North Carolina Youth Tobacco Survey (NCYTS) compared to the National Youth Tobacco Survey (YTS) Results, 1999

Middle School Students:

- Percentage of middle school students reporting use of some form of tobacco in the past month.

North Carolina	18.4%
National	12.8%

- Percentage of middle school students reporting cigarette smoking in the past month.

North Carolina	15.0%
National	9.2%

High School Students:

- Percentage of high school students reporting use of some form of tobacco in the past month.

North Carolina	38.3%
National	34.8%

- Percentage of high school students reporting cigarette smoking in the past month.

North Carolina	31.6%
National	28.4%

PETITION

Whereas students have the right to breathe clean air,

Whereas students under 18 are not allowed to buy tobacco products by law,

Whereas second hand smoke is a major health concern for students due to the fact that 53,000 Americans die each year from second hand smoke;

Whereas some county school systems, such as Caldwell County, Carteret County, Hickory City, New Hanover County, Chapel Hill-Carrboro, Rowan-Salisbury, and Mecklenburg County have successfully implemented 100% tobacco-free campuses;

Whereas tobacco kills more people than alcohol, illicit drugs, and firearms combined, we respectfully request that tobacco use be prohibited at least as much as the aforementioned hazards;

Whereas students need positive role models in schools, this policy needs to apply to all individuals on school campuses;

Let it be resolved that we the undersigned implore Governor James B. Hunt and all who hold such authority to mandate a policy requiring all public school buildings, grounds, and events to be 100 percent tobacco free at all times.



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**Change
starts here.**



The Grass Roots Guide for Tobacco-Free Schools in North Carolina

This is a sneak preview of the Tobacco Prevention and Control Branch's *Grass Roots Guide for Tobacco-Free Schools in North Carolina*.

The Guide includes practical tools to assist you in advocating for your school or school system to be one hundred percent tobacco-free:

- Press Release from Governor Jim Hunt
- Letter from Governor Hunt
- Model School Policy on Tobacco Use in North Carolina
- Model Enforcement Policy Framework
- Local Petition (modeled after the petition sent to Governor Hunt by his Teen Tobacco Prevention Team on February 18, 2000)
- Eight-Step Checklist for Creating and Maintaining Tobacco-Free School Policy

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DRAFT



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Model School Policy for Tobacco Use North Carolina February, 2000

The _____ School Board recognizes that the use of tobacco products is a health, safety, and environmental hazard for students, employees, visitors, and school facilities. The Board acknowledges that adult employees and visitors serve as role models for students and that the Board's acceptance of any use of tobacco products implies school approval, if not endorsement, of such use. In addition, the Board recognizes that it has an obligation to provide positive role models in school and to promote a healthy learning and working environment, free from unwanted smoke, for the students, employees, and visitors to the school campus. Finally, the Board recognizes that it has a legal obligation pursuant to Title X of Public Law 103-227 to provide schools that are smoke-free.

Accordingly, the Board enacts the following:

1. Students may not possess, display, or use any tobacco product at any time on school premises, including school vehicles, or while participating in school events, both indoor and outdoor and both off and on school property.
2. School employees, volunteers, and visitors to the school may not at any time use or display any tobacco product in the presence of or possible visibility of students on school premises, or at any school-sponsored events, both indoor and outdoor, and both off and on school property. The prohibition of display of tobacco products will not extend to display that has a legitimate instructional purpose.
3. School employees and volunteers may not at any time display or use any tobacco product in school vehicles.
4. No student, employee, or visitor will be permitted under any circumstance to use tobacco products in any indoor facility owned or leased or contracted for by the _____ County (City) Schools.

For the purposes of this policy, "tobacco product" is defined to include cigarettes, cigars, blunts, bidis, pipes, chewing tobacco, snuff, and any other items containing or reasonably resembling tobacco or tobacco products. "Tobacco use" includes smoking, chewing, dipping, or any other use of tobacco products. (Legal Reference: G.S. 115C-47; P.L. 103-227)

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Model Enforcement Policy January, 2000

Enforcement policies for students:

1st Offense:	Tobacco education/alternative to suspension course or a one-day suspension; parent notification
2nd Offense:	Tobacco education/alternative to suspension course is mandatory; parent notification
3rd Offense:	Three-day suspension; parent notification
4th Offense:	Administrator's discretion
Enforcement for staff should follow the school's personnel regulations as with any other personnel policy.	
Enforcement policies for visitors: Communicate, communicate, communicate!	

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Eight-Step Checklist for Creating and Maintaining Tobacco-Free School Policy

Step	Action
1	Use current policy assessment to get commitment.
2	Form an advisory committee (or use your school's existing health committee) to recommend a tobacco policy.
3	Develop a draft of the new policy.
4	Present the new policy to the school board.
5	Plan the implementation and enforcement strategies.
6	Positively communicate the policy throughout the school and community.
7	Implement the policy.
8	Conduct on-going advocacy efforts and policy evaluation.

Step 1: Use current policy assessment to get commitment.

- Identify problems related to current policy and support for a change in policy or enforcement.
- Identify educational, health, and economic reasons for changing policy or enforcement.
- Interview key stakeholders about tobacco-free schools policy; share information; determine level of support and possible barriers as well as key supporters!
- Talk with students, staff, parents and community leaders about attitudes toward the current policy.
- Identify supporters; consider adopting the Model Petition.
- Identify potential barriers.
- Secure school board and administrative support for a review of existing policy.
- Request support and cooperation from school board in developing new policy or strengthening enforcement of current policy.

[Return to List of Steps](#)

Step 2: Form an advisory committee (or use your school's existing health committee) to recommend a tobacco policy.

- Include representation of school and community members, including students, teachers,

smokers, and nonsmokers.

- Review current policy and gather data needed for new policy or enforcement changes.
- Include the review of effective policies or enforcement strategies from other districts.
- Discuss and address concerns of school administrators and others.

Return to List of Steps

Step 3: Develop a draft of the new policy.

- Make the policy simple and specific. Use the Model Policy.
- Identify to whom the policy applies--students, staff, and visitors.
- Identify where the policy applies--school buildings, grounds, athletic events, vehicles, etc.
- Identify a meaningful date, such as the start of the school year, to implement the policy or begin policy changes.
- Develop a rationale (include values and benefits) for the policy. Address enforcement issues. Invite local law enforcement officers to assist, if appropriate. Develop consequences for violation. Refer to the Model Enforcement Policy. Be creative.
- Meet individually with school board members to gain input and support as you prepare the new policy.
- Determine the level of support prior to proceeding and be prepared to overcome any barriers.

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Step 4: Present the new policy to the school board.

- Identify students to champion the policy.
- Identify a smoker on the school board, if possible, to champion the policy.
- Acquire and submit forms to be scheduled on the school board agenda.
- Select a group to present the policy--local health care provider, teacher, student, parent school club leaders, athletic director, and other champions.
- Provide a few pages of information to school board members before meeting.
- Preferably, meet with school board members individually before the joint meeting.
- Gather support from community members to attend the meeting.
- Convey the importance of such a policy and ask for approval to adopt.
- Recognize that policy changes take time; if at first you don't succeed, strategize and try again.

Return to List of Steps

Step 5: Plan the implementation and enforcement strategies.

- Use the Model Enforcement Policy to start discussion on how to enforce the new policy.
- Identify enforcement strategies for students, staff, and visitors.
- Select an implementation date four to six weeks out in order to prepare. If convenient and helpful, you could choose a date with significance, such as the start of the school year, a new semester, or the Great American Smokeout (third Thursday in November).
- Allow sufficient time for people to prepare for implementation.
- Identify cessation resources available to tobacco users.
- Identify alternatives to suspension for policy violators.
- Prepare for complaints about the new policy and decide how conflicts will be resolved.
- Organize special sessions to train and educate those who will be enforcing the new policy.
- Emphasize the need for firm, consistent enforcement.
- Emphasize that being tobacco-free is in the best educational, health, and economic interests of everyone.
- Focus on the use of tobacco, not on the user.
- Make a commitment to enforce the policy consistently.

Return to List of Steps



Step 6: Positively communicate the policy throughout the school and community. Include the following:

- A description of the new policy and reasons for the change
- An emphasis on the educational, health, and economic benefits of the new policy
- People affected
- Implementation date
- Enforcement procedures
- How and where to get help with quitting tobacco use
- Communication strategies for reaching students, staff, parents, and others

Return to List of Steps



Step 7: Implement the policy.

- Post signs with a positive "No Tobacco Use" message in all affected areas. Celebrate the implementation.
- Recognize commitment is necessary to insure effective policy implementation.
- Expect an initial testing period.
- Be extra vigilant during the first few months of policy implementation.
- Provide positive incentives on day one of the implementation, such as healthy snacks, cinnamon candies, etc.
- Enlist support of community law enforcement agencies.
- Encourage students, staff, parents, and others to take pride in the new policy.

- Include tobacco users and non-users in all phases of implementation.
- Enlist cooperation of local retailers not to sell tobacco to minors.
- Use educational programs instead of punitive programs for student violators.
- Offer several options for cessation programs.

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Step 8: Conduct on-going advocacy efforts and policy evaluation.

- Collect stories of positive effects of policies on students and staff.
- Solicit comments from parents and community members.
- Publicize these comments and stories in school newsletters, and send these home to parents.
- Develop recognition events for students and staff who quit tobacco use.
- Orient new administrators, employees, and board members to the policy.
- Identify problems with policy implementation and make necessary corrections.
- have a new tobacco-free schools poster contest each year and post the winners.
- Communicate, communicate, communicate.

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NORTH CAROLINA ASSOCIATION OF LOCAL HEALTH DIRECTORS
EPIDEMIOLOGY COMMITTEE MINUTES
TUESDAY, FEBRUARY 8, 2000
CONFERENCE CALL

In attendance: George Bond, Chair, Lou Brewer, Joey Huff, Dr. Sherman Kahn, Jenny Lassiter, Dr. John Morrow, Ray Rabe, Danny Staley, Beth Jones, Lou Turner, Dr. Steve Cline, and Newt MacCormack.

The meeting was called to order at 2:00 PM.

1. WELCOME

George Bond welcomed the committee members and particularly welcomed Beth Jones, PHN Director in New-Hanover County. She is replacing Eunice Inman who has taken a position as a State Consultant.

2. IMMUNIZATION UPDATE

Dr. MacCormack reported that the flu numbers were coming down across North Carolina rather dramatically. The last week in December represented the peak number of patients presenting with flu-like illness at sentinel practices. During that week, 10% of patients exhibited flu-like symptoms and the number has consistently dropped since then until now which is around 4%. Dr. MacCormack intends to keep up e-mail surveillance report to local Health Directors until spring.

