NORTH CAROLINA CENTER FOR
PUBLIC POLICY RESEARCH INC.

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N.C.'s HEALTH STATUS GETS MIXED MARKS

North Carolinians exceed the national averages in deaths from heart disease, cancer, stroke, motor vehicle and other accidents, lung disease, pneumonia and influenza, diabetes, and chronic liver disease, says the N.C. Center for Public Policy Research in the latest issue of its quarterly magazine, North Carolina Insight. The Center also says the state is lower than the national average in deaths from suicide, homicide, kidney disease, and hardening of the arteries.

"Healthwise, North Carolina's population is on the mend. But the state still lags much of the nation, and race and geography still seem to play a role in the health of individuals," says Mike McLaughlin, editor of Insight.

The Center sorted through data kept by state agencies, plus a number of other studies and opinion polls to formulate its report on the health status of North Carolina's population. State Health Director Ron Levine best summed up the results of this analysis. "Compared to ourselves, we are healthier than ever before," says Levine. "Compared to the United States, we are not as healthy as we should be."

The article, written by Ken Otterbourg, appears in "Health Care in North Carolina: Part II," the second special edition of North Carolina Insight devoted to health-related issues. Other topics in this edition include nursing home regulation, a thorough compilation of state-level health care programs in North Carolina, and a listing of resources in the health care field. It follows an earlier issue of Insight which examined access to health insurance, rising health care costs, and the viability of rural hospitals.

Top 10 Health Problems in N.C.

Mortality rates currently provide the best overall data source on the health status of the North Carolina population. When people die, their death certificates state the cause of death, their age, their race, and their address. At the end of the year, the numbers are collected and analyzed by the Division of Statistics and Information Services in the N.C. Department of Environment, Health, and Natural Resources.

These figures enable researchers to pinpoint the who, what, when, where, and why of dying. Data on diseases -- morbidity rates -- are not kept so systematically and are thus less reliable.

The state's top killer is heart disease, accounting for nearly a third of all deaths in North Carolina. Rounding out the top 10, in descending order, are cancer, strokes, unintentional injuries, lung disease, pneumonia, diabetes, suicide, liver disease, and homicide. Four-fifths of the state's deaths each year can be attributed to these 10 diseases. Generally speaking, the more non-whites, males, and elderly that live in a county, the higher the death rate.

When figures are adjusted for age, Avery County has the state's highest mortality rate. This is attributed to a high rate of heart disease, despite a relatively small minority population. Onslow County, home to Camp Lejeune and thousands of healthy young Marines, has the state's lowest mortality rate.

In 1988, the latest year for which comparable figures were available, North Carolina's death rate exceeded the national average in all but four areas: suicide; homicide; kidney disease; and atherosclerosis, or hardening of the arteries. After adjusting for age, the state's overall death rate is 571 per 100,000. That's higher than the U.S. death rate of roughly 536 per 100,000, even though the nation's population, on average, is slightly older than North Carolina's.

Other studies also show the state to be slightly worse than the national average, healthwise. The Northwestern Mutual Life Insurance Co. ranked the state 30th in the nation in 1991 on 17 indicators of health, well behind Virginia, but ahead of most states in the South Atlantic region and up two places from a ranking of 32nd in 1990.

And although most North Carolinians rate themselves as healthy, the number who rate their own health as good or excellent again is a little lower than the nation as a whole. A Carolina Poll conducted in March 1991 by the School of Journalism and Mass Communication and the Institute for Research in Social Sciences at UNC-Chapel Hill found 81 percent of North Carolina adults rate their health as excellent or good. By comparison, a 1989 national poll found 91 percent of respondents rated their health as excellent, very good, or good.

Racial Differences in Health Problems

Minorities have poorer overall health than do whites. Black males, for example, are almost five times more likely to be the victims of homicide and more than twice as likely to die of diabetes or stroke than are white males, according to the N.C. Center for Health and Environmental Statistics in the Department of Environment, Health, and Natural Resources. Death rates from heart disease and cancer for black males also far exceed those of whites.

The Effect of Lifestyles on Health: Smoking, Diet, and Exercise

Part of the reason the state trails the nation in health has to do with lifestyles. Smoking, poor diets, and lack of exercise are among the leading causes of poor health. "There's a large segment of North Carolina's population that likes its buttered grits and red-eye gravy and bacon," says Dr. Joseph Konen, director of community medicine at the Bowman Gray School of Medicine in Winston-Salem. In contrast, Utah, one of the nation's healthiest states, has a high percentage of Mormons, whose religious teachings urge them to avoid tobacco, caffeine, and alcohol. The state also has a much smaller percentage of non-whites in its population.

