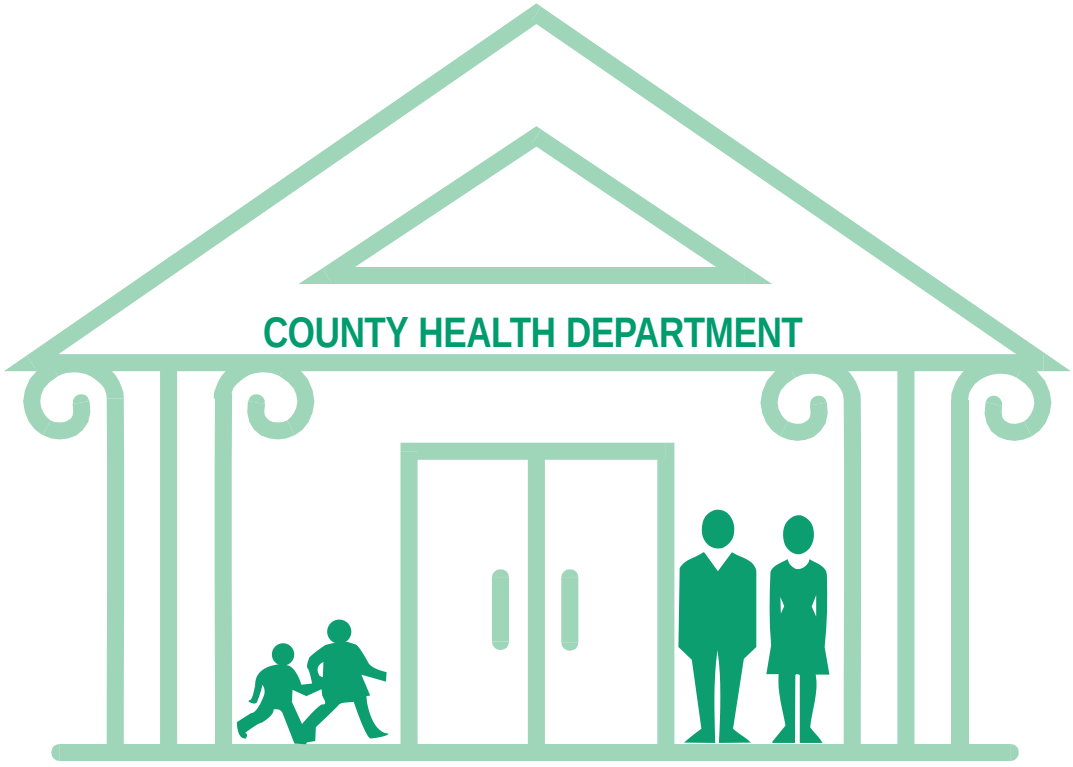
Local Health Department Staffing and Services Summary

Fiscal Year 2003



North Carolina
Department of Health and Human Services
Division of Public Health
State Center for Health Statistics
April 2004

Local Health Department Staffing and Services Summary for Fiscal Year 2003

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Division of Public Health
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Introduction

This survey is the latest in the series of surveys of North Carolina health departments which, over the years, have provided a count of health department employees by occupational groups, a count of essential public health services, and various assessments of new or emerging topics, such as the use of information technology. All surveys have been oriented to the state's fiscal year: beginning July 1 and ending June 30th of the subsequent year. The survey was first introduced in 1984 and administered annually thereafter until 1990. The survey then resumed in 1993 and continued biennially through 1999. After four years, the current survey for FY2003 (July 1, 2002 - June 30, 2003) was conducted.

All of North Carolina's one hundred counties are represented in this survey. A total of 85 surveys were returned, consisting of 78 single-county health department respondents and seven multi-county district health department respondents. These district health departments are: (1) Alleghany, Ashe, and Watauga counties (Appalachian District); (2) Bertie, Camden, Chowan, Currituck, Pasquotank, and Perquimans counties (Albemarle Regional Health District); (3) Granville and Vance counties; (4) Hertford and Gates counties; (5) Martin, Tyrrell, and Washington counties; (6) Rutherford, Polk, and McDowell counties; and (7) Avery, Mitchell, and Yancey counties (Toe River Health District). Throughout this report, health department respondents are referred to as health departments, or health departments/health districts, or LHDs (Local Health Departments).