3. HEPATITIS A FROM FOODHANDLERS

The Committee reviewed the letter that Chairman Bond had written Dr. MacCormack and his response to Buncombe County regarding the efficacy of providing Immune globulin to contacts of infected foodhandlers with hepatitis A. Dr. MacCormack recommended, and the Committee agreed, that we are always better to err on the side of caution since there is no reliable way to adequately judge the hygiene of an employee. There was additional discussion about the value of requiring hepatitis A immunization for foodhandlers and the group generally felt it would not be cost effective. Further, the group concurred that it would be an extremely burdensome requirement to be placed upon the food industry and could make it even impossible for many of the restaurants with high employee turnover to keep their doors open. There is a conference telephone call scheduled for Wednesday, February 9th at 2:30 PM which has been called by Michael Rhodes, Chief of the Environmental Health Services Division, to discuss the possibility of hepatitis A vaccination for foodhandlers. There will be representatives on the call from the Health Director's Association, from DPH, the North Carolina Restaurant Association, and from pharmaceutical companies supplying the vaccine. The Committee made it clear to Mr. Bond that the position of the Epidemiology Committee was that any vaccination program would be expensive, burdensome on industry, and protective of only a single disease entity and therefore could not be supported by the Committee. The Committee's consensus was that a strong educational program emphasizing proper hand washing techniques would be far more cost effective and protective of a variety of foodborne illnesses rather than a single focus upon hepatitis A through immunization.

The last discussion under hepatitis A regarding problems of getting adequate notification around the state when a county wished to issue an alert. E-mail has been used with relatively good success in recent years but it certainly is not perfect. There was discussion about using the Emergency Medical Services system to provide notification to the radio rooms in each county who then would contact the appropriate officials in the health department. The group agreed to take the matter under advisement and perhaps at a later date invite EMS officials to join the conference call to discuss alternatives.

4. STATE LABORATORY TURNAROUND TIME

Lou Turner, Director of the State Lab, joined the call to alert the Health Directors that, for a variety of reasons, the State Lab was falling six to eight weeks behind in the reading of pap smears. A new computer system, the new ThinPrep technology, training required for Cytotechnologists, staff turnover, long-term illness for two key staff, and the failure of the usual backup lab to receive all of the state's overload were all cited as contributors to the problem. Add to that the latest Hurricane Floyd crisis and the recent snow event and the result is a six to eight week delay. Lou will be sending out a letter to all Health Directors outlining the problem. However, hope is on the horizon and she told the Committee she had received permission to pay overtime for 12 of her staff to begin catching up on the backlog. She also has received permission for an emergency contract with another backup laboratory to help relieve the backlog. Ray Rabe asked if there was anything the local Health Directors could do to support Lou in her work to speed up the reading of pap smears and she felt that at the present time there was not. Ms. Turner pointed out that if health departments had a "special patient" and they absolutely needed a reading quickly, then they are encouraged to call the laboratory directly and every effort will be made to accommodate the local health departments needs.

5. FOLLOW-UP FROM PREVIOUS MEETING

a) HIV/STD Contract Addendum Changes

Steve Cline reported that the motion adopted by the local Health Director's Association last month was in keeping with the wishes of the Division and those wishes would be converted into contract language for the upcoming Contract Addendum.

b) County Resolutions re: Teen Consent

The group briefly discussed information which had been sent out again by Margaret Woodcock's office as background material to help local Health Directors better inform Boards of Health and Boards of County Commissioners regarding access to service by teenagers.

6. APPOINTMENT TO THE AIDS CARE UNIT ADVISORY COMMITTEE

Chairman Bond asked the group if there was volunteer who wished to serve on the AIDS Care Unit Advisory Committee. Mr. Bond had received a letter from Evelyn Foust asking for a nomination. Dr. John Morrow is already serving on the North Carolina AIDS Advisory Council and he graciously agreed to accept this additional appointment to the AIDS Care Unit Advisory Committee on behalf of local Health Directors.

7. TUBERCULOSIS

Dr. Raoult Ratard outlined to the group a study his division wishes to undertake on tuberculosis patients whose conversion took more than four months. The Raleigh staff will do the work and they will be pulling records from 74 counties to attempt to document whether the conversion could have been achieved earlier thereby cutting down on treatment time and costs. Some counties will have only two or three records reviewed while the larger ones may have 20+. Dr. Ratard said that his staff would be happy to come to the health department to review the records or they would be equally happy to receive copies of the records from the local health department if that was easier for the local staff. The group agreed by consensus that the project was worthwhile and Chairman Bond will inform the Health Director's Association of the project at their next meeting.

8. GENERAL INFORMATION

The state staff informed the Health Director's that a CDC grant application has been submitted for West Nile Virus research around the north/south flyways of migratory birds. Of particular concern in North Carolina are crows. The virus has been identified as far south as Maryland last year and there is no reason to believe that we won't see it in North Carolina in the near future. The grant notification deadline is April 1.

9. NEXT MEETING

The next meeting is set for **Tuesday, March 14, 2000 at 2:00 PM**. Any committee member with agenda items is encouraged to forward them to either Chairman Bond or Dr. Cline by **Monday, March 6** so we can include them on the agenda. Chairman Bond told the group he was inviting Medical Directors across the state to join in the EPI Committee conference call and any clinical items to be discussed will be put at the beginning of the agenda so that Medical Directors will not have to stay for the entire call unless they so choose.

Respectfully submitted:

George F. Bond, Jr., Chair

**North Carolina Association of Local Health Directors
TECHNOLOGY COMMITTEE MINUTES
February 17, 2000**

The Technology Committee of the Health Director's Association met on February 17, 2000, at 1330 St. Mary's Building, Raleigh, North Carolina. A list of attendees is attached for reference. Doug Harr called the meeting to order at 1:30 p.m.

Approval of Minutes:

The minutes of the 12/15/99 meeting were approved

HSMS Project Update:

Marc Kolman provided a brief update regarding the HSMS project. Vendor Demonstration information and March dates were provided

NCALHD Web-Site Maintains Update:

Proposal responses from ITS/web services and Russell Jones have not been received. Jim Womack indicated he would contact ITS.

Paperless Medical Record Resolution:

Copies of the resolution were distributed. A public Health HIPPA primer provided by Tom Bridges was also distributed.

Presentation/ Demonstration:

Besty Clayton provided a software demonstration of the Environmental health food handling inspection software. Counties are encouraged to utilize this software in their communities to provide on site information on a lab top bases system.

Next Meeting:

The next meeting was scheduled for March 17 at 1:00 (1330 St. Mary's St., suite201)

The meeting adjourned at approximately 4 p.m.

Respectfully submitted by Doug Harr, Greene County Health Department.

**North Carolina Association of Local Health Directors
TECHNOLOGY COMMITTEE MINUTES
March 17, 2000**

The Technology Committee of the Health Directors' Association met on March 17, 2000, at 1330 St. Mary's Building, Raleigh, North Carolina. A list of attendees is attached for reference. Marc Kolman called the meeting to order at 1 p.m.

Approval of Minutes:

The minutes of the 2/17/00 meeting were not available for approval.

HSMS Project Update:

Marc Kolman provided a brief update regarding the HSMS project.

Linking UNC Web based course on CPT/ICD to NCALHD Web Page:

Joy Reed, Public Health Nursing Chief provided information on the linking of the UNC Web based course to the NCALHD Web page. The decision was made to place a "Hot-link" on the NCALHD web-site to the CPT/ICD9 web-based training. The training will be developed by the UNC-SPH and located on their web-site.

Presentation/Demonstration – NC Immunization Program:

Lisa Wojnovich, MPH, Immunization Branch provided a presentation and demonstration of updates for the North Carolina Immunization Program. See attachments.

PAIRS – Provider Access to Immunization Registry Securely – This is a secure internet-based registry with read-only access. The main function is to look-up childrens' immunization histories. There are two pilot sites – New Hanover and Craven counties.

70% of immunizations given by private providers are not included in the current registry data.

Benefits of PAIRS to a local health department include a much more specific record search function, and the ability to combine selected records.

One of the values of PAIRS is getting private providers prepared for an immunization registry and the opportunity to build and advance partnerships between local providers. In addition, PAIRS will improve efficiency and accuracy of immunization data look-up.

PAIRS next steps:

- Establish 25+ pilot sites.
- Implement PKI for user authentication and security.
- Expand PAIRS participation
- Possible implementation of inter-state exchange of immunization information (NC, SC, Tennessee).

Next Meeting:

A recommendation was made that the next meeting "piggy-back" with the Managed Care committee. The Managed Care committee meeting will be held Wednesday, April 12, 2000 from 1 p.m. until approximately 3 p.m. at the NCHA. This is pending Doug Harr's agenda for the committee and final decision as to date, time and location.

The meeting adjourned at approximately 3 p.m.

Respectfully submitted by Marc Kolman, Person County Health Department.

PAIRS PROJECT

Demonstration: Key Features and Examples

(To demo PAIRS, visit the following URL: <http://pairs.interpath.net:8080>)

Provider Access to Immunization Registry Securely (PAIRS) is a collaborative project of the North Carolina Healthcare Information and Communications Alliance (NCHICA). Various NCHICA members have contributed expertise and resources towards this effort.

PAIRS is a secure Internet-based system that offers look-up capability to a database of public and private immunization records. PAIRS includes some of the key features of an immunization registry, although it is not a fully functional registry system. Since PAIRS is an Internet-based application, the system includes multiple ways to do the same thing, which makes the application fairly self-explanatory and should minimize training needs.

To access PAIRS, you will need a user ID and password. PAIRS uses Secure Socket Layer to encrypt information exchange between the client and the server. The highest encryption level, 128 bit, is used. This type of security is the same as what is used by many on-line banking services, however most banks only use 40 bit encryption.

MAIN PAGE

SYSTEM FUNCTIONS

The PAIRS system's functions are listed on the main page. We have incorporated these functions in the right hand corner of every subsequent page, so the user doesn't have to go back to the main page to access these options.

LINKS

Currently, there are links established to the Recommended Childhood Immunization Schedule, Policy Guidelines, Tutorial and the Help Desk. In the future, we plan to add links to other relevant immunization sites.

SEARCHING FOR RECORDS

First name, last name and date of birth, at a minimum, are required in order to perform a search. This requirement is part of our policy guidelines. It reduces the ability to browse the system. In addition, the more information included in a search, the more likely you will be able to locate the record(s) you are looking for. There are other criteria such as Social Security Number that can be incorporated in a search.