Heart Disease and Cancer

Much of state government's attack on poor health is centered on changing behaviors. For example, the state has launched a crusade against cigarette smoking, even though tobacco is North Carolina's leading cash crop and a linchpin of the state's economy. The state is participating in a nationwide campaign called ASSIST, the American Stop-Smoking Intervention Study, which aims to cut the adult smoking rate from 28 percent to 15 percent by the year 2000. Smoking is considered the leading cause of heart disease.

Cancer remains the only major illness that kills more people now than 40 years ago. Prevention and early detection play a primary role in fighting the disease.

U.S. lifestyle changes clearly are the goal in the fight against diabetes. The Centers for Disease Control have begun a project in the Triad and Triangle, with the Triad as the control group. The communities of Raleigh and Durham will receive heavy doses of public education with the goal of reducing body weight by 5 to 10 percent during the next decade. Participants will then be compared to the control group to see if there has been a preventive effect.

Infant Mortality

The state's last-place national ranking in infant mortality in the late 1980s prompted an all-out assault from state policymakers, who have since poured more than $40 million into various forms of prenatal care. The state now has moved off the bottom, but the infant mortality rate remains more than twice as high for non-whites as for whites. Any death of an infant less than one year old counts toward the state's infant mortality rate. These deaths rank eighth as a cause of death in North Carolina, just ahead of suicide.

In these and other areas, the state clearly has room for improvement in health. One challenge is to make the next generation healthier than the last. Experts say the solution lies in fostering better eating habits, a regular exercise program, and avoidance of alcohol and drugs, including tobacco.

The most recent survey of North Carolina lifestyles shows that 11 percent of residents between the ages of 18 and 24 are obese. More than half do little or no exercise. A fifth smoke. More than a fifth drink heavily.

Health education through the public schools represents one tool for changing these behaviors. More work also is needed in a number of other areas. "Our citizens continue to die... too early or needlessly," says Levine. "Problems such as lack of health care access, poor health habits [and] behavior, and inadequate education... must be resolved before the relative health of North Carolinians can improve."

Shortage of Rural Doctors and High Number of Uninsured

North Carolina is hurt by a shortage of primary care physicians in some rural counties. In 1987, North Carolina had one doctor for every 565 residents. The national average was one doctor for every 467 people. Within the state, there are vast discrepancies in the number of primary care physicians -- doctors who provide the vital first rung on the health care ladder. Orange County, home of the University of North Carolina's medical center, had one such doctor for every 316 people in 1990. In

Stokes County in the northwest, each primary care physician serves, on average, 6,024 people.

The state also is plagued by a high number of uninsured who have less access to the health care system. On a given day, nearly one in every eight persons in North Carolina lacks health insurance, and as many as 1.2 million citizens are uninsured at some point over the course of a year.

In the 1991 session, the General Assembly took two major steps toward broadening access to preventive care. The legislature passed a law requiring health insurers to pay for annual mammograms and pap smears for women, and it required health insurers and health maintenance organizations to offer bare-bones insurance plans to small businesses.

Both laws have limited scope. The uninsured get no help from the law requiring insurers to pay for mammograms and pap smears, and there is no assurance that small businesses will enroll in the insurance plans offered. N.C. Insurance Department officials say an optimistic estimate would be a 10 percent increase in the number of small businesses offering insurance.

The N.C. Center for Public Policy Research is an independent, nonpartisan, nonprofit corporation created to study public policy issues facing North Carolina and evaluate state government programs. This research project was supported by grants from the A.J. Fletcher Foundation in Raleigh and the Kathleen Price and Joseph M. Bryan Family Foundation in Greensboro. The Center also receives general operating support from the Z. Smith Reynolds and Mary Reynolds Babcock Foundations in Winston-Salem, 120 corporate contributors, and about 750 individual and organizational members.

In addition to publishing North Carolina Insight magazine, the Center has conducted studies on disparities in funding between rich and poor school districts in North Carolina, access to health care, and ways to improve voter participation.

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Copies of the issue of Insight magazine containing the research on the health status of the North Carolina population can be obtained from the N.C. Center for Public Policy Research for $6.36 plus $1.50 for postage and handling. To order, call (919) 832-2839, or write the N.C. Center, P.O., Box 430, Raleigh, N.C. 27602.

