

Local Health Department Staffing and Services Summary

Fiscal Year 2007



North Carolina
Department of Health and Human Services
Division of Public Health
State Center for Health Statistics
April 2008

Local Health Department Staffing and Services Summary Fiscal Year 2006–07



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Division of Public Health
State Center for Health Statistics**

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325 copies of this public document were printed at a total cost of \$407.10 or \$1.25 per copy. 5/08



We would like to acknowledge the assistance of the Vital Records section in performing data entry for the FY2006–07 health department surveys.

April 2008

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Introduction

This survey is the latest in a series of surveys of North Carolina health departments which, since 1984, have provided a count of health department employees by occupational groups, a summary of essential public health services, and assessments of other topics, such as bilingual health initiatives and the use of information technology in health departments. All surveys have been oriented to the state's fiscal year: beginning July 1 and ending June 30 of the subsequent year. The current survey was administered in the Fall of 2007, and covers the 2006–2007 fiscal year (FY2007).

All of North Carolina's 100 counties are represented in this survey. A total of 85 surveys were returned, consisting of 79 single-county health department respondents and six multi-county district health department respondents. The district health departments included are: (1) Alleghany, Ashe, and Watauga counties (Appalachian District); (2) Granville and Vance counties; (3) Martin, Tyrrell, and Washington counties; (4) Rutherford, Polk, and McDowell counties; (5) Avery, Mitchell, and Yancey counties (Toe River Health District); and (6) Albemarle Regional Health District (consisting of Bertie, Camden, Chowan, Currituck, Gates, Pasquotank, and Perquimans counties).

In this report, we summarize the data from the FY2007 survey, and we present comparisons with the FY2005 survey data where possible. For the section of the survey on staffing, we use the same definitions that have been used in the past to calculate the number of full time equivalent (FTE) employees in order to ensure consistency across reports. Throughout this report, health department respondents are referred to as health departments, or health departments/health districts, or LHDs (Local Health Departments).

Changes to the Survey Instrument

The only major change to the survey instrument for FY2007 was the elimination of the section related to insurance billing. One occupational category was added to the staffing section — Environmental Health Technician. As with the FY2005 survey, detailed tabular data reports from the FY2007 survey are available for download on the State Center for Health Statistics web site: www.schs.state.nc.us/SCHS/data/lhd/2007.

Staffing (Section A)

Local Health Department Occupations and FTEs

Table 1 presents data regarding health department staffing for FY2007. Data are presented for each occupational group, and include the total number of full-time positions, the total hours worked by part-time staff per average week, the annual number of contract staff hours worked, as well as the total FTEs — both including and excluding contract staff. FTEs were calculated as the number of full-time funded positions, plus the number of part-time hours divided by 40 (one work week).

Assessing changes in staffing from FY2005 to FY2007 by occupational groups is challenging due to the fact that responses were not received from all health departments in FY2005, while the FY2007 survey obtained a 100 percent response rate.

Total FTEs

As of July 1, 2007, there were 9,676 full-time equivalent employees in county health departments (not including contract personnel), which is above the 2005 FTE total by 971 employees (**Figure 1**). Again, most of this increase may be attributable to the lack of response from some health departments to the FY2005 survey. Based on the FTE total for FY1989, the number of additional FTE health department employees in FY2007 constituted an increase of 80 percent over the past 18 years.

In **Figure 2**, trends from FY1989–FY2007 are shown for three of the largest professional groups working in North Carolina health departments: nurses (LPNs and RNs), management support staff, and environmental health specialists. Within the nursing profession, the total number of FTE nurses was on a gradual decline since 1995; but in 2007 their numbers increased for the first time in the last decade. Environmental health specialist positions have increased by 43 percent (262 FTEs) since 1989. The number of administration/management support staff positions has also increased since 1989, with an increase of 659 positions (39%) during this time.

**Table 1. Health Department Staffing for FY2007:
Full-Time Positions, Part-Time Hours, Annual Contract Hours, and FTEs by Occupation**