In this report, we summarize the data from the FY2003 Survey, and we focus on comparisons with the FY1999 Survey data, whenever the two surveys share the same questions. Our primary purpose is to show trends or changes in health department data from 1999 to the present time. 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 addition to comparisons with the 1999 data, we describe the results obtained from new survey items added to this survey. In the Special Section of this report, we analyze and discuss the association of the availability of bilingual services and the size of the county's Spanish-speaking only population.

Changes to the Survey

The FY2003 Survey is considerably shorter than the FY1999 Survey. The aim was to reduce the response burden and include only those survey sections deemed essential to current needs. The FY1999 Survey contained a lengthy section on building specifications including plans for renovation and expansion, which was dropped from the FY2003 Survey. The FY1999 Survey also contained two new sections: **Changes in Service Delivery** and **Information Technology**. The section on service delivery, which assessed the effects of managed care and privatization on public health services, was dropped from the current survey and several new questions were added to the **Information Technology** section. In addition, the FY2003 Survey added a new section on **Insurance**, which contained several questions regarding health department billing practices in relation to health insurance companies.

Staffing (Section A)

Local Health Department Occupations & FTEs

FTEs were calculated as the number of full-time funded positions, plus the number of part-time hours per average week divided by 40 (one work week).

Since the 1999 survey, the occupational groups that grew the fastest with respect to (positive) change in the number of FTEs included: dental assistants/hygienists (+98), environmental health specialists (+95), and spoken-language interpreters (+99). With respect to percentage growth, home health LPNs (143.8%), language interpreters (129.4%), and pharmacists (126.8%) were the fastest growing occupations. Also of note, dental health was the most frequently mentioned service need in 1999, and in 2003 it was the fourth fastest growing occupation – with the addition of 11 new dentists and 98 new dental assistants.

Since 1999, the occupational groups with little or no change in FTE growth included clinical RNs (1.9%), home health RNs (-4.6%), aides of all types (-3.7%), and landfill operators (-2.8%). Most noteworthy among groups that lost ground in 2003, 99 occupational health nurses were counted in the FY1999 survey and none were counted in the FY2003 survey.

Coinciding with the growth in the number of FTE employees, there was a large increase in the growth of both part-time and contract hours in 2003. Total annual contract hours grew to 1,729,406 hours, nearly doubling the 1999 total of 885,003 hours. Over 50 percent of this increase was reflected in an increase of contract hours for administrative support staff, environmental health specialists, and aides of all types. Part-time weekly hours grew by 23,570 hours, resulting in a total of 38,330 hours (or 958 FTEs). More than 55 percent of this increase was explained by an increase in the number of part-time hours for administrative support staff, dental assistants, clinical RNs, home health RNs, social workers, and environmental health specialists.

Since 1999, funded full-time positions grew by three and a half percent with the addition of 291 new full-time jobs. When contract personnel are included with FTE personnel, the grand total of 10,340 FTEs in 2003 compares to 9,475 FTEs in 1999. Based on the totals in Table 1, contract staff make up about eight percent of the grand total of health department FTE employees, part-time staff make up an additional nine percent, and full-time staff make up the remaining 83 percent of the FTE grand total.

Table 1. **Health Department Staffing:**
Full-Time Positions, Part-Time Hours, Annual Contract Hours & FTEs by Occupation
(Fiscal Year 2003)