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Table 1. Mortality Rates for U.S. and N.C., by Cause, 1979–88

Mortality Rates per 100,000	1979		1981		1984		1986		1988	
	U.S.	N.C.	U.S.	N.C.	U.S.	N.C.	U.S.	N.C.	U.S.	N.C.
All Causes	587.4	644.5	568.2	609.1	545.9	571.2	541.7	574.3	535.5	570.8
Specific Causes										
Diseases of the Heart	203.0	223.7	195.0	211.7	183.6	193.9	175.0	185.5	166.3	173.1
Cancer	133.4	132.0	131.6	129.6	133.5	126.8	133.2	130.6	132.7	134.7
Cerebrovascular Diseases (Stroke)	42.5	55.0	38.1	49.0	33.4	41.6	31.0	38.3	29.7	37.7
Motor Vehicle Accidents	23.9	26.9	21.8	25.2	19.1	23.3	19.4	26.2	19.7	23.9
Other Accidents and Adverse Effects	19.7	24.5	18.0	21.4	15.9	19.0	15.7	19.1	15.3	20.1
Chronic Obstructive PulmonaryDiseases (Lung Disease)	14.8	14.7	16.3	15.6	17.7	16.2	18.8	18.6	19.4	19.7
Pneumonia and Influenza	11.1	12.6	12.3	14.5	12.2	12.7	13.5	14.7	14.2	14.8
Diabetes Mellitus	9.9	11.3	9.8	10.0	9.5	10.0	9.6	10.0	10.1	13.0
Suicide	12.0	12.5	11.5	12.6	11.6	12.6	11.9	11.3	11.4	10.9
Chronic Liver Disease and Cirrhosis	12.3	12.7	11.4	10.5	10.0	8.7	9.2	8.8	9.0	9.2
Homicide/Legal Intervention	10.6	12.3	10.4	10.7	8.4	8.5	9.0	9.1	9.0	8.8
Nephritis/Nephrosis (Kidney Disease)	4.5	6.1	4.5	5.9	4.7	5.5	4.9	5.1	4.8	4.3
Atherosclerosis	5.6	5.9	5.2	5.0	4.2	4.2	3.7	4.0	3.4	2.8

Source: N.C. Center for Health and Environmental Statistics, Department of Environment, Health, and Natural Resources
Table prepared by Seth Blum, Center intern and Duke Univ. law student
Shaded areas indicate years when N.C. rates were lower than national average.

Table 2. Comparative Rankings of Health Status in 1990 and 1991.

Rank 1990	Rank 1991	State
4	1	Hawaii
1	2	Minnesota
3	3	New Hampshire
1	3	Utah
7	5	Wisconsin
5	5	Nebraska
5	7	Connecticut
7	8	Iowa
10	8	Kansas
10	10	Colorado
7	11	Massachusetts
12	11	Maine
15	11	Virginia
12	14	Vermont
17	15	Rhode Island
16	15	New Jersey
12	17	North Dakota
20	18	Indiana
19	19	Ohio
20	19	Pennsylvania
18	19	Montana
22	22	California
30	23	Washington
23	23	Maryland
25	25	Wyoming
23	25	South Dakota
25	27	Oklahoma
25	28	Michigan
25	28	Delaware
32	**30**	**North Carolina**
30	30	Texas
25	32	Missouri
34	32	Illinois
34	32	New York
33	35	Idaho
34	36	Georgia
38	36	Kentucky
34	36	Tennessee
43	39	Oregon
39	40	Arizona
39	40	Arkansas
44	42	Florida
39	42	Alabama
39	44	South Carolina
47	44	Nevada
45	46	Louisiana
47	47	Mississippi
45	47	New Mexico
50	49	Alaska
49	50	West Virginia

Source: Northwestern National Life Insurance Co.