Occupational Groups	Total Funded Full-	Total Vacant Positions During Year	Total Hours Worked by Part-time Staff	Annual Contract Staff Hours Worked	Total FTE (Not Including Contract)	Total FTE
Health Director	84	9	117	6,570	87	90
Administrative/Management Support Staff	2,284	249	1,962	106,849	2,333	2,386
LAN/PC Support	46	6	81	8,475	48	52
Physician	61	8	418	45,133	71	94
Physician Assistant	89	9	347	2,662	98	99
Dentist	50	14	146	35,367	54	71
Dental Assistant	112	21	367	16,528	121	129
Dental Hygienist	47	7	381	21,632	57	67
RN (Clinical)	1,408	213	4,583	49,111	1,523	1,547
RN (Enhanced Role)	262	13	117	5,390	265	268
RN (Home Health)	467	90	731	27,292	485	499
LPN (Clinical)	126	16	262	1,872	133	133
LPN (Home Health)	26	1	52	40	27	27
Occupational Health Nurse	2	0	0	2,546	2	3
Nurse Practitioner	120	26	741	21,760	139	149
Certified Nurse Midwife	11	0	0	9,915	11	16
Pharmacist	25	3	94	6,583	27	31
Nutritionist	366	57	646	14,403	382	389
Therapist	73	9	0	69,758	73	108
Social Worker	496	65	696	22,813	513	525
Environmental Health Specialist	852	101	930	45,360	875	898
Environmental Health Technician	19	5	20	160	20	20
Public Health Investigator	22	0	0	0	22	22
Lab Technician	213	17	349	13,392	222	228
X-Ray Technician	6	0	0	748	6	6
Health Educator	332	69	393	8,705	342	346
Interpreter, Spoken Language	179	31	143	37,711	183	201
Aides (all types)	485	84	3,074	62,699	562	593
Landfill Operators/Workers	101	0	0	6,992	101	104
Animal Control Officers	139	26	175	10,046	143	148
Epidemiologist/Statistician	13	3	0	0	13	13
Other	722	36	683	9,115	739	744
TOTAL	9,238	1,188	17,508	669,627	9,676	10,011

Note: Part-time hours per week were converted to FTEs by dividing by 40; annual contract staff hours were converted to FTEs by dividing by 2000.

Figure 1
Full-Time Equivalent Employees, FY1989-FY2007
(Not Including Contract Personnel)

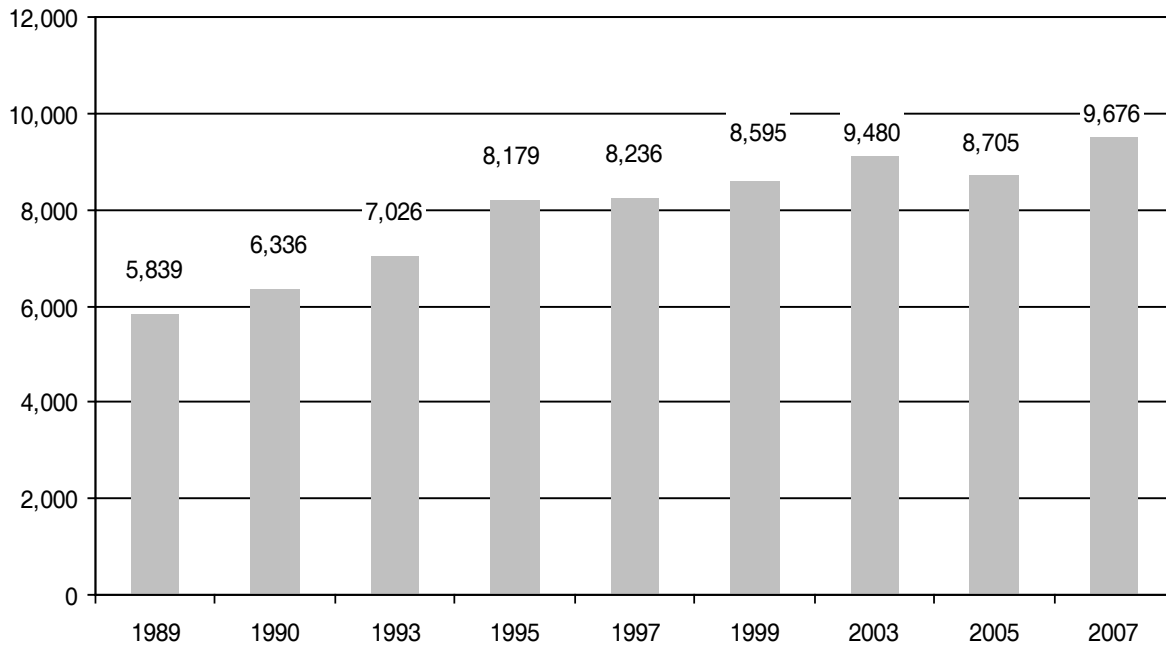
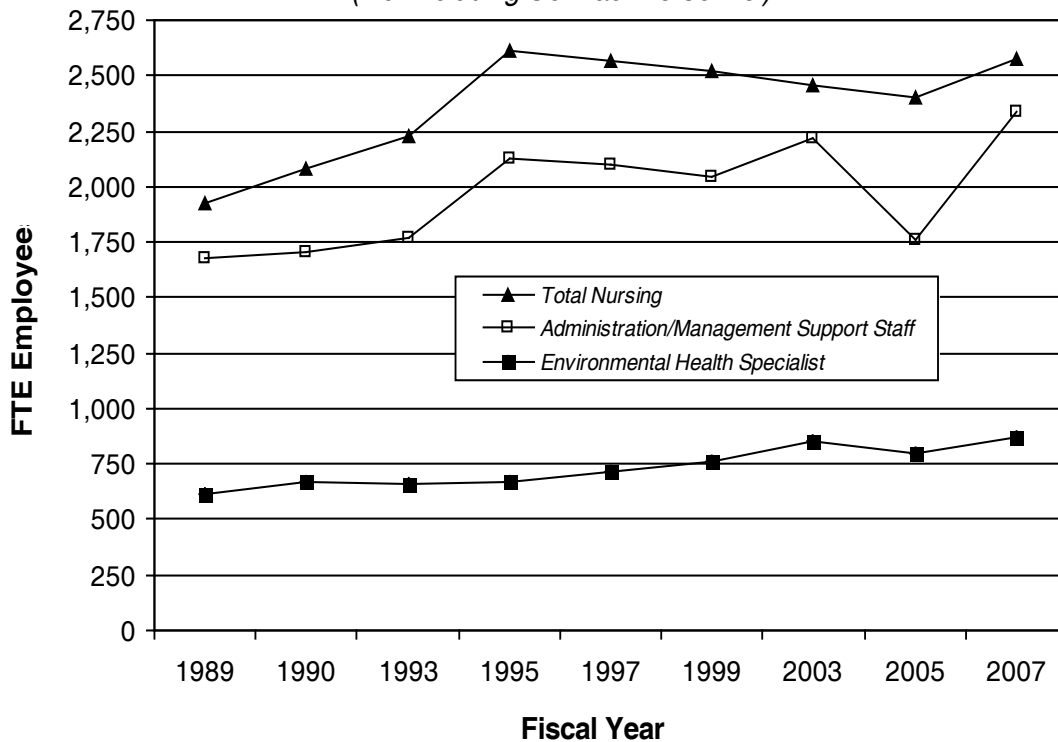