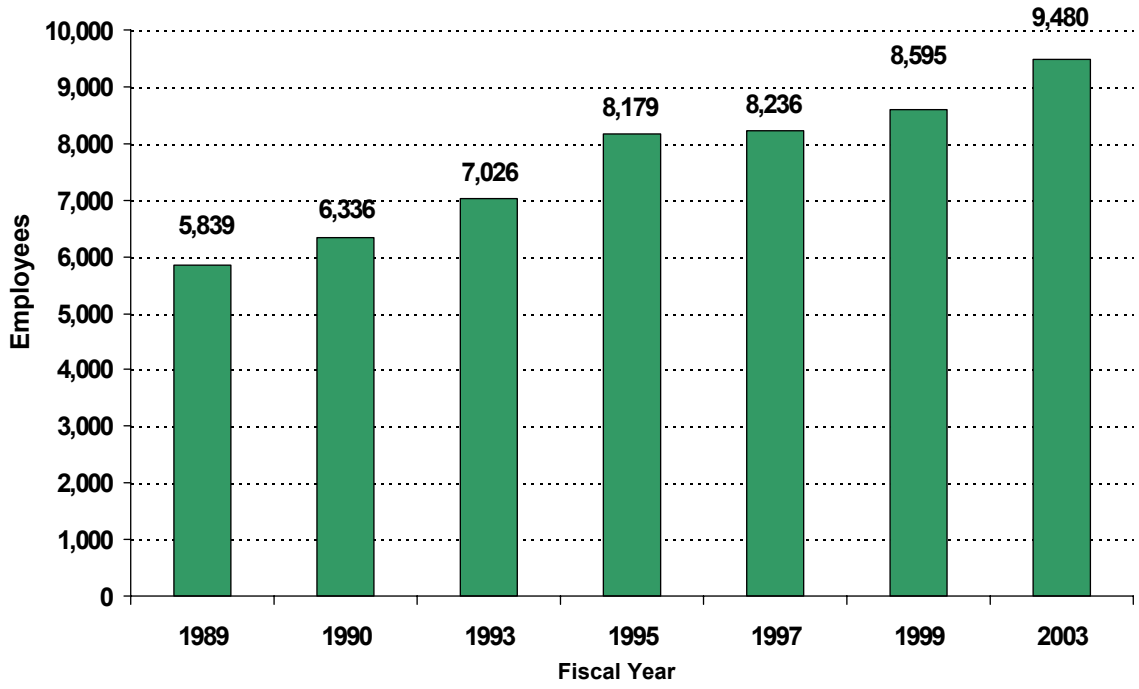
Occupational Groups	Total Funded Full-time Positions	Total Hours Worked by Part-time Staff (Per Average Week)	Annual Contract Staff Hours Worked	Total FTE (Not Including Contract)	Total FTE Including Contract)
Health Director	85	100	10,400	87	92
Administrative/ Management Support Staff	2,089	5,050	256,032	2,215	2,343
LAN/PC Support	57	405	22,537	67	78
Physician	46	503	62,726	59	90
Physician Assistant	70	924	47,480	93	117
Dentist	37	226	36,579	43	61
Dental Assistant/Hygienist	128	2,629	43,605	194	216
RN (Clinical)	1,591	5,853	214,506	1,737	1,845
RN (Home Health)	359	1,427	62,182	395	426
LPN (Clinical)	146	874	40,144	168	188
LPN (Home Health)	36	74	3,911	38	40
Occupational Health Nurse	0	0	3,255	0	2
Nurse Practitioner	117	197	20,960	122	132
Certified Nurse Midwife	11	0	3,846	11	13
Pharmacist	23	1,235	15,298	54	62
Nutritionist	321	2,420	58,577	382	411
Therapist	12	20	73,034	13	49
Social Worker	470	2,020	110,659	521	576
Environmental Health Specialist	796	2,421	106,432	857	910
Public Health Investigator	21	120	6,240	24	27
Lab Technician	204	789	50,479	224	249
X-Ray Technician	8	64	4,809	10	12
Health Educator	310	1,224	65,607	341	373
Interpreter, Spoken Language	137	763	47,448	156	180
Aides (all types)	666	3,841	194,556	762	859
Landfill Operators/Workers	53	1,534	650	91	92
Animal Control Officers	154	280	25,399	161	174
Epidemiologist/Statistician	10	100	4,160	13	15
Other	561	3,237	137,895	642	711
TOTAL	**8,518**	**38,330**	**1,729,406**	**9,480**	**10,340**

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.

Total FTEs: FY1989-FY2003

As of July 1, 2003, there were 9,480 full-time equivalent employees in county health departments (not including contract personnel), surpassing the FY1999 FTE total by 885 employees (Figure 1). Based on the FTE total for FY1989, the number of additional FTE health department employees in FY2003 constituted an increase of 62 percent over the past 15 years. The trend also shows that the FTE totals rose steadily from FY1990 to FY1995, began leveling off in FY1997, and then rose again in FY2003.