One of the enhanced capabilities of this system is the patient record disambiguation. The system has the ability to differentiate between like records and identify multiple records for the same person without the luxury of a universal unique identifier. The system indexes "like" names and nicknames together. There are statistical scores given to the records found based on what information was entered for the search. Only records receiving a score above a certain threshold

PAIRS PROJECT

will be returned. This capability allows some flexibility – you don't have to know the exact spelling of the person's name, as it is stored in the database.

To view an example of how this works:

Search for (1) Catherine Bailey, Date of Birth: 09/10/90

Also try searching for her with her first name spelled (2) Kathryn and (3) Kate.

VIEWING RECORDS

CONSOLIDATING RECORDS

When a search returns multiple records for the same person, PAIRS offers the flexibility to view them as one consolidated record while maintaining the integrity of the individual records.

To view an example of how this works:

Search for: Michael Jordan, Date of Birth 03/10/98

- ☞ To view a consolidated record of two or more of the results returned, click the box next to each record and then click on the "View Consolidated Record" button.
- ☞ You'll notice that for every display of a consolidated record, there is the following disclaimer – "NOTE: This consolidated immunization record is made up of multiple records determined to be for the same child by the provider." The PAIRS system doesn't combine records automatically. You must make the determination that two or more of the results returned are in fact for the same person.

DIFFERENT DISPLAYS

Quick Reference Immunization Record

When you select a patient to view the associated immunization record, the system automatically displays the Quick Reference Record.

Key Features

- ☞ Grid display – for quick assessment of immunization status
- ☞ The child's age as of current date
- ☞ The 5 vaccines required by law are organized by vaccine group

Complete History

This display includes the name of the provider of each of the vaccines administered. There are three ways to access this view from the Quick Reference Record – click on the name, click on "View Complete History" or click on one of the dose dates in the record itself.

PAIRS PROJECT

Printable Record

Displays the record in a black and white format suitable for printing. This view is useful for producing copies for parents.

COMBINATION VACCINES AND NEW VACCINES

It is fairly trivial to add new vaccines and new vaccine types to a computerized record; however, it is not so trivial to add new vaccines to a paper-based record system. Immunization schedules are becoming increasingly more complex, making it difficult for practices to maintain the immunization records kept in their patient's chart. The introduction of combination vaccines has also presented some challenges for the paper-based record. Most paper records include these vaccines under only one of the vaccine groups. This combination vaccine situation makes it difficult for clinicians to quickly assess the immunization status of a patient.

To view an example demonstrating the advantage of a computerized record:

Search for: Nicholas Strickland, Date of Birth 07/20/96

Immunization Program Update

Lisa Wojnovich, Immunization Branch
Local Health Director's Technology Committee Meeting
March 17, 2000

Mission of the Immunization Branch:

- To eliminate vaccine-preventable diseases.

How do we do it?

- By assuring the immunization coverage of North Carolina's entire population through:
 - Delivery of immunizations (UCVDP program)
 - Tracking and Follow-up Activities

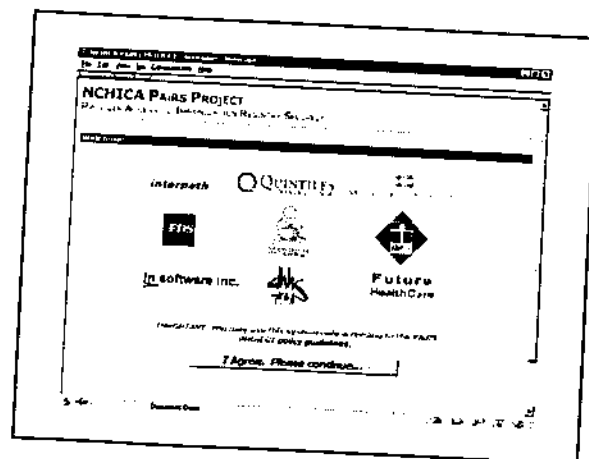
National Immunization Registry Initiative:

- Registries are key to improving and sustaining high immunization rates

NCHICA Mission:

(North Carolina Healthcare Information and Communications Alliance)

- To improve healthcare through the use of information technology
- (NCHICA website: www.nchica.org)



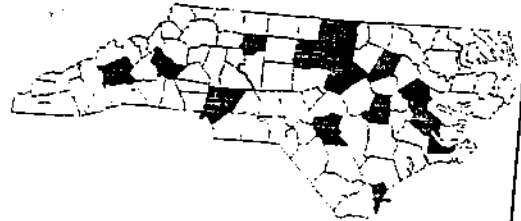
PAiRS System Highlights

- Secure Internet Solution
- Query-only capability
- Data included:
 - 1.4 million patient records - ≤ 18 years old
 - 12 million vaccine doses
 - 4 sources of public and private data
 - 3 clinical and 1 billing
- 25 Initial Pilot Sites

PAiRS PROJECT

Provider Access to Immunization Registry Securely

Location of Initial Pilot Sites



Pre -Test Survey - Initial Results

- Number of Computers
 - Half of the offices that have responded have at least 7 computers that can be used to access PAiRS
- Location of Computers
- Current use of Internet
- Sharing of immunization information
 - Demonstrated need for sharing
 - Anticipated benefit of PAiRS

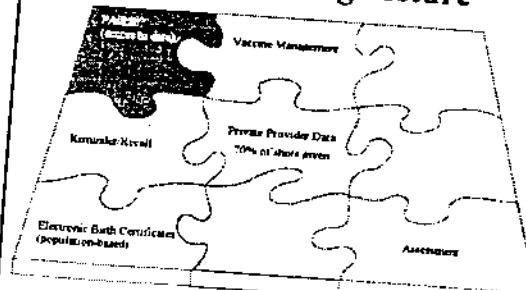
Value of PAiRS

- PAiRS is getting private providers ready for registry implementation
- Begin to demonstrate value of registry to stakeholders - project visibility
- Opportunity to build and enhance partnerships with private providers and other stakeholders
- Identify local early adopters and prepare them for registry implementation

PAiRS Next Steps

- 25 initial pilot sites up and running
- PKI for user authentication and security
- PAiRS participation expansion
- Regional PAiRS project - demonstration project to facilitate inter-state exchange of immunization information

PAiRS in the Big Picture



Other NCIR Progress

- Since the end of 1998, we have surveyed over 360 private provider offices regarding registry interest and computer capacities
- 83% of private providers reported that they are interested in an immunization registry

Computer Capacities

- 44% of private practices surveyed reported that they currently have Internet access

Status of New Registry Initiative

- Identification of registry system for NC
- Proven existing system that will:
 - Facilitate sharing of immunization info.
 - Help public health assure the immunization coverage of NC's population
 - Integrate well within private providers' environments
 - Support NC vaccine program reporting requirements

Michigan Childhood Immunization Registry

- Proven system - implemented in 70% of Michigan public and private offices
- High-level of functionality - meets CDC requirements
- Vaccine Accountability Module
- Software is free
- Opportunity to partner with Michigan for enhancements and cost-sharing

West Nile Virus Northeast U.S.

IN
THE

Nicholas Komar, ScD

What was reported in late August, 1999, as the first epidemic of St. Louis encephalitis (SLE) in our nation's largest city turned out to be the first recognized occurrence of West Nile (WN) virus in the Americas. The story of how this unique biological event unfolded is fascinating and will be told in numerous different media in the months and years to come.

The outbreak investigation began on August 23 when an infectious disease physician reported two human encephalitis cases from north Queens (a Borough of New York City) to the New York City Health Department (1). Epidemiologic follow-up by Dr. Marcelle Layton and her staff at the Health Department revealed over 700 cases of suspect meningo-encephalitis in and around NYC. As of Dec. 10, the count of laboratory-confirmed WN encephalitis cases stood at 59 with 7 deaths. Many of these cases were diagnosed based on finding flavivirus-reactive IgM antibody in cerebrospinal fluid or convalescent-phase serum, rather than by virus isolation from the patient. Therein lies the key to the early diagnosis of this disease as SLE, because SLE virus cross-reacts with its Old World flavivirus cousin, WN virus in serologic tests. CDC's arbovirus diagnostic laboratory in Fort Collins, CO, typically tests specimens from suspected encephalitis patients against a battery of arboviruses expected to occur in the location of presumptive exposure. WN virus infection was not included in these tests in the early weeks of the New York City epidemic investigation because it is an Old World virus that has never been documented in North America.

The early response to the epidemic focused on four aspects: 1) active surveillance for human cases of meningo-encephalitis, beginning in late August; 2) mosquito control throughout the affected counties, beginning in the counties (NYC Boroughs) where end; 3) monitoring of and of virus infection in vertebrate reservoir of serosurveys of resident These four components change in diagnosis of vestigation. However, tially as "West Nile-like," curred. In particular, a the neighborhoods of and identify risk factors ease. The avian vertebrate serosurvey initiated in September was expanded geographically to include a broad region around New York City, as well as locations as far south as Florida, targeting both migrating and resident birds, and including domestic mammals in the New York City area as well. Additionally, a new type of arbovirus surveillance was quickly organized in the tri-state region of New York, Connecticut and New Jersey, based on reports of dead crows and other birds. Other states along the Atlantic and Gulf coasts have joined this effort as well, in anticipation of movement of the virus south with migrating birds.

"...the first epidemic of St. Louis encephalitis (SLE) in our nation's largest city turned out to be the first recognized occurrence of West Nile (WN) virus in the Americas... laboratory-confirmed WN encephalitis cases stood at 59."

American crows (*Corvus brachyrhynchos*), a common gregarious passerine bird in the New York area, had been dying throughout the region as early as late July. This die-off was being investigated independently by state wildlife officials in New York. The media had reported other dead birds as well, especially in the northern Queens neighborhoods near where human encephalitis was occurring in mid-August. The connection between the bird die-off and the outbreak of human encephalitis was made as a result of three, almost concurrent events. First, tissues from a crow found dead September 4 in Westchester County were submitted on September 9 by Dr. Ward Stone, New

AMCA

2

SAVE NEWSLETTER

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MMWRTM

MORBIDITY AND MORTALITY WEEKLY REPORT

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Guidelines for Surveillance, Prevention, and Control of West Nile Virus Infection — United States

The introduction of West Nile (WN) virus in the northeastern United States during the summer and fall of 1999 raised the issue of preparedness of public health agencies to handle sporadic and outbreak-associated vectorborne diseases (1-3). In many local and state health departments, vectorborne disease capacity has diminished. Because it is unknown whether the virus can persist over the winter, whether it has already or will spread to new geographic locations, and the public health and animal health implications of this introduction, it is important to establish proactive laboratory-based surveillance and prevention and control programs to limit the impact of the virus in the United States. On November 8 and 9, 1999, CDC and the U.S. Department of Agriculture (USDA) cosponsored a meeting of experts representing a wide range of disciplines to review the outbreak and to provide input and guidance on the programs that should be developed to monitor WN virus activity and to prevent future outbreaks of disease. This report summarizes the guidelines established during this meeting.