Table 4. 1990 North Carolina Deaths by Cause and by County

County	* County Rank	Population	Cancer	Diabetes	Heart Disease	Stroke	Pneumonia/ Influenza	Chronic Obstructive Pulmonary Disease	Chronic Liver Disease/ Cirrhosis	Unintentional Injuries & Adverse Effects	Suicide	Homicide	** Total Deaths
Alamance	37	108,427	257	41	362	87	32	50	8	41	17	17	1104
Alexander	83	27,608	49	3	69	17	14	7	2	12	1	2	221
Alleghany	10	9,590	22	1	37	7	7	5	2	8	3	1	113
Anson	35	23,421	58	5	83	19	14	12	3	7	2	6	242
Ashe	20	22,206	59	5	75	26	7	11	1	4	4	2	245
Avery	51	14,878	23	3	56	4	10	11	4	10	3	0	141
Beaufort	18	42,331	112	21	154	42	22	19	3	15	3	4	473
Bertie	6	20,372	60	10	76	24	9	5	2	20	4	1	257
Bladen	22	28,616	61	6	105	31	10	5	3	24	4	5	311
Brunswick	62	51,365	132	4	146	26	22	21	5	35	5	4	467
Buncombe	31	175,173	466	30	529	129	89	77	27	79	22	11	1821
Burke	78	75,815	149	19	224	39	19	22	9	33	12	10	648
Cabarrus	73	99,256	222	25	306	45	43	20	11	28	14	9	868
Caldwell	82	70,789	149	16	166	53	16	21	3	30	13	15	572
Camden	80	5,906	10	1	12	9	2	4	0	3	2	0	49
Carteret	58	52,854	122	5	144	35	13	21	11	28	11	3	487
Caswell	51	20,695	45	7	64	14	7	7	4	9	5	0	196
Catawba	70	118,742	237	20	332	70	45	42	9	67	17	11	1049
Chatham	66	38,893	75	6	124	32	11	9	3	18	7	4	345
Cherokee	31	20,200	47	5	83	18	11	4	2	3	3	1	211
Chowan	8	13,530	32	4	46	16	15	5	6	3	0	1	162
Clay	28	7,168	17	0	38	5	3	1	0	2	2	0	75
Cleveland	43	84,748	173	31	311	68	23	28	12	39	10	16	838
Columbus	24	49,549	111	10	190	45	18	12	5	29	5	9	536
Craven	92	81,715	136	7	206	40	16	23	9	32	12	10	616
Cumberland	97	276,791	370	45	541	98	36	66	28	100	28	39	1624
Currituck	51	13,800	24	3	39	10	12	6	0	9	2	0	131
Dare	94	22,980	43	2	53	8	7	2	2	9	3	2	166
Davidson	91	127,038	224	22	344	61	28	33	13	69	16	9	968
Davie	78	27,941	57	6	90	14	10	7	2	15	7	3	238
Duplin	28	39,976	98	6	129	50	19	18	4	17	6	6	420
Durham	92	182,585	310	32	415	97	42	37	13	59	15	22	1376
Edgecombe	20	56,602	157	12	178	64	21	15	6	40	7	11	620
Forsyth	73	266,443	527	58	695	199	84	86	28	91	47	33	2331
Franklin	41	36,675	80	9	122	30	8	12	6	31	3	4	369
Gaston	62	175,410	358	24	631	94	45	62	17	76	23	17	1594
Gates	27	9,317	17	0	35	9	1	3	0	11	4	0	100
Graham	64	7,195	16	3	16	5	3	1	2	5	1	0	65
Granville	43	38,510	83	9	131	23	25	14	4	16	8	7	382
Greene	87	15,397	18	1	44	6	4	7	0	12	2	1	118
Guilford	76	348,187	724	63	923	267	97	104	51	110	48	33	2998
Halifax	7	55,572	143	17	235	61	15	28	10	35	4	10	670
Harnett	66	68,033	140	26	194	39	12	19	2	44	12	12	603
Haywood	22	46,950	113	8	202	28	21	25	4	16	7	8	512
Henderson	10	69,551	192	7	298	59	33	39	14	33	10	6	821
Hertford	4	22,504	59	5	96	21	9	10	5	8	2	4	290
Hoke	87	22,857	47	1	51	15	7	7	5	9	1	5	175
Hyde	2	5,399	12	2	29	6	4	6	0	4	1	1	75
Iredell	70	93,193	177	17	262	69	26	28	13	54	17	10	818