Figure 2
Staffing Change by Occupational Category, FY1989-FY2007
(Not Including Contract Personnel)



Occupational Composition of LHDs

Figure 3 shows the distribution of all public health occupations in North Carolina health departments for FY2007. The nursing profession made up the largest percentage of personnel with 27 percent, followed closely by management support staff with 24 percent. The remaining specified occupations — aides, environmental health specialists, social workers, nutritionists, and health educators — accounted for about 28 percent of all health department personnel. Those who were assigned to the “other” category in the survey comprised an additional 21 percent of the occupations. This occupational distribution, shown in Figure 3, is similar to the results found in the FY2005 health department survey, with nurses representing 29 percent and management support staff representing 20 percent of the health department personnel in FY2005.

Change in 2005 and 2007 FTEs, by County

Table 2 shows the change in the number of FTEs from 2005 to 2007, along with the percent change. Overall, 27 out of 85 health departments/health districts **lost** FTE positions during this period, and 47 out of 85 health departments **gained** FTE positions. Also, between FY 2005 and FY2007, there was *no* change in the number of FTEs in seven health departments: Beaufort, Cumberland, Graham, Hyde, Jones, Orange, and Pamlico.

Figure 3
FTE Employees by Occupation, FY2007
(Not Including Contract Personnel)