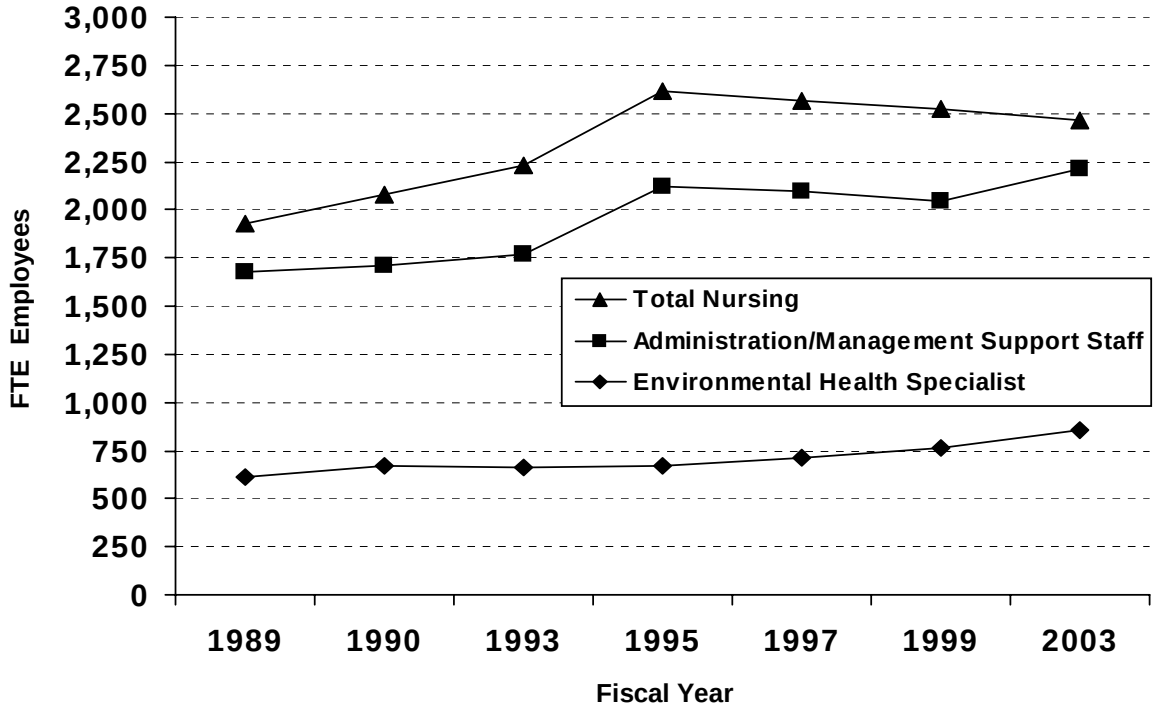
Figure 1. Full-Time Equivalent Employees, FY1989-FY2003
(*Not Including Contract Personnel*)



Nursing, Support Staff, & Environmental Health Specialists: FY1989-FY2003

In Figure 2, the 15-year trends are shown for three of the largest professional groups working in North Carolina health departments: nurses (LPNs & RNs), management support staff, and environmental health specialists. The total number of FTE nurses has been on a gradual decline since 1995; their numbers have dropped by 153 from the start of the decline in 1995 to the present time. For management support staff, the 15-year trend closely follows the pattern among nurses, with the exception that in FY2003, the total number of FTE management support staff increased. Between 1989 and 1997 the total number of FTE environmental health specialists remained below 750; then, in 1999, their numbers climbed to 762 and stood at 857 in FY2003 – an increase of 95 positions from FY1999 to FY2003.

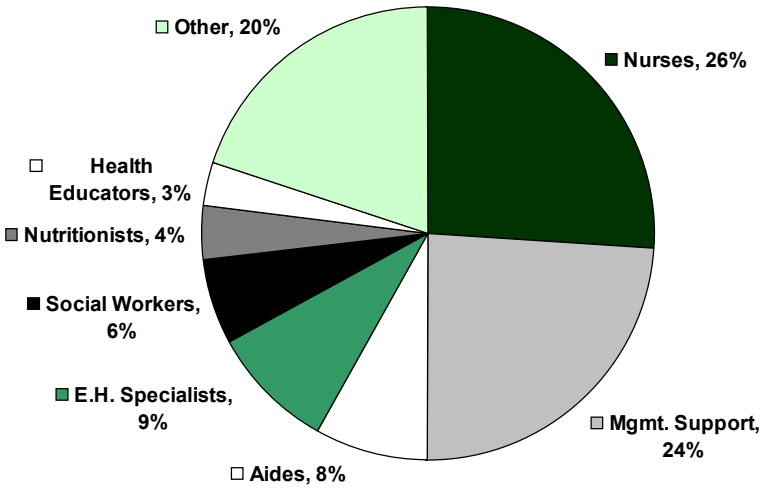
Figure 2. Staffing Change by Occupational Category, FY1989- FY2003
(*Not Including Contract Personnel*)