Surveillance

Because of bird migration patterns, enhanced surveillance is a priority in those states already affected or having a potential for being affected, including areas from Massachusetts to Texas along the Atlantic and Gulf coasts*. Active surveillance activities should be implemented through the winter in southern states where mosquito activity continues throughout the year, or implemented early in the spring in northern states where mosquito activity ceased with the onset of cold weather. Surveillance activities that should be emphasized in the catchment area include the following:

1. Active bird surveillance to detect the presence of and to monitor WN virus activity in both wild and sentinel bird populations (4). In particular, surveillance for dead crows may be a sensitive means to detect the presence of WN virus in an area.
2. Active mosquito surveillance to detect and monitor WN virus activity in mosquito populations and to help identify potential vectors (4).

*Alabama, Connecticut, Delaware, District of Columbia, Florida, Georgia, Louisiana, Maine, Maryland, Massachusetts, North Carolina, New Jersey, New York, New York City, Pennsylvania, Rhode Island, South Carolina, Texas, and Virginia.

West Nile Virus Infection — Continued

3. Enhanced passive veterinary surveillance by general alerts to veterinarians for reporting neurologic illness in animals, with emphasis on horses as a backup system to monitor the extent of WN virus transmission outside the bird-mosquito cycle.
4. Enhanced passive human surveillance by general alerts to health-care providers to report viral encephalitis and, if resources permit, aseptic meningitis in humans.

Laboratory Diagnosis

Diagnosis of WN or other virus infections requires specialized laboratory diagnostic tests (4). Surveillance activities require the availability of laboratories that can provide the following minimal laboratory diagnostic support:

1. **Serology.** Using CDC and USDA protocols and reagents, the IgM and IgG enzyme-linked immunosorbent assays (ELISAs) for WN virus should be established in all state public health and veterinary laboratories to provide initial testing for human and animal specimens (5). State health, veterinary, and reference laboratories with biosafety level 3 facilities should have the capability to conduct neutralization tests to identify specific flavivirus antibodies.
2. **Virus isolation and detection.** Regional state public health laboratories and reference laboratories with biosafety level 3 facilities should have virus isolation, and identification capabilities. Selected other laboratories also should have reverse transcriptase polymerase chain reaction (RT-PCR) capability to detect viral RNA (5-7). Antigen-capture ELISAs to detect WN and other arboviruses in mosquito pools should be developed and made available to state and local laboratories. Regional state public health and reference laboratories should have the capability to use immunohistochemistry to detect virus in autopsy tissues.

Prevention and Control

Mosquito control is the most effective way to prevent transmission of WN and other arboviruses to humans and other animals, or to control an ongoing outbreak (4). Mosquito-control methods should include the following:

1. **Mosquito abatement districts.** The most effective and economical way to control mosquitoes is by larval source reduction through locally funded abatement programs that monitor mosquito populations and initiate control before disease transmission occurs. These programs also can be used as the first line emergency response for mosquito control if disease is detected in humans or domestic animals.
2. **Public outreach.** Public education about vectorborne diseases, particularly about modes of transmission and means of preventing or reducing risk for exposure, is a critical component of a prevention and control program.

Public Health Infrastructure

Effective surveillance, prevention, and control of vectorborne diseases, including WN virus, require designated resources in local and state health departments. Few state and local health departments have trained personnel or the resources to address adequately vectorborne diseases. At a minimum, each state health department should have functional arbovirus surveillance and response capability, including entomology

West Nile Virus Infection — Continued

and laboratory support. Geographic location and risk for WN transmission will determine the extent of a state's capability to handle arboviral diseases.

Interjurisdictional Data Sharing

WN fever is a zoonosis that affects numerous animal species, including humans. Effective surveillance and response will require coordination and data exchange between federal, state, and local agencies including departments of health, agriculture, and wildlife. A system of secure e-mail list servers and/or World-Wide Web sites will be necessary to facilitate the rapid and efficient exchange of data and other information between authorized users.

Research Priorities

Targets of applied research include understanding how and why the 1999 WN virus epidemic occurred, the public health and animal health implications of this introduction to the Western Hemisphere, and developing effective prevention strategies. High-priority research topics include defining current and future geographic distribution; bird migration as a mechanism of virus dispersal; vector relations and range; vertebrate host relations and range; virus persistence mechanisms; mosquito biology and behavior; mosquito control methods; mosquito surveillance methods; developing and evaluating disease prevention strategies; improving laboratory diagnostic tests; clinical spectrum of WN virus illness and long-term prognosis in humans; determining risk factors in enzootic areas; viral pathogenesis; genetic relations and the molecular basis of virulence; WN virus vaccine development for animals and humans; antiviral therapy for flaviviruses; and economic impact of the northeastern outbreak.

Reported by: Animal, Plant, and Health Inspection Svc, US Department of Agriculture. Div of Vector-Borne Infectious Diseases, National Center for Infectious Diseases, CDC.

Editorial Note: The 1999 WN virus epidemic in the New York City (NYC) metropolitan area resulted in 61 human cases (55 confirmed and six probable), including seven deaths (1-3). Exotic zoo birds, American crows, and horses also were affected and had high death rates. In addition to NYC, epidemic/epizootic transmission was detected in surrounding New York counties. Emergency surveillance programs detected epizootic transmission in New Jersey and Connecticut but no cases in humans.

The surveillance and laboratory efforts required from NYC, surrounding counties, and adjacent states consumed considerable resources and demonstrated a need to enhance state and local health department programs to combat vectorborne infectious diseases. In December 1999, CDC announced the availability of fiscal year 2000 supplemental funds to support WN virus surveillance, prevention, and control projects. The 19 state and local health departments eligible to apply for these funds represent those areas where WN virus transmission already has occurred or where transmission would be more likely to occur based on bird migration patterns.

The focus of these cooperative agreements enables state and local health departments to increase surveillance activities and enhance laboratory capacity for detecting WN and other arboviruses. In the initial year, surveillance activities will be focused to determine whether WN virus survived the winter and, if so, to ascertain its geographic distribution along the Atlantic and Gulf coasts.

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January 21, 2000

West Nile Virus Infection — Continued

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Accutane®-Exposed Pregnancies — California, 1999

Accutane®* (Roche Laboratories, Nutley, New Jersey), known by the generic name "isotretinoin," is a prescription oral medication approved by the Food and Drug Administration (FDA) to treat severe, recalcitrant nodular acne (1). It is also a known human teratogen that can cause multiple major malformations. Embryopathy associated with the mother's exposure to isotretinoin during the first trimester of pregnancy includes craniofacial, cardiac, thymic, and central nervous system malformations (2,3). In response to FDA recommendations (4), the manufacturer began a pregnancy-prevention program (PPP) in 1988 that included educational materials for physicians and patients and offered women reimbursement for contraceptive counseling by a physician. The PPP coordinators asked reproductive-aged women being treated with isotretinoin to enroll voluntarily in the Boston University Accutane Survey (BUAS) (5). The total number of reproductive-aged women taking isotretinoin in the United States is unknown; however, 454,273 women enrolled in the BUAS from 1989 to October 1999. BUAS has estimated that 38%–40% of reproductive-aged women taking isotretinoin chose to enroll in the survey (BUAS, unpublished data, 1999). Although isotretinoin is contraindicated in pregnancy and has a package label warning users to avoid pregnancy while taking it, exposed pregnancies occur (5–7). Approximately 900 pregnancies occurred among BUAS enrollees during 1989–1998 (BUAS, unpublished data, 1999). Roche Laboratories began direct-to-consumer print advertisements in 1996, added television and radio advertisements to selected cities in 1997, and expanded the campaign to the entire United States in 1998. During March 1999, CDC interviewed women who had had recent isotretinoin-exposed pregnancies. The objective of the study was to draw attention to the continued occurrence of isotretinoin-exposed pregnancies 11 years after the inception of the PPP and to learn more about why these exposed pregnancies happened. California was selected as the study site because of its large population and the availability of referrals from the California Teratogen Information Service and Clinical Research Center (CTIS). This report summarizes the results of the study, which suggest that some isotretinoin-exposed pregnancies can be prevented. The case reports describe the experiences of three study respondents.

*Use of trade names and commercial sources is for identification only and does not imply endorsement by CDC or the U.S. Department of Health and Human Services.

CDC answers your questions about WEST NILE ENCEPHALITIS

CDC

CENTERS FOR DISEASE CONTROL
AND PREVENTION

Q. What is West Nile encephalitis?

A. "Encephalitis" means an inflammation of the brain and can be caused by viruses and bacteria, including viruses transmitted by mosquitoes. West Nile encephalitis is an infection of the brain caused by West Nile virus, a flavivirus commonly found in Africa, West Asia, and the Middle East. It is closely related to St. Louis encephalitis virus found in the United States.

Q. How long has West Nile virus been in the U.S.?

A. It is not known how long it has been in the U.S., but CDC scientists believe the virus has probably been in the eastern U.S. since the early summer of 1999, possibly longer.

Q. Historically, where has West Nile encephalitis occurred worldwide?

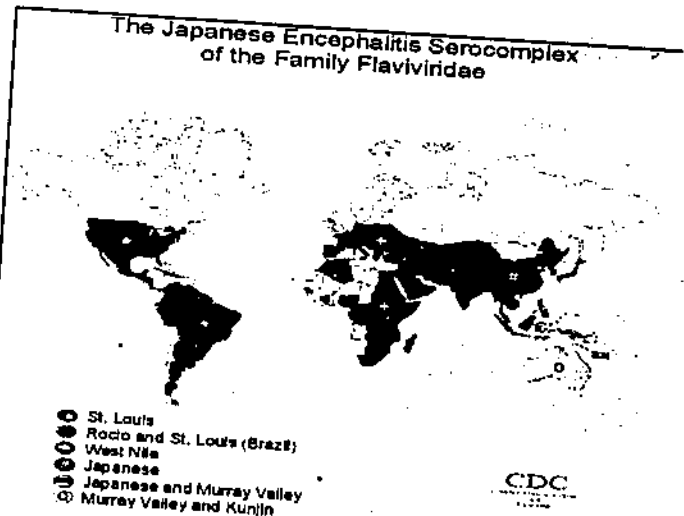
A. See map:

Q. How do people get West Nile encephalitis?

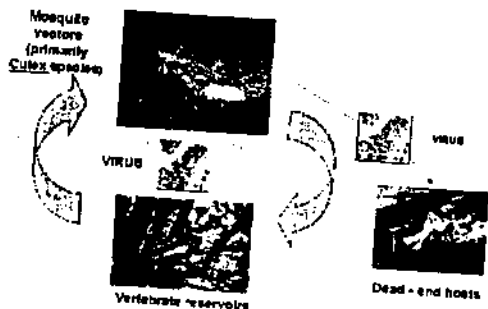
A. By the bite of a mosquito (primarily the *Culex* species) that is infected with West Nile virus.