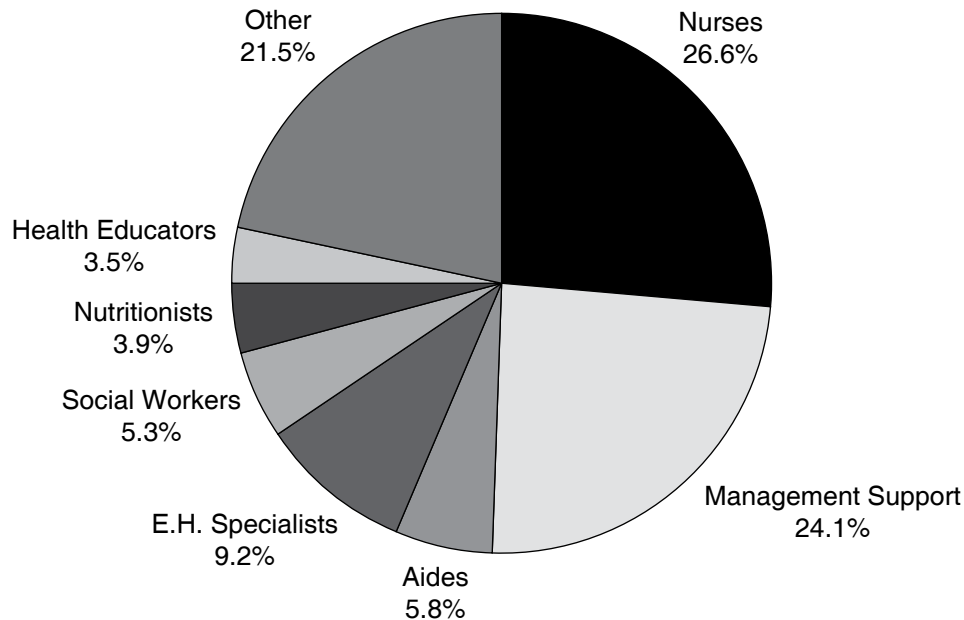


Table 2. Health Department Staffing: Change in Number of FTEs, FY2005–FY2007, Number and Percent Change by Health Department

	2005 FTEs	2007 FTEs	% Chg.		2005 FTEs	2007 FTEs	% Chg.
Alamance	97	107	10.3%	Jackson ¹	59	61	3.4%
Albermarle District	NA	429	NA	Johnston	93	107	15.1%
Alexander	37	30	-18.9%	Jones ¹	15	15	0.0%
Anson	27	26	-3.7%	Lee	59	55	-6.8%
Appalachian District	97	82	-15.5%	Lenoir	64	63	-1.6%
Beaufort	47	47	0.0%	Lincoln	76	73	-3.9%
Bladen	72	63	-12.5%	Macon ¹	55	57	3.6%
Brunswick	108	102	-5.6%	Madison	18	25	38.9%
Buncombe	NA	159	NA	Mecklenburg	467	379	-18.8%
Burke	55	72	30.9%	Montgomery	32	37	15.6%
Cabarrus ¹	200	209	4.5%	Moore	NA	50	NA
Caldwell	132	117	-11.4%	MTW Health District	122	119	-2.5%
Carteret	57	73	28.1%	Nash	198	134	-32.3%
Caswell	NA	47	NA	New Hanover	207	217	4.8%
Catawba	132	147	11.4%	Northampton	71	82	15.5%
Chatham	87	91	4.6%	Onslow	168	171	1.8%
Cherokee	28	43	53.6%	Orange	94	94	0.0%
Clay	21	38	81.0%	Pamlico	20	20	0.0%
Cleveland ¹	193	202	4.7%	Pender	45	56	24.4%
Columbus	95	67	-29.5%	Person	52	55	5.8%
Craven	139	160	15.1%	Pitt	122	124	1.6%
Cumberland	240	240	0.0%	Randolph	77	71	-7.8%
Dare	84	99	17.9%	Richmond	65	112	72.3%
Davidson	97	100	3.1%	Robeson	208	178	-14.4%
Davie	61	55	-9.8%	Rockingham	88	89	1.1%
Duplin	59	50	-15.3%	Rowan	76	82	7.9%
Durham	201	167	-16.9%	Rutherford/Polk/McDowell	97	110	13.4%
Edgecombe	90	135	50.0%	Sampson	42	41	-2.4%
Forsyth	237	272	14.8%	Scotland	54	55	1.9%
Franklin	70	61	-12.9%	Stanly	68	63	-7.4%
Gaston	110	188	70.9%	Stokes	37	47	27.0%
Graham	16	16	0.0%	Surry	180	228	26.7%
Granville/Vance ¹	78	82	5.1%	Swain ¹	50	57	14.0%
Greene	26	28	7.7%	Toe River	209	200	-4.3%
Guilford	425	484	13.9%	Transylvania	27	31	14.8%
Halifax	124	119	-4.0%	Union ¹	95	104	9.5%
Harnett	84	97	15.5%	Wake	825	882	6.9%
Haywood	70	73	4.3%	Warren	49	48	-2.0%
Henderson	83	90	8.4%	Wayne	132	134	1.5%
Hertford	68	65	-4.4%	Wilkes	68	64	-5.9%
Hoke	34	36	5.9%	Wilson	120	142	18.3%
Hyde	42	42	0.0%	Yadkin	33	31	-6.1%
Iredell	109	112	2.8%				

NA= Not Available: Caswell and the Albermarle Health District (consisting of Bertie, Camden, Chowan, Currituck, Gates, Pasquotank, and Perquimans counties) did not respond to the 2005 survey. Buncombe and Moore counties responded to the survey, but did not supply figures for these measures.