Occupational Composition of LHDs

Figure 3 shows the distribution of all public health occupations in NC health departments for FY2003. The nursing profession made up the largest percentage of personnel with 26 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 30 percent of all health department personnel. Those who were assigned to the "other" category in the survey comprised an additional 20 percent of the occupations. The occupational distribution shown in Figure 3 is similar to the results found in the 1999 survey, with nurses representing 29 percent and support staff representing 24 percent of the 1999 health department personnel.

Figure 3. FTE Employees by Occupation, FY2003
(*Not Including Contract Employees*)



Change in FTEs from FY1999 to FY2003, by County

Table 2 shows the change in the number of FTEs from FY1999 to FY2003, along with the percent change. Overall, 38 out of 80 health departments/health districts (these 80 had complete 1999 data) **lost** FTE positions during this period, and 39 out of 80 health departments **gained** FTE positions. Also, between FY1999 and FY2003, there was *no* change in the number of FTEs for three counties: Alexander (FTEs=34), Cherokee (FTEs=30) and Rockingham (FTEs=84).

Most notable among health departments that gained FTEs in FY2003, Wake County added 590 FTE positions since the last count was taken in FY1999. Much of this increase in FTEs for Wake can be explained by the consolidation of public health services, mental health services, and social services, including Medicaid. Now, with such services under one organizational roof, renamed "Wake County Human Services," it becomes harder to identify the number of personnel who are only in public health, as roles and responsibilities and services have become blended.[1]

[1] Personal Communication, Gibbie Harris, Director of Community Health, Wake County Human Services, December 23, 2003.

Table 2. **Health Department Staffing:**
Change in Number of FY2003 FTEs From FY1999 & Percent Change, by County LHD