Q. What is the basic transmission cycle?

A. Mosquitoes become infected when they feed on infected birds, which may circulate the virus in their blood for a few days. After an incubation period of 10 days to 2 weeks, infected mosquitoes can then transmit West Nile virus to humans and animals while biting to take blood. The virus is located in the mosquito's salivary glands. During blood feeding, the virus is then injected into the animal or human, where it then multiplies and may cause illness.



West Nile Virus Transmission Cycle



Q. Can you get West Nile encephalitis from another person?

A. No. West Nile encephalitis is NOT transmitted from person-to-person. For example, you cannot get West Nile virus from touching or kissing a person who has the disease, or from a health care worker who has treated someone with the disease.

Q. Can you get West Nile virus directly from birds?

A. There is no evidence that a person can get the virus from handling live or dead infected birds. However, avoid bare-handed contact when handling dead animals, including dead birds. Use gloves or double plastic bags to place the carcass in a garbage can.

Q. Besides mosquitoes, can you get West Nile virus directly from other insects or ticks?

A. Infected mosquitoes are the primary source for West Nile virus and caused the recent outbreak in the New

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York City metropolitan area. Ticks infected with West Nile virus have been found in Asia and Africa. Their role in the transmission and maintenance of the virus is uncertain. However, there is no information to suggest that ticks transmitted West Nile virus to patients in the New York area outbreak.

Q. Where did West Nile virus come from?

A. West Nile virus has been commonly found in humans and birds and other vertebrates in Africa, Eastern Europe, West Asia, and the Middle East, but has not previously been documented in the Western Hemisphere. It is not known from where the U.S. virus originated, but it is most closely related genetically to strains found in the Middle East.

Q. What are the symptoms of West Nile encephalitis?

A. Most infections are mild and symptoms include fever, headache, and body aches, often with skin rash and swollen lymph glands. More severe infection may be marked by headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, paralysis and, rarely, death.

Q. Is a woman's pregnancy at risk if she gets West Nile encephalitis?

A. There is no documented evidence that a pregnancy is at risk due to infection with West Nile virus.

Q. How is West Nile encephalitis treated?

A. There is no specific therapy. In more severe cases, intensive supportive therapy is indicated, i.e., hospitalization, intravenous (IV) fluids and nutrition, airway management, ventilatory support (ventilator) if needed, prevention of secondary infections (pneumonia, urinary tract, etc.), and good nursing care.

Q. Is there a vaccine against West Nile encephalitis?

A. No.

Q. What is the incubation period in humans (i.e., time from infection to onset of disease symptoms) for West Nile encephalitis?

A. Usually 5 to 15 days.

Q. What should a person do if he/she thinks they have West Nile encephalitis?

A. Seek medical care as soon as possible.

Q. Reference was made to "West Nile-like" virus. Does this mean the virus found in New York is not West Nile virus?

A. Initially, the virus found in New York was identified as being genetically related to West Nile virus. Genetic sequencing of virus found in the New York area is now complete. The virus has been definitively identified as West Nile virus.

Q. Who is at risk for getting West Nile encephalitis?

A. All residents of areas where virus activity has been identified are at risk of getting West Nile encephalitis; persons greater than 50 years of age have the highest risk of severe disease.

Q. When did the outbreak in New York end?

A. The risk for infection in the New York City area ended when mosquito activity ceased for the season, i.e., when sustained freezing temperatures occurred.

Q. What precautions need to be taken to prevent a recurrent outbreak?

A. Active sampling for West Nile virus (i.e., surveillance) in mosquito and bird populations will greatly enhance state and local government's early detection systems. When the first virus activity is detected in a community, prior to the occurrence of human disease, rapid mosquito control measures, such as targeted

application of adulticides and larvacides, should be implemented .

Q. What proportion of people die when infected with West Nile virus?

A. Case-fatality rates range from 3% to 15% and are highest in the elderly.

Q. How does West Nile virus actually cause death in humans?

A. Following transmission by an infected mosquito, West Nile virus multiplies in the person's blood system and crosses the blood-brain barrier to reach the brain. The virus interferes with normal central nervous system functioning and causes inflammation of brain tissue.

Q. How many cases of West Nile encephalitis occurred in the U.S. last year?

A. Prior to August 1999, West Nile virus had never been reported in the U.S. In 1999, 61 cases of severe disease and 7 deaths occurred in the New York area. West Nile virus infections in Queens, NY, in 1999. No reliable estimates are available for the number of cases of West Nile encephalitis that occur worldwide.

Q. Is the disease seasonal in its occurrence?

A. In the Temperate Zone of the world (i.e., between latitudes 23.5° and 66.5° north and south), West Nile encephalitis cases occur primarily in the late summer or early fall. In the southern climates where temperatures are milder, West Nile virus can be transmitted year round.

Q. Do wild birds infected with West Nile virus die or become ill?

A. This has not been previously reported in nature, but occurred in the New York area epidemic, where there was a large die-off of American crows. A total of 18 native bird species have demonstrated morbidity or mortality. Also, domestic geese were reported as dying from West Nile virus infection in Israel in late 1999.

Q. Can West Nile virus cause illness in dogs or cats?

A. There is a published report of West Nile virus isolated from a dog in southern Africa (Botswana) in 1982. There are no published reports regarding cats, but West Nile virus was isolated from a dead cat in the New York area epidemic. However, a serosurvey of these animals in the epidemic area showed a low infection rate.

Q. Can infected dogs or cats be carriers (i.e., reservoirs) for, and transmit West Nile virus to humans?

A. West Nile virus is transmitted by infectious mosquitoes. There is no documented evidence of person-to-person, animal-to-animal, or animal-to-person transmission of West Nile virus. Veterinarians should take normal infection control precautions when caring for an animal suspected to have this or any viral infection.

Q. How do dogs or cats become infected with West Nile virus?

A. The same way humans become infected, by the bite of infectious mosquitoes. The virus is located in the mosquito's salivary glands. During blood feeding, the virus is injected into the animal. The virus then multiplies and may cause illness. Mosquitoes become infected when they feed on infected birds, which may circulate the virus in their blood for a few days. It is possible that dogs and cats could become infected by eating dead infected animals such as birds, but this is unproven.

Q. Can a dog or cat infected with West Nile virus infect other dogs or cats?

A. No. There is no documented evidence that West Nile virus is transmitted from animal-to-animal.

Q. How long can a dog or cat be infected with West Nile virus?

A. The answer is not known at this time.

Q. Should a dog or cat infected with West Nile virus be destroyed? What is the treatment for an animal

infected with West Nile virus?

A. No. There is no reason to destroy an animal just because it has been infected with West Nile virus. Full recovery from the infection is likely. Treatment would be supportive and consistent with standard veterinary practices for animals infected with a viral agent.

Q. Are duck and other wild game hunters at risk for West Nile virus infection?

A. We do not know the extent to which West Nile virus may be present in wild game. Surveillance studies are currently underway in collaboration with the U.S. Geological Survey (USGS) National Wildlife Health Center, Madison, WI, and state and local wildlife biologists and naturalists, to answer this question.

Q. What should wild game hunters do to protect against West Nile virus infection?

A. A hunter should follow the usual precautions when handling wild animals. If you anticipate being exposed to mosquitoes, apply insect repellents to clothing and skin, according to label instructions, to prevent mosquito bites. Wear gloves when handling and cleaning animals to prevent blood exposure to bare hands. Cook meat thoroughly.

Q. Who should wild game hunters contact for information about the risk for West Nile virus infection in specific geographic areas?

A. Hunters should check with their local area department of wildlife and naturalist resources, state epidemiologist at the state health department, or the U.S. Geological Survey (USGS) National Wildlife Health Center, Madison, WI, 608-270-2400 for information on local area risk.

Q. Were the horse deaths reported on Long Island, NY, due to West Nile virus?

A. West Nile virus has been identified in the tissue of several horses that died on Long Island, NY, in October 1999, and specific West Nile antibody has been observed in others. Investigations by the USDA and CDC indicate that West Nile virus was responsible for some of the horse deaths.

Q. How do the horses become infected with West Nile virus?

A. The same way humans become infected, by the bite of infectious mosquitoes while biting to take blood. The virus is located in the mosquito's salivary glands. During the bloodmeal, the virus is injected into the blood system of the horse. The virus then multiplies and may cause illness. The mosquitoes become infected when they feed on infected birds or other animals.

Q. What actually causes the horse's death?

A. Following transmission by an infected mosquito, West Nile virus multiplies in the horse's blood system and crosses the blood brain barrier infecting the brain. The virus interferes with normal central nervous system functioning and causes inflammation of the brain.

Q. Can I get infected with West Nile virus by caring for an infected horse?

A. West Nile virus is transmitted by infectious mosquitoes. There is no documented evidence of person-to-person, or animal-to-person transmission of West Nile virus. Normal veterinary infection control precautions should be followed when caring for a horse suspected to have this or any viral infection.

Q. Can a horse infected with West Nile virus infect horses in neighboring stalls?

A. No. There is no documented evidence that West Nile virus is transmitted from horse-to-horse. However, horses with suspected West Nile virus should be isolated from mosquito bites, if at all possible.

Q. My horse is vaccinated against eastern equine encephalitis (EEE), western equine encephalitis (WEE), and Venezuelan equine encephalitis (VEE). Will these vaccines protect my horse against West Nile virus infection?

A. No. EEE, WEE, and VEE belong to another family of viruses for which there is no cross-protection. There

is no approved vaccine currently available for West Nile virus.

Q. How long will a horse infected with West Nile virus be infectious?

A. The answer is not known for sure at this time, but previously published data suggest that the virus is detectable in the blood for only a few days.

Q. Should a horse infected with West Nile virus be destroyed? What is the treatment for a horse infected with West Nile virus?

A. No. There is no reason to destroy a horse just because it has been infected with West Nile virus. Data suggest that most horses recover from the infection. Treatment would be supportive and consistent with standard veterinary practices for animals infected with a viral agent.

Q. What can I do to reduce my risk of becoming infected with West Nile virus?

A.