¹ In certain cases, 2005 FTE data appeared to be reported in error, so 2003 FTEs were used. Cabarrus County 2005 figures were revised in 2007.

Public Health Services (Section B)

According to North Carolina laws: “*The Public Health Laws of North Carolina establish categories of essential public health services that are to be made available and accessible to all citizens of the State [G.S. 130A-1.1(b)].*” The services that appear in **Table 3** include all essential services established by this law as well as other services that were deemed to be essential to the public health of North Carolina citizens. For each service, counties were asked to indicate if the service was provided in their health department or health district.

Health Support Services

A total of 78 out of 85 health departments/health districts in North Carolina (92%) provide registration of vital events (see Table 3). Vital records and statistical services are maintained in 89 percent of all health departments (n=76). All health departments indicated that they provide child health services (100%) and nearly all (99%) report that they offer health education services. In addition, most health departments report that they perform communicable disease surveillance (98%), community health education (97%), and comprehensive community health assessment (94%). A new focus in recent years is bioterrorism and emergency preparedness. A large proportion of health departments/districts report that they are engaged in bioterrorism/other emergency preparedness response planning and assessment (95%). However, only slightly more than half said that their health department/district is engaged in chronic disease surveillance (59%). Prenatal care services are offered by 87 percent of all health departments, but primary care services for adults are offered by fewer than half (42%) of all health departments. Most health departments/districts (92%) stated that they offer spoken language interpretation to their clients. The health support service provided least frequently was pesticide poisoning investigation, with less than 30 percent of health departments reporting that they offered this service.

Environmental Health

All county health departments reported offering restaurant and lodging inspections and on-site sewage and wastewater disposal services. With regard to water sanitation and safety, 76 out of 85 county health departments (89%) offer private water supply services and 75 percent (n=64) offer water sanitation and safety services. Public swimming pool sanitation was available in all but two health departments (98%). Lead abatement is offered by 79 percent (n=67) of the health districts surveyed. Regarding pest management, 36 health departments (42%) provide mosquito control and 19 health departments (22%) provide rodent control. Tick control is provided by 15 percent of all health departments and bedding control is offered in 12 health departments (14%).

Personal Health

Personal health services comprised the largest category of services. Complete coverage (100%) was available for four services: maternity care coordination, contraceptive care, child service coordination, and immunizations. Under the sub-category of **Maternal Health** services, over 90 percent of health departments provided Maternity Care Coordination, SIDS counseling, and maternal WIC services. Most (86%) reported that they provide prenatal/postpartum care. Within **Family Planning** services, all health departments reported offering contraceptive care (100%). In addition, most health departments also provide adolescent pregnancy prevention (93%) and preconceptional counseling (91%). Fertility services were less likely to be offered, with slightly more than a third of health departments (37%) reporting that they offered this service. Within **Child Health** services, immunizations (100%), child service coordination (100%), newborn home visiting (95%), and child WIC (94%) services were most often provided.

— text continued on page 11

**Table 3. Public Health Services
(As of 7/1/2007 with 100 percent of Health Departments/Health Districts reporting)**

Services Offered	Number of Health Departments Offering Service	Percent of Health Departments Offering Service
HEALTH SUPPORT	#	%
Registration of Vital Events	78	92%
Assessment of Health Status, Health Needs and Environmental Risks to Health Epidemic Investigations		
Risk Assessment	60	71%
Pesticide Poisoning	22	26%
Health Assessment		
Comprehensive Community Health Assessment	80	94%
Behavioral Risk Assessment	39	46%
Morbidity Data	53	62%
Reportable Disease	78	92%
Vital Records and Statistics	76	89%
Chronic Disease Surveillance	50	59%
Communicable Disease Surveillance	83	98%
Bioterrorism/Other Emergency Preparedness Response Planning & Assessment	81	95%
Policy Development Functions/Services		
Health Code Development and Enforcement	50	59%
Health Planning	58	68%
Health Assurance		
Health Education	84	99%
Child Health	85	100%
Prenatal Care	74	87%
Primary Care		
Adult	36	42%
Pediatric	51	60%
Community Health Education	82	97%
Interpretation, Spoken Language	78	92%
Laboratory Services	82	97%
Public Health Nurse Pharmacy Dispensing	55	65%
Other Pharmacy Services	34	40%
School Nursing Services	33	39%
ENVIRONMENTAL HEALTH		
Restaurant/Lodging/Institutions Sanitation and Inspections	85	100%
On-Site Sewage and Wastewater Disposal	85	100%
Water Sanitation and Safety	64	75%
Private Water Supply	76	89%
Milk Sanitation	8	9%
Shellfish Sanitation	11	13%
Public Swimming Pool	83	98%
Bedding Control	12	14%
Pest Management		
Mosquito	36	42%
Rodent	19	22%
Ticks	13	15%
Lead Abatement	67	79%