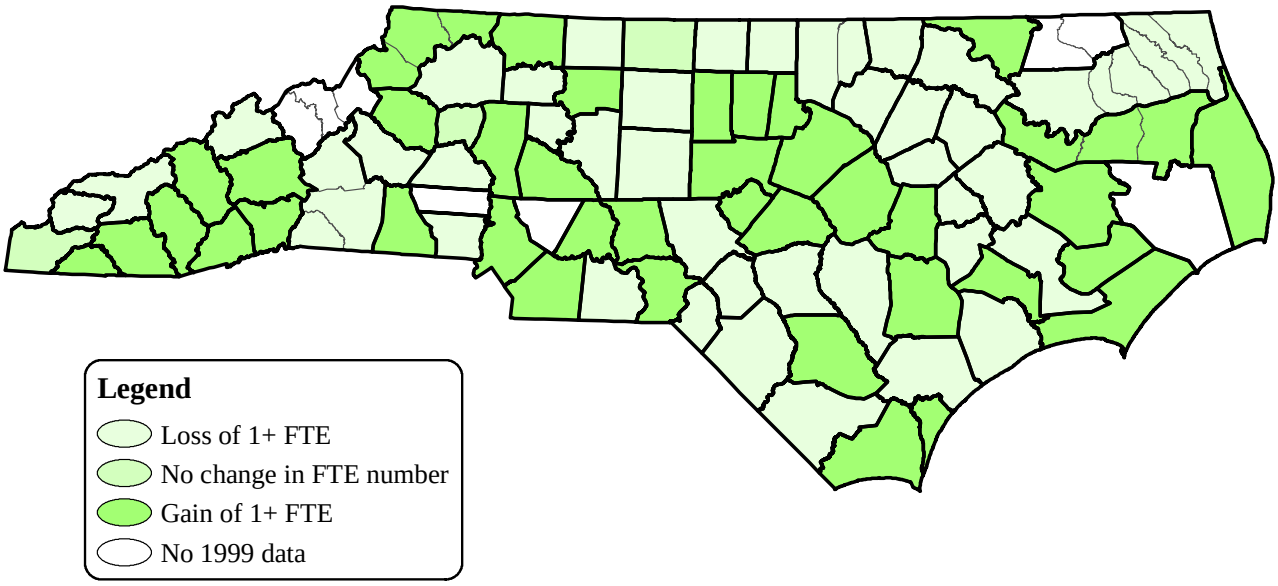
	2003 FTEs	Change from 1999 (+/-)	% chg.		2003 FTEs	Change from 1999 (+/-)	% chg.
Alamance	105	10	10.5%	Jackson	59	4	7.3%
Alexander	34	0†	0.0%	Johnston	97	6	6.6%
Alleg/Ashe/Watauga	113	25	28.4%	Jones	15	3	25.0%
Anson	31	-5	-13.9%	Lee	51	5	10.9%
Beaufort	41	5	13.9%	Lenoir	63	-4	-6.0%
Bertie/Cam/Chow/ Curr/Pasq/Perq	343	-47	-12.1%	Lincoln	67	n/a*	
Bladen	72	3	4.3%	Macon	55	8	17.0%
Brunswick	103	11	12.0%	Madison	23	-8	-25.8%
Buncombe	244	3	1.2%	Mecklenburg	458	73	19.0%
Burke	63	-5	-7.4%	Mitchell/ Avery/Yancey	194	n/a*	
Cabarrus	111	n/a*		Montgomery	35	9	34.6%
Caldwell	122	5	4.3%	Moore	62	-2	-3.1%
Carteret	58	4	7.4%	MTW Health District	146	16	12.3%
Caswell	40	-20	-33.3%	Nash	164	-16	-8.9%
Catawba	129	-7	-5.1%	New Hanover	184	11	6.4%
Chatham	76	12	18.8%	Northampton	72	13	22.0%
Cherokee	30	0†	0.0%	Onslow	163	-11	-6.3%
Clay	35	3	9.4%	Orange	94	6	6.8%
Cleveland	193	18	10.3%	Pamlico	19	3	18.8%
Columbus	85	-16	-15.8%	Pender	47	-10	-17.5%
Craven	130	-3	-2.3%	Person	55	-3	-5.2%
Cumberland	228	-94	-29.2%	Pitt	113	-2	-1.7%
Dare	72	16	28.6%	Randolph	85	-3	-3.4%
Davidson	91	-19	-17.3%	Richmond	70	10	16.7%
Davie	57	-9	-13.6%	Robeson	211	-1	-0.5%
Duplin	54	4	8.0%	Rockingham	84	0†	0.0%
Durham	284	54	23.5%	Rowan	78	1	1.3%
Edgecombe	110	-88	-44.4%	Rutherford/Polk/ McDowell	17	-80	-82.5%
Forsyth	240	30	14.3%	Sampson	41	-1	-2.4%
Franklin	79	-4	-4.8%	Scotland	62	-12	-16.2%
Gaston	180	-31	-14.7%	Stanly	60	9	17.6%
Graham	14	-66	-82.5%	Stokes	52	-4	-7.1%
Granville/Vance	78	-12	-13.3%	Surry	210	48	29.6%
Greene	25	-2	-7.4%	Swain	50	-33	-39.8%
Guilford	450	-6	-1.3%	Transylvania	29	1	3.6%
Halifax	121	-5	-4.0%	Union	95	4	4.4%
Harnett	162	85	110.4%	Wake	821	590	255.4%
Haywood	73	9	14.1%	Warren	46	-17	-27.0%
Henderson	82	13	18.8%	Wayne	138	21	17.9%
Hertford/Gates	83	n/a*		Wilkes	58	-6	-9.4%
Hoke	30	-5	-14.3%	Wilson	153	-2	-1.3%
Hyde	38	n/a*		Yadkin	30	-1	-3.2%
Iredell	140	46	48.9%				

* Not available: Avery, Cabarrus, Gates, Hertford, Hyde, and Lincoln did not respond to the 1999 survey.
† No change in FTEs from 1999 to 2003.