- Stay indoors at dawn, dusk, and in the early evening.
- Wear long-sleeved shirts and long pants whenever you are outdoors.
- Apply insect repellent sparingly to exposed skin. An effective repellent will contain 20% to 30% DEET (N,N-diethyl-meta-toluamide). DEET in high concentrations (greater than 30%) may cause side effects, particularly in children; avoid products containing more than 30% DEET.
- Repellents may irritate the eyes and mouth, so avoid applying repellent to the hands of children. Insect repellants should not be applied to very young children (< 3 years old).
- Spray clothing with repellents containing permethrin or DEET, as mosquitoes may bite through thin clothing.
- Whenever you use an insecticide or insect repellent, be sure to read and follow the manufacturer's **DIRECTIONS FOR USE**, as printed on the product.
- Note: Vitamin B and "ultrasonic" devices are NOT effective in preventing mosquito bites.

Q. Where can I get more information on mosquito-borne viral encephalitis?

A. Visit the CDC website on [Arboviral Encephalitides](#).

Q. Where can I get more information on pesticides used to control mosquito populations?

A. Visit the Environmental Protection Agency (EPA) website on [Pesticides and Mosquito Control](#).

For further information, e-mail dybid@cdc.gov, call 970-221-6400, or fax 970-221-6476.

Division of Vector-Borne Infectious Diseases,
National Center for Infectious Diseases,
Centers for Disease Control and Prevention
Updated February 1, 2000

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DISPATCH

WEST NILE MYSTERY

How did it get here? The C.I.A. would like to know.

BY RICHARD PRESTON

SINCE the end of August, a brain virus that is now believed to be a previously unknown variant of the West Nile virus has killed at least five people around New York City and its suburbs. This has created a stir in the national news media—and a whiff of concern within the C.I.A. that the outbreak might have been an act of bioterrorism—but the main effect of the outbreak in humans has been quiet: thousands of New Yorkers may have had West Nile virus replicating in their brains this summer without knowing it. In most people, the West Nile illness feels like a mild flu. Humans catch it from the bite of an infected mosquito. You might get a headache and a backache and the blahs; just another summer bug. Usually, the illness lasts from three to six days, and people recover quickly, without lasting effects. But in young children, the elderly, and people with weak immune systems West Nile can turn into encephalitis—an inflammation of the brain. The brain becomes red and puffs up inside the skull. These victims may get tremors—their muscles may become uncontrollably weak—and they can have seizures, fall into a coma, stop breathing, and die.

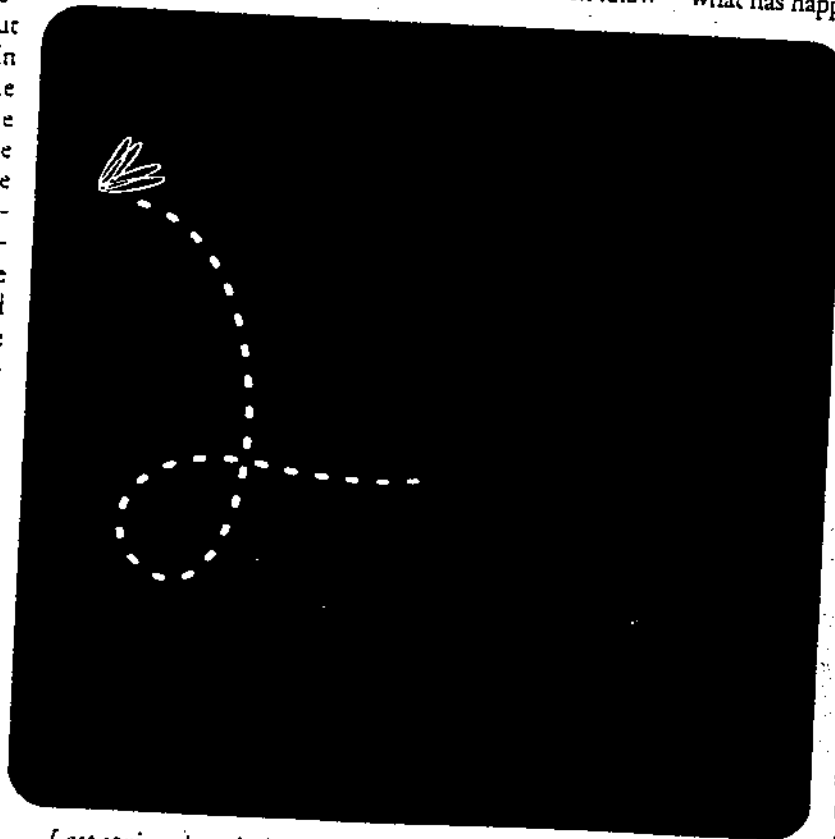
The West Nile virus was first identified by virologists in 1937, in the West Nile district of Uganda, along the Albert Nile near the border with the Congo, where it was making people sick.

West Nile virus is a traveller. Mosquitoes are its main carriers and birds are its main hosts; they are its deep reservoir in nature. It has been found all over east Africa, in western India, in Australia (where one of its close relations is known as Kunjin), and in Egypt and the Middle East. About forty per cent of the people who live in the Nile Delta in Egypt have been infected with West Nile at some point in their lives. Although the virus stages occasional outbreaks in people, the real outbreaks are happening in birds, and people are bystanders caught in the crossfire—bitten by chance by an infected mosquito. The virus also gets into ticks. From the point of view of the West Nile virus, the human species is of less consequence than a tick. In a manner of speaking, West Nile doesn't even know

we exist. But when West Nile moves with the birds there is splatter damage among humans. Birds occasionally carry West Nile into Eastern Europe during their annual migrations out of Africa. Right now, there is a major outbreak of what is believed to be the West Nile virus in southern Russia, around the cities of Volgograd and Rostov-on-Don. There are reports that some six hundred people have been taken ill, and at least thirty-two have died. American scientists have been trying to persuade Russian scientists to send them samples of tissue and blood from the Russian outbreak, so that they can compare the New York strain with the Russian strain. It might show that the New York strain somehow came from Russia, perhaps travelling by airplane in the bloodstream of an infected Russian who ended up in Queens and was bitten by a mosquito there, and the mosquito then passed it to a bird. So far, the Russians haven't sent any samples.

Until this summer, the West Nile virus had never been seen in the Western Hemisphere. Some virus experts think that the leap of West Nile virus into North America—if this is indeed what has happened—is one of the most

important biological events to occur in the world of the viruses in this century. For one thing, until now the virus has generally not been fatal to its avian hosts. For another, the outbreak reveals the mobility of viruses and their propensity to cross continents. The experts have no idea how the virus got to New York and little idea where it's going. Possibly, an infected bird somehow flew across the ocean—or hitched a ride on a ship, or was imported legally or illegally. Or perhaps an infected mosquito got here on a plane. The virus may now be headed down the eastern seaboard of the United States for the winter, travel-



Last spring, long before the outbreak, an Iraqi defector declared that Saddam Hussein had told him of plans to use the virus as a bioweapon.

Ebola virus. The scientist is said to be well respected by his peers, and he works with a team of analysts, mainly younger people fresh out of college. The analysts gather intelligence involving bioweapons and then try to assemble the big picture, fitting the data together with what they already know about bioweapons. After the New York diagnosis was changed to West Nile, on September 27th, the top officers in the bioweapons-analysis section suffered a lurch of uneasy recognition: they recalled a report that a self-described defector from Iraq had declared last April that Saddam Hussein was developing a strain of the West Nile virus as a biological weapon and was preparing to release it.

Someone in the analysis section apparently noticed that on April 6th a British tabloid, the *Daily Mail* of London, had published an excerpt from a book entitled "In the Shadow of Saddam," with a note that the account's credibility was "for the reader to judge." The author calls himself Mikhael Ramadan. That may or may not be his real name. Mikhael Ramadan is said to look a lot like Saddam Hussein. Purportedly, he served as one of Saddam's doubles, in order to help foil assassination attempts. There is a photograph, supposedly of him, on the back cover of the book, and he looks remarkably like Saddam except that he has more gray at the temples, and somehow he looks kindly. Eventually, Mikhael Ramadan managed to escape from Iraq. In his book he offers a wild-sounding account of his experiences working as Saddam's double, including such vignettes as a Kurdish rebel being lowered slowly into a vat of sulfuric acid. Mr. Ramadan also wrote, as the *Daily Mail* published it:

In 1997, on almost the last occasion we met, Saddam summoned me to his study. Seldom had I seen him so elated. Unlocking the top right-hand drawer of his desk, he produced a bulky, leather-bound dossier and read extracts from it. . . . The dossier holds details of his ultimate weapon, developed in secret laboratories outside Iraq. . . . Free of UN inspection, the laboratories would develop the SV1417 strain of the West Nile virus—capable of destroying 97 pc [per cent] of all life in an urban environment. . . . He said SV1417 was to be "operationally tested" on a Third World population centre. . . . The target had been selected. Saddam said, "but that is not for your innocent ears."

It sounded crazy. But why would a man presenting himself as an Iraqi de-

factor predict that Saddam would unleash a virus just months before the same one broke out unexpectedly in New York? And, of all the thousands of viruses in the world, why West Nile? It was enough to make any bioweapons analyst at the C.I.A. feel uneasy. Adding another twist to the story, it turns out that in 1985 the Centers for Disease Control had sent samples of West Nile virus to a researcher in Iraq, which occasioned a controversy in the media five years later, on the eve of the Gulf War, when reports came out that Iraq had a biowarfare program. But the fatality rate for West Nile is not remotely near ninety-seven per cent, and "SV1417" is not a standard designation for any known strain of West Nile virus. It may be a code designation for some strain that Saddam's bioweaponers might conceivably be working on, perhaps in a French-built virology facility near Baghdad that has been closed to inspectors from the United Nations for two years, ever since Saddam threw out all the U.N. inspectors. In the early nineteen-eighties, a French vaccine company, Institut Merieux, which is a division of the pharmaceutical giant Rhône-Poulenc, built a facility called the Foot and Mouth Vaccine Plant at a site now known as Al Manal. Institut Merieux helped the Iraqis operate Al Manal for a time, and trained the staff before departing. Al Manal was subsequently used for research into virus weapons. During the Gulf War, Al Manal and the Merieux equipment were used for making twenty thousand litres of botulinum toxin, or BTX—one of the most lethal biotoxins known. In 1992, the United Nations tore down the buildings in which the BTX was made and destroyed that equipment, but it left standing eighty per cent of the facility, part of which was for virus research. (Some inspectors wanted the whole thing torn down.) Al Manal may be back in business developing virus weapons. At the same time that the report

about West Nile virus was being discussed in the C.I.A., Dr. Ken Alibek, the former deputy chief of research for Biopreparat, the Soviet Union's main biowarfare program—he defected to the United States—in 1992—spoke to various people on Capitol Hill, voicing his concern that the West Nile outbreak was suspicious. "I told them, 'It will not be possible to say whether or not it is terrorism unless we have a thorough study,'" he explained to me. "We need to take these situations with a high degree of seriousness."