Table 3. Public Health Services
(As of 7/1/2007 with 100 percent of Health Departments/Health Districts reporting)

Services Offered	Number of Health Departments Offering Service	Percent of Health Departments Offering Service
PERSONAL HEALTH		
Maternal Health		
Prenatal and Postpartum Care	73	86%
Maternity Care Coordination	85	100%
SIDS Counseling	79	93%
WIC Services— Mother	80	94%
Family Planning		
Preconceptional Counseling	77	91%
Contraceptive Care	85	100%
Fertility Services	31	37%
Pregnancy Prevention — Adolescent	79	93%
Child Health		
Well-Child Services	76	89%
Genetic Services	25	29%
Services to Developmentally Disabled Children	27	32%
Child Service Coordination	85	100%
Adolescent Health Services	59	69%
School Health Services	44	52%
Lead Poisoning Prevention	75	88%
WIC Services— Children	80	94%
Immunizations	85	100%
Newborn Home Visiting Services	81	95%
Behavioral Health Services	24	28%
Children with Special Health Care Needs Services	29	34%
Chronic Disease Control		
Early Detection and Referral		
Kidney Disease	20	24%
Hypertension	54	64%
Cancer	59	69%
Diabetes	62	73%
Cholesterol	50	59%
Arthritis	18	21%
Glaucoma	11	13%
Epilepsy	14	17%
Patient Education		
Kidney Disease	27	32%
Hypertension	67	79%
Cancer	66	78%
Diabetes	73	86%
Cholesterol	59	69%
Arthritis	27	32%
Glaucoma	22	26%
Epilepsy	22	26%

(continued)

Table 3. Public Health Services
(As of 7/1/2007 with 100 percent of Health Departments/Health Districts reporting)

Services Offered	Number of Health Departments Offering Service	Percent of Health Departments Offering Service
PERSONAL HEALTH (continued)		
	#	%
Chronic Disease Monitoring and Treatment	33	39%
Home Health Services	37	44%
Health Promotion and Risk Reduction		
Nutrition Counseling	74	87%
Injury Control	43	51%
Tobacco Cessation	67	79%
Communicable Disease Control		
Tuberculosis Control	85	100%
Acute Communicable Disease Control	76	89%
STD Control		
Case Management	59	69%
Medications	73	86%
Training/Education	78	92%
Screening	85	100%
AIDS/HIV Screening	85	100%
Vaccinations for Hepatitis A and B	82	97%
Rabies Control	77	91%
Dental Health		
Dental Health Education	64	75%
Topical Fluoride Application	62	73%
Sealant Application	52	61%
Dental Screening and Referral	62	73%
Dental Treatment	44	52%
Community Fluoridation	16	19%
"Into the Mouths of Babes" Dental Prevention Services	34	40%
Other Personal Health		
Migrant Health	24	28%
Refugee Health	20	24%

For services related to **Chronic Disease Control**, early detection and referral services were most often provided for diabetes (73%), cancer (69%), hypertension (64%), and cholesterol (59%). Less than 25 percent of health departments offered early detection and referral for kidney disease, arthritis, glaucoma, and epilepsy. In every category, the provision of **Patient Education** services for these same chronic diseases tended to be somewhat higher than that of early detection and referral.

Regarding **Health Promotion** efforts, the majority of health departments reported that they offer nutrition (87%) and tobacco cessation counseling (79%). However, only slightly more than half (51%) offer injury control.

Under services for **Communicable Disease Control**, all health departments (100%) report that they offer tuberculosis control and nearly all (89%) report offering other acute communicable disease control. Under STD control, all health departments (100%) offer AIDS/HIV screening and other STD screening. In addition, most health departments also offer vaccinations for Hepatitis A and B (97%), training and education (92%), and medications for STDs (86%). More than half of health departments report offering case management services (69%).

Under **Dental Health** services, approximately three out of four health departments offer dental health education (75%), topical fluoride application (73%), and dental screening and referral (73%). About half (52%) of all health departments report that they offer dental treatment. Less than one in five (19%) of health departments participate in community fluoridation.

With regard to **Other Personal Health** services, 24 health departments (28%) offer migrant health services and 20 health departments (24%) offer refugee health services.

Bilingual Health Initiatives (Section C)

Non-English Information and Education Material in LHDs

All but one health department reported providing educational and informational materials in Spanish. Besides Spanish, a few health departments also provided educational material in other languages: French, Chinese, and Hmong. One health department reported offering educational material in more than 15 languages in addition to Spanish.