County	* County Rank	Population	Cancer	Diabetes	Heart Disease	Stroke	Pneumonia/ Influenza	Chronic Obstructive Pulmonary Disease	Chronic Liver Disease/ Cirrhosis	Unintentional Injuries & Adverse Effects	Suicide	Homicide	** Total Deaths
Jackson	66	26,884	40	8	83	15	15	8	1	18	3	0	239
Johnston	58	81,580	156	11	296	51	25	23	11	44	11	8	747
Jones	58	9,407	18	2	33	3	4	4	0	4	0	1	87
Lee	55	41,490	97	10	120	20	15	17	7	29	6	9	388
Lenoir	18	57,206	134	13	227	52	16	22	9	25	11	10	643
Lincoln	87	50,517	105	6	148	31	8	6	6	28	4	2	389
McDowell	48	35,696	79	8	134	24	13	16	4	20	4	4	349
Macon	24	23,545	79	6	77	17	6	13	6	8	4	0	255
Madison	43	16,966	28	7	46	18	13	8	2	10	3	1	168
Martin	13	25,056	70	12	73	23	8	12	4	16	5	5	292
Mecklenburg	95	514,056	869	87	1023	267	97	114	58	168	69	98	3599
Mitchell	28	14,433	40	2	50	12	10	5	2	11	1	1	152
Montgomery	56	23,342	57	3	64	23	3	4	1	12	3	3	217
Moore	35	59,228	159	9	194	60	31	18	7	34	10	6	608
Nash	49	76,916	142	15	240	62	27	31	15	37	16	13	746
New Hanover	73	120,691	303	26	296	97	19	44	16	42	20	4	1052
Northampton	10	20,758	56	8	81	19	11	10	2	15	3	1	245
Onslow	100	150,744	136	11	158	27	15	28	10	43	22	11	579
Orange	98	94,283	137	14	140	42	15	20	3	24	17	11	539
Pamlico	8	11,396	29	0	49	12	5	3	0	6	3	0	137
Pasquotank	41	31,368	81	5	118	21	9	11	5	8	5	3	318
Pender	66	29,022	56	7	76	29	8	11	4	12	5	3	258
Perquimans	13	10,471	28	0	34	14	5	4	1	5	4	1	122
Person	31	30,206	77	4	99	30	9	11	2	22	2	5	314
Pitt	83	108,380	204	28	237	69	29	18	16	55	12	9	865
Polk	1	14,452	50	7	73	22	8	7	4	7	1	2	227
Randolph	80	106,928	214	18	286	71	22	38	12	50	12	6	891
Richmond	37	44,502	96	11	152	42	10	16	6	25	9	10	454
Robeson	70	105,280	163	37	308	72	32	32	7	69	15	16	924
Rockingham	43	86,131	202	23	273	77	29	33	13	47	8	10	852
Rowan	43	110,886	260	20	383	97	44	34	8	49	18	9	1103
Rutherford	37	57,018	130	11	229	47	16	27	3	18	6	6	579
Sampson	17	47,242	100	12	182	55	14	21	5	30	10	4	535
Scotland	86	33,790	55	12	85	22	4	7	3	21	4	3	263
Stanly	64	51,851	92	16	184	41	16	11	5	25	7	2	467
Stokes	83	37,321	65	4	98	32	12	11	5	22	5	0	297
Surry	49	61,760	128	12	215	51	17	30	11	27	14	7	601
Swain	3	11,287	30	3	48	9	10	5	1	8	1	1	149
Transylvania	56	25,562	75	4	82	11	11	10	6	7	1	3	239
Tyrrell	5	3,853	15	0	15	0	2	3	1	4	0	0	49
Union	87	84,562	138	17	226	45	27	12	5	32	8	10	647
Vance	16	38,950	94	9	162	40	24	13	3	22	8	6	451
Wake	99	426,212	603	57	694	201	60	68	22	116	53	30	2419
Warren	13	17,291	46	2	71	18	6	9	0	14	3	3	202
Washington	37	13,973	31	3	53	6	9	1	1	6	2	2	143
Watauga	96	37,074	48	1	73	13	13	12	3	22	9	2	239
Wayne	76	104,836	222	28	289	61	14	42	9	37	8	18	903
Wilkes	58	59,414	106	8	173	44	30	26	7	34	9	3	546
Wilson	24	66,145	153	26	219	64	24	18	11	33	13	15	712
Yadkin	31	30,543	57	6	110	19	17	12	2	16	3	0	317
Yancey	51	15,432	32	3	50	14	3	6	1	7	2	0	147
Total		**6,648,6891**	**13198**	**1315**	**18520**	**4446**	**1937**	**2042**	**719**	**2896**	**927**	**762**	**57175**

* *1 = highest death rate after adjusting for population size*

** *Includes all causes, not just causes included in this table, so row total does not equal total deaths.*