Mikhael Ramadan is now apparently in hiding somewhere in Canada or the United States. At any rate, the C.I.A. people had an interest in finding him. Presumably, they would want to ask him more questions about the West Nile virus and whatever Saddam might have told him about any plans Iraq might have had for it and New York City. I don't know whether they succeeded in finding him.

Hoping to speak with Mikhael Ramadan myself, I called his publisher, a tiny outfit called GreenZone Publishing, which has an office in the south of England. One of the firm's three directors, James Bartholomew, answered the telephone. "We don't know Mikhael Ramadan's whereabouts," he said. "We believe he was in Canada for a while. We have five employees here, and none of our people has ever met him. We were introduced to him through a third party. There was a woman, an American-Iraqi nurse, involved in bringing him forward. There was a verification meeting with him that took place in the fall of last year, in Canada, I guess. All of our communication with him has been by E-mail. His E-mail address is now defunct. His manuscript was physically delivered to us by a courier outfit. We tried to get him to change his mind and come forward for television interviews. We had inquiries from NBC and CBS. What is that show, '60 Minutes'?—they were trying to find him. The book has sold well for a company our size. We want to pay him, but we can't find him."

"Is the book fiction?"

"We've taken his book as true, based on the evidence we have. But we don't know how much of it is true."

"What's the evidence?"

"I can't say. It would put him in dr . . ."



**"INTIMATE AND
COMPELLING" ★**



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"In her spare, wonderfully elegant prose, [Sobel] gives us Galileo the man, Galileo the father."
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"Recapitulating the splendors of her best-seller *Longitude*, Sobel finds a new way to celebrate history's intellectual heroes."
—*Newsweek*

"An intimate and compelling biography of the great scientist [that] moves beyond his world-altering achievements into the heart of his family, his foibles, and his radical beliefs."
—*Elle**

"A wholly involving tale, a worthy follow-up to Sobel's surprise bestseller, *Longitude*."
—*Publishers Weekly*

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THE NEW YORKER



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lives all over the world," Monath said. "But now the virus is encountering a whole new ecosystem in North America. Everything else will be unfamiliar to the virus—the weather and climate, the ticks, many of the birds—so it's got a job ahead of it in order to become established. Winter is coming on. In order to maintain itself and reproduce, it's got to find a suitable ecosystem. And it's got to find a mechanism for surviving the winter. Humans are just getting in the way. They have nothing to do with its survival. In Africa, it migrates with the birds. Right now, the birds of eastern North America are heading south for Florida and the Caribbean, and they will be going as far as Brazil and Argentina. We could see an outbreak of West Nile in Buenos Aires. It could also persist locally in the New York area, in hibernating mosquitoes. The virus may not be successful at overwintering, but if it is it will take us years to understand the impact and spread of West Nile in the New World."

On Wednesday, October 7th, a man in his twenties from Lakewood, New Jersey, reportedly became the first suspected case of West Nile-like encephalitis south of New York City. Last week, he was in critical condition. New Jersey health officials reported that they had picked up fifty dead crows around New Jersey; fifteen of them have tested positive for the virus. Tracey McNamara, at the Bronx Zoo, said, "I'm certain that the number of birds being reported dead is a gross understatement." A woman in Hopewell, New Jersey, found five dead blue jays and crows, but threw them away before health officials could pick them up.

AT sunrise a couple of days ago, I went up on a ridge overlooking the Hopewell Valley, near where I live. I walked to the top of a field. Trees stood in field lines all around. Birds were chirping, and I heard the squawking of a grackle. The trees were smoky and tinged with yellow. Cloud decks were moving in, and the sun had not yet risen. A fingernail of moon shone through breaks in the running clouds, and I picked out the morning star, Venus, a pinpoint of light near the moon. The sun rose, and Venus was washed away in the head of dawn. The

birds started lifting off, and all were flying from north to south, except for two crows, who loitered in an ash tree at the bottom of the field like hoods on a corner, flapping around and looking for crow-excitement.

Three flycatchers wove for insects, weaving always southward. Two more flycatchers came by, going south, and three finches passed, going south, and a lone bird with sharp wings beat by, going south, and then three grackles humped along, keeping the rising sun on their leftward wings. Milkweed in the field was dying, its leaves turning brown at the edges. I broke open a milkweed pod, and two shockingly red beetles tumbled into my fingers. They'd been feeding on the milkweed and probably laying eggs. I tore out the milkweed seeds and threw them in the air. A few parachutes of milkweed deployed, and the seeds drifted across the field. Everything alive understood what was coming. What was coming, for many organisms, was death. For them, death was not what we think of as death but a means of survival. You die on purpose, to give your genes their best chance to spread out into the world and remain alive. This valley in New Jersey reminded me in a strange way of Kitum Cave, on Mt. Elgon, in East Africa, a haunting place I'd seen some years ago. Kitum Cave is suspected of harboring a type of the Ebola virus called Marburg, which is thought to carry on its life cycle inside some unknown animal that visits the cave or lives there. The natural host of the Ebola virus has never been identified. The cave in Africa and the field in New Jersey were two habitats bursting with life, and in them were viruses, active but unseen, carrying on their life cycles. I could not see Ebola in Kitum Cave any more than I could see West Nile pouring through the Hopewell Valley. However this biological event began, it has become something important in nature. In discovering the New World, West Nile has killed a few humans and managed to foil the C.I.A., but now it has more important business—to find a way, somehow, to keep making copies of itself. If the virus continues migrating south with the birds, and if it finds a place to hide this winter, the only way we will know is if it comes back next year. ♦



Summary of West Nile Virus in the United States

December 23, 1999



West Nile virus (WNV) has been identified in a limited area of the northeastern United States in wild birds, mosquitoes, humans, and horses. Specifically, the affected area consists of parts of Connecticut, New York, New Jersey, and one county in Maryland. The map in Figure 1 outlines the areas where evidence of the virus was found. Clinical illness in humans and horses occurred during the period from early August through late October (Figure 2). WNV activity in the United States has ended because of various factors, including climate and vector control activities.

The scientific literature about this virus indicates that transmission is primarily through a mosquito-bird cycle, with occasional incursions into other vertebrates as terminal hosts only. The literature supports the conclusion that horses are terminal hosts for WNV and do not maintain a sufficient viremia to infect either other mammals (including humans) or mosquitoes.

An outbreak of human encephalitis of then unknown etiology began in New York City in early August 1999. On September 14, 1999, a virus was isolated from tissues of a crow from the New York City area. This virus was later identified as WNV and confirmed as the cause of the human encephalitis outbreak. WNV was isolated from central nervous system tissue from a horse on Long Island, New York, that exhibited neurologic signs; the isolate was confirmed to be WNV by the Centers for Disease Control and Prevention (CDC) on October 18, 1999. As of December 15, 1999, 23 cases of WNV have been identified in horses, all in Suffolk and Nassau Counties on Long Island, New York. Because horses are not known to play a role in transmission of WNV, quarantines were never placed on any non-clinically ill horses in the outbreak area.

Surveillance has continued in the affected area and in additional States on the eastern coast of the United States to monitor the possible spread of WNV. This surveillance consists of investigating suspect cases in horses, testing wild birds, collecting and testing mosquitoes, and testing sentinel chickens. No spread has been detected in horses, and wild birds and mosquitoes are no longer being found positive for WNV. No cases of WNV infection were found in any commercial poultry in the United States.

The deaths of crows and other wild birds coincided with cases of illness in humans and horses. Anecdotal reports suggest that significant wild bird mortality very likely preceded cases of human and equine illness, but surveillance for dead wild birds dramatically increased after the association was made between WNV in wild birds and human encephalitis cases. Based on the high mortality of crows, it appears that crows in the United States are highly susceptible to WNV. The lack of crow mortality in areas outside of the States known to be affected is, therefore, a good indicator that WNV activity is unlikely to be present in other regions of the country.

To obtain additional information about the virus, inoculation studies have begun in a small

number of horses, chickens, and turkeys. In none of these species did inoculation with WNV cause clinical disease. In each of the species, WNV was reisolated from the blood after inoculation. Many results are pending, but thus far the study has shown that chickens amplified the virus. Each species developed detectable antibodies after being inoculated. More detailed information will be provided as it becomes available.

In recent genetic sequencing studies, WNV isolates from the New York outbreak showed strong similarities to isolates from the Eastern Mediterranean region, suggesting that this region may be the origin of the WNV that caused the U.S. outbreak. The mechanism of introduction of WNV is unknown, but speculation has centered on infected humans, mosquitoes, or birds being transported by aircraft (see Lancet, Research Letters, Volume 354, Number 9194, 4 December 1999).

WNV activity in the United States has ceased because of various factors including climate and previous vector control activities. The information below includes specifics on the outbreak, on surveillance and vector control, and on evidence that virus activity has ended.

Humans

59 laboratory-positive cases (all in New York)

First human onset - August 2, 1999

Last human onset - September 22, 1999

[Dates given are for clinical onset, an earlier point in the course of disease progression than the dates given for wild birds (see below), for which only a date of collection is known.]

Active surveillance for human encephalitis cases in Connecticut and New Jersey has not detected any WNV cases.

Horses

23 clinical cases (all in New York, 20 in Suffolk County and 3 in Nassau County)

First horse onset - August 26, 1999

Last horse onset - October 18, 1999

[Dates given are for clinical onset.]

Twenty-three cases of WNV were identified in horses from New York: 20 from Suffolk County (eastern Long Island) and 3 from Nassau County (western Long Island), which is closer to New York City, where humans, mosquitoes, and wild birds tested positive for WNV. Virus was isolated from tissues of 3 of the 20 Suffolk County cases. The genders and breeds of horses infected with WNV appear to reflect the general population of horses on Long Island. Females (mares and fillies) and males (stallions and geldings) of several breeds were infected; most were quarterhorses and standardbreds.

Suffolk County Cases

Beginning August 26, 1999, a private practitioner observed multiple horses with neurologic signs in eastern Long Island, which prompted investigations to determine the cause. At the request of the New York State Department of Agriculture and Markets, USDA sent an Early Response Team (ERT) to assist in investigating the cases.

years. Two of the three WNV cases in Nassau County were horses stabled at Belmont Park race track. Both of these horses had clinical illness compatible with WNV infection, and both were found to have high WNV antibody titers. Both horses have recovered and no other clinically ill horses have been reported from Belmont Park.