Regarding the use of non-English material in health department service areas, most health departments (95%) reported that their Family Planning clinics use non-English material. In addition, most health departments stated that they use non-English material for Maternal Health (94%), Patient Education (86%), Child Health Services (90%), and Communicable Disease Control (86%). Non-English materials were least likely to be available for Chronic Disease Control (62%), Dental Health (73%), and Health Promotion (74%).

Examining the need for non-English education/information material, Chronic Disease Control, Health Promotion, Communicable Disease Control, Patient Education, and Dental Health were the areas where some health departments reported needing non-English materials.

Bilingual Staff

Sixty-seven health departments (78%) reported having staff positions designated as interpreters and 18 health departments (22%) did not report having designated interpreters. The number of health department staff who were bilingual ranged from one (10 health departments) to 45 (1 health department).

In FY2007, there were 411 LHD staff members (including contract staff) who were reported to be bilingual; in 2003, that number was 413. This number has remained relatively stable despite the fact that more health departments responded to the 2007 survey. In **Table 4**, we show the number of FY2005 and FY2007 bilingual staff by county. For 30 health departments, the number of bilingual staff remained unchanged. Four counties reported no bilingual staff members in 2005 *and* in 2007. The largest gain in FY2007 bilingual staff occurred in Cabarrus (+19) and Alamance (+10) counties. Sixteen counties left this field blank in either FY2005 and/or FY2007, so for those counties no changes in bilingual staffing could be calculated.

Bilingual Training

More than half of health departments (62%) reported that special training is provided for health care providers who work with non-English speaking clients. In addition, 87 percent of health departments report that their service population is becoming more non-English speaking. In light of this, most departments report that their staff has undergone cultural diversity training (87%). Further, slightly more than half of health departments (59%) report that their department has specific outreach efforts targeting non-English speaking populations.

**Table 4. Bilingual Health Initiatives:
Change in the Number of Bilingual Staff from FY2005 to FY2007,
by Health Department**

	FY2005 Bilingual	FY2007 Bilingual	Chg.		FY2005 Bilingual	FY2007 Bilingual	Chg.
Alamance	0	10	10	Jackson	3	2	-1
Albemarle District	*	0	-	Johnston	14	*	-
Alexander	0	*	-	Jones	0	2	2
Anson	1	1	0	Lee	8	4	-4
Appalachian District	4	3	-1	Lenoir	2	3	1
Beaufort	2	2	0	Lincoln	0	*	-
Bladen	3	*	-	Macon	1	2	1
Brunswick	3	3	0	Madison	2	2	0
Buncombe	37	*	-	MTW Health District	1	1	0
Burke	3	1	-2	Mecklenburg	20	17	-3
Cabarrus	6	25	19	Montgomery	6	5	-1
Caldwell	3	*	-	Moore	3	3	0
Carteret	1	2	1	Nash	7	6	-1
Caswell	*	1	-	New Hanover	4	*	-
Catawba	8	9	1	Northampton	1	0	-1
Chatham	9	*	-	Onslow	3	*	-
Cherokee	0	0	0	Orange	7	3	-4
Clay	0	0	0	Pamlico	1	2	1
Cleveland	1	1	0	Pender	4	4	0
Columbus	2	3	1	Person	1	1	0
Craven	5	2	-3	Pitt	3	5	2
Cumberland	5	10	5	Randolph	13	12	-1
Dare	5	5	0	Richmond	1	2	1
Davidson	4	3	-1	Robeson	9	10	1
Davie	3	3	0	Rockingham	3	3	0
Duplin	9	*	-	Rowan	8	4	-4
Durham	5	13	8	Rutherford/Polk/McDowell	1	3	2
Edgecombe	3	1	-2	Sampson	4	*	-
Forsyth	24	25	1	Scotland	1	1	0
Franklin	2	2	0	Stanly	1	2	1
Gaston	3	3	0	Stokes	2	2	0
Graham	0	*	-	Surry	6	7	1
Granville/Vance	3	1	-2	Swain	0	0	0
Greene	3	3	0	Toe River District	10	9	-1
Guilford	32	32	0	Transylvania	1	1	0
Halifax	2	2	0	Union	13	17	4
Harnett	3	3	0	Wake	*	45	-
Haywood	3	4	1	Warren	2	2	0
Henderson	12	13	1	Wayne	9	9	0
Hertford	0	0	0	Wilkes	6	6	0
Hoke	6	6	0	Wilson	5	7	2
Hyde	0	*	-	Yadkin	5	5	0
Iredell	7	10	3	N.C. Total	413	411	-2

* Data not available for this health department on this measure.