The third case in Nassau County was detected by a retrospective investigation. The 23-year-old horse exhibited neurological signs consistent with WNV on September 4, 1999, recovered within a few days, and remains healthy. A serum sample obtained from the horse on November 2 was reported serologically positive for WNV by the National Veterinary Services Laboratories on November 26. The horse was stabled in an area on the north shore of Nassau County near WNV-positive human cases and mosquito pools in Queens County.

WNV Attack Rates in Horses

Attack rates of WNV, per 10,000 horses, are shown in Table 2 for each of the four States in which at least one WNV-positive wild bird was found. Table 3 shows attack rates for counties in the State of New York where at least one WNV-positive wild bird was found. The horse population data for Table 3 is from the last census for which data is currently available, but the population is not expected to have changed significantly. Even in Suffolk County, New York, which had by far the greatest number of equine cases, less than 0.4 percent of all horses had a clinical illness caused by WNV.

Table 2. Attack Rates of WNV in Horses by State, 1999

State	Horse Population as of January 1, 1999*	Cases of WNV in Horses	Attack Rate (per 10,000)
Connecticut	26,000	0	0.0
Maryland	45,000	0	0.0
New Jersey	45,000	0	0.0
New York	155,000	23	1.5
Total	271,000	23	0.8

* Includes horses, ponies, mules, burros, and donkeys for farm and non-farm premises.

Culex spp., including *Culex pipiens*. *Culex pipiens* is a species that prefers breeding sites generally associated with urban settings.

Since the onset of freezing weather in the WNV-affected areas, mosquito collection has stopped because of the low numbers of insects being collected. After the last positive collection on October 14, additional pools were collected for 2 more weeks; those pools were negative for WNV.

Vector Control

The State Departments of Public Health in New York, New Jersey, and Connecticut conducted intensive mosquito control activities beginning in the latter part of August because of suspect cases of St. Louis encephalitis. These efforts intensified once WNV was confirmed as the actual etiologic agent. Mosquito control activities included area-wide spraying for control of adult mosquitoes and source reduction, i.e., eliminating mosquito breeding grounds. Spraying for adults continued until the first frost or until surveillance indicated that adults were no longer active.

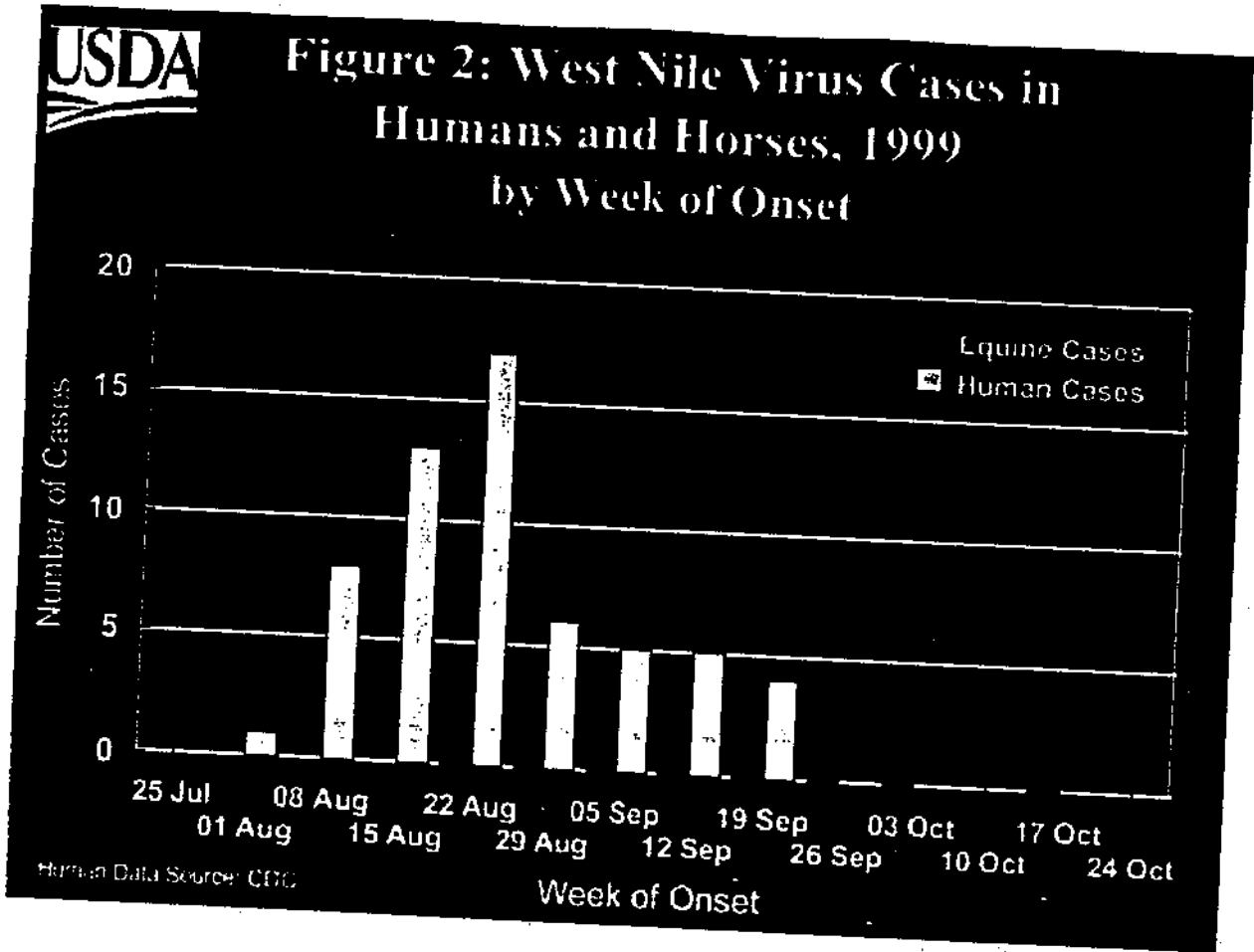
Climate/Weather Factors

The map in [Figure 5](#) documents the lowest temperatures observed in the relevant States through December 12, 1999. In locations that have had a hard freeze (temperatures less than -3°C) mosquito activity has, for practical purposes, ended. With the cold temperatures seen in WNV-affected areas, and the concomitant reduction of mosquito activity, pesticide spraying activities have ended.

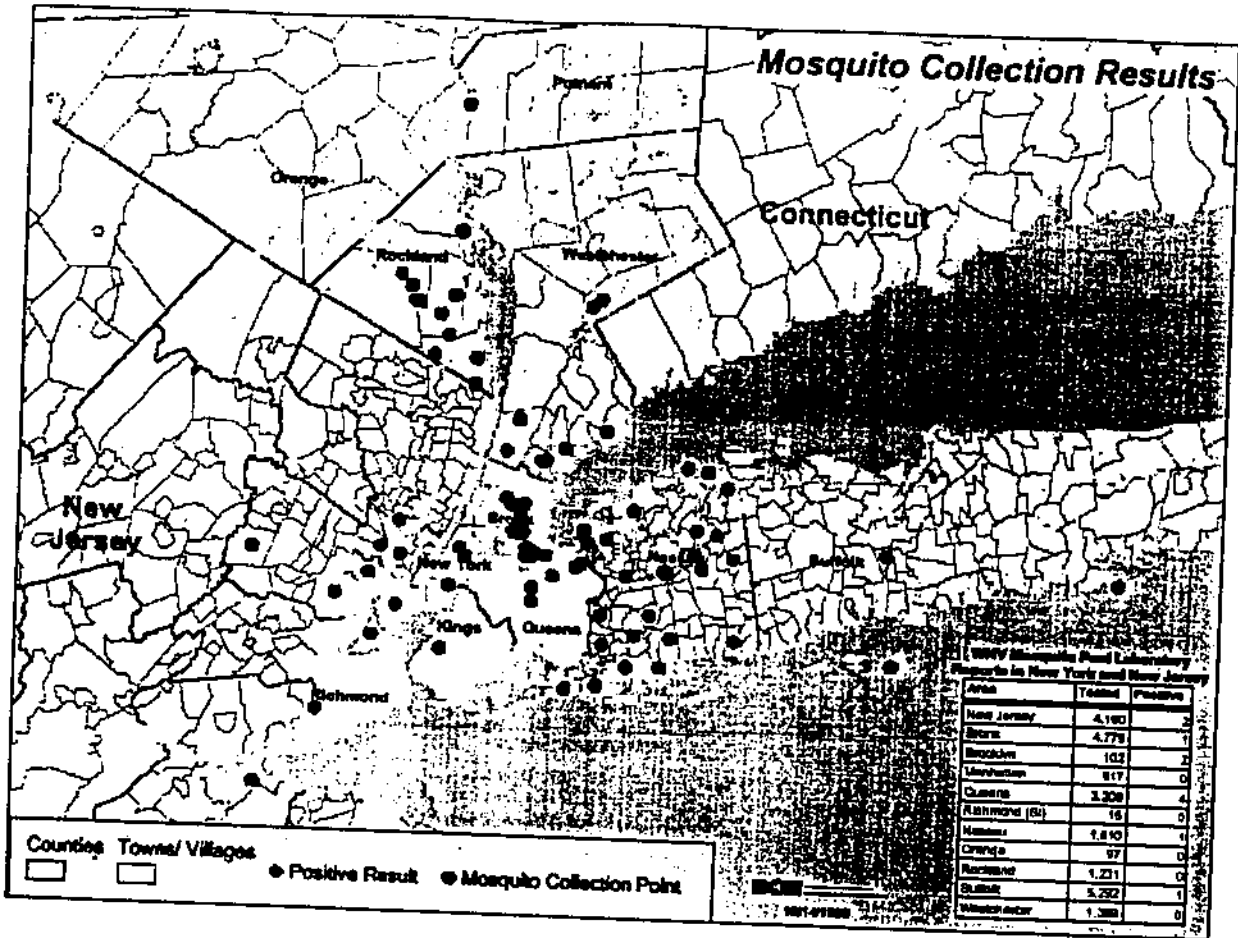
Summary

An outbreak of West Nile virus occurred in a limited area of the northeastern United States from August through October of 1999. The affected area consisted of parts of Connecticut, New York, New Jersey, and one county in Maryland. WNV was identified in wild birds, mosquitoes, humans and horses. WNV activity in the United States has ceased because of various factors, including climate and vector control activities.

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