Information Technology (Section D)

Table 5 provides a summary of the technological capacity of health departments and the number of employees who have access to these information technologies. As reported on the survey, there were a total of 9,855 desktops or personal computers (PCs) in use in 2007, down 4 percent from the 10,296 PCs reported in 2005. Over half (71%) of health department PCs use Pentium computers with Windows XP and another 24 percent use Pentium computers with Windows 2000. In addition, the number of Laptop computers has doubled — from 1,234 reported in health departments in 2005 to 2,464 in use in 2007.

Seventy-nine health departments reported having a Local Area Network (LAN) system, the same number as in 2003 and 2005 (Table 6). More than half of all health departments (60%) had a LAN administrator on staff. More than half of all health departments (60%) were connected to the state's Wide Area Network (WAN), compared to 62 percent in 2003 and 51 percent in 2005.

Regarding Internet access, nearly all health department respondents in 2007 reported having staff access to the Internet (97%). Twenty-four of these health departments used the State WAN as their Internet provider and 40 used the county as their Internet provider. The majority of health departments reported having an Internet connection of T1 or better (81%).

Seventy-three health departments (86%) had an Internet homepage in 2007, up from 80 percent in 2005. The availability of Geographic Information Systems (GIS) expanded in 2007, with 19 counties (22%) reporting GIS in their health department and 70 counties (82%) reporting that they are aware of county-wide GIS services (Table 5).

Most health departments had security systems such as firewalls (99%) and back-up/recovery systems (97%). However, only 60 percent reported having a business continuity or disaster recover plan in place and less than a third (29%) had a recovery plan that had been tested. Less than half (45%) had redundant or fail-over systems, but more than half had virtual private networks (66%).

**Table 5. Information Technology:
Summary of Technological Capabilities Among Health Departments, FY2007**

	#	%	Number of Personal Computers by Model and Operating System	#
Local Area Network (LAN)	79	93%	Desktop:	
Ethernet	70	82%	Pentium Win 2000	2,408
Other	6	7%	Pentium Win XP	6,958
LAN Administrator on staff	51	60%	Pentium Win 95, 98/Me, NT	164
Part of Wide Area Network (WAN)	51	60%	Pentium Windows Vista	12
System has a firewall	84	99%	Pentium Other OS (e.g. Mac, Linux)	16
Has Virtual Private Network (VPN)	56	66%	Other Win 2000	58
Back-up/Recovery for systems	82	97%	Other Win XP	218
Business Continuity/Disaster Recovery Plan	51	60%	Other Win 95, 98/Me, NT	2
Business Continuity/Disaster Recovery Plan			Other Windows Vista	15
has been tested	25	29%	Other, Other OS (e.g. Mac, Linux)	4
Redundant or fail over systems	38	45%		
Staff have access to Internet at work	82	97%	Total Desktops	9,855
Access to Internet at home	37	44%		
Provider of Internet services:			Laptop:	
State WAN	24	28%	Pentium Win 2000	242
County	40	47%	Pentium Win XP	2,024
Cable	9	11%	Pentium Win 95, 98/Me, NT	28
DSL	9	11%	Pentium Windows Vista	34
Dial-up	0	0%	Pentium Other OS (e.g. Mac, Linux)	0
Internet connection level:				
56kb or less	2	2%		
Fractional T1	11	13%	Other Win 2000	8
T1	46	54%	Other Win XP	114
T3	7	8%	Other Win 95, 98/Me, NT	2
Better	16	19%	Other Windows Vista	12
Wireless access to E-mail	39	46%	Other, Other OS (e.g. Mac, Linux)	0
Wireless access to Network/LAN	31	37%		
County-wide GIS	70	82%	Total Laptops	2,464
Health Department GIS	19	22%		
Global Positioning Systems (GPS)	34	40%		
Desktop Video Conferencing	27	32%		
Department has a website	73	86%		

**Table 6. Information Technology:
Percent Change in Selected Technologies from FY2005 to FY2007**

Health Depts with:	Number in FY2005	% of Health Depts Having	Number in FY2007	% of Health Depts Having	Percent Change in Number
Total PCs in Health Departments	10,296	n/a	9,855	n/a	-4.3%
Local Area Network (LAN)	79	95%	79	93%	0.0%
Connection to State Wide Area Network	42	51%	51	60%	21.4%
Access to the Internet	83	100%	82	97%	-1.2%
Internet Homepage	66	80%	73	86%	10.6%
Desktop Video Conferencing	31	37%	27	32%	-12.9%
n/a= Not Applicable					

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