Examining the results by individual counties (excluding Wake), the largest **increases** in the number of FY2003 FTEs occurred in Durham (+54), Harnett (+85), and Mecklenburg (+73) counties, while the largest percentage increases were found in Harnett (+110.4%), Iredell (+48.9%), and Montgomery (+43.6%) counties.

The largest **decreases** in the number of FTEs occurred in Cumberland (-94), Edgecombe (-88) and the Rutherford/Polk/McDowell District Health Department (-80). The largest percentage declines were evident in Edgecombe (-44.4%), Rutherford/Polk/McDowell (-82.5%), and in Graham County (-82.5%).

Figure 4. Gain, Loss, or No Change in FTE Positions from FY1999 to FY2003 by County Health Departments



Public Health Services (Section B)

As stated in the 1999 Report, "*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.

Beginning with HEALTH SUPPORT services, a total of 77 out of 85 health departments/health districts in North Carolina (90%) provide registration of vital events (see Table 3). Vital records and statistical services are maintained in all but four health departments. At least 80 out 85 health departments/health districts (94%) provide reportable disease data, communicable disease surveillance, health education, child health, community health education, language interpretation, and laboratory services. The Health Support service least often provided was pesticide poisoning investigation: less than 25 percent of health departments offered this service.

Regarding ENVIRONMENTAL HEALTH services, all county health departments offer restaurant and lodging inspections. All but one county offers on-site sewage and wastewater disposal services. With regard to water sanitation and safety, 77 out of 85 county health departments (91%) offer private water supply services, while 33 out of 85 (39%) offer public water supply services. Public swimming pool sanitation was available in all but two health departments. Regarding pest management, 42 health departments (49%) provide mosquito control and 36 health departments (42%) provide rodent control.

Regarding PERSONAL HEALTH services – the largest category of services – complete coverage (100%) was available for three services: maternity care coordination, contraceptive care, and immunizations. Under the sub-category of Maternal Health services, over 90 percent of health departments provided prenatal/postpartum care, SIDS counseling, and maternal WIC services. Within Family Planning services, adolescent pregnancy prevention (93%) and preconceptional counseling (90%) were most often provided. Within Child Health services, child service coordination (99%), lead poisoning prevention (96%), child WIC (94%), and Well-Child services (93%) were most often provided.

For services related to Chronic Disease Control, early detection and referral services were most often provided for hypertension (83%), cancer (81%), diabetes (87%), and cholesterol (79%). Less than 25 health departments offered early detection and referral for arthritis, glaucoma, epilepsy, and asthma. The provision of Patient Education services for these same chronic diseases tended to be somewhat higher than that of early detection and referral.

Under services for Communicable Disease Control, training and education (94%) were most often provided for STD control; case management (77%) and technical assistance (68%) for STD control were least often provided. All 85 health departments offered screening for AIDS/HIV.

Under Dental Health services, 75 percent of health departments offer dental health education, 66 percent offer sealant application, and 78 percent offer dental screening and referral. Lastly, 24 health departments (28%) offer migrant health services and 16 health departments (19%) offer refugee health services.

Since 1999, the provision of public health services has grown in some areas and declined in others. In 2003, the number of health departments offering services to developmentally disabled children increased by eight from 1999, the number offering school health services increased by nine, the number offering dental sealant application increased by 17, and the number offering mosquito control services increased by 14. The number of health departments offering early detection and referral of glaucoma decreased by nine since 1999, the number offering genetic services for children decreased by nine, and the number of health departments offering migrant health services decreased by 15. Most noticeably, the number of health departments offering primary care for adults decreased by 45 – a decline of 56 percent.

Table 3. **Public Health Services**
(As of 7/1/2003 with all 85 Health Departments/Health Districts reporting)

SERVICE	Number of Health Departments Offering Service
HEALTH SUPPORT	
Registration of Vital Events	77
Assessment of Health Status, Health Needs and Environmental Risks to Health	
Epidemic Investigations	
Risk Assessment	62
Pesticide Poisoning	20
Health Assessment	
Behavioral Risk Assessment	60
Morbidity Data	67
Reportable Disease	81
Vital Records and Statistics	81
Chronic Disease Surveillance	57
Communicable Disease Surveillance	82
Policy Development Functions and Services	
Health Code Development and Enforcement	57
Health Planning	60
Health Assurance	
Health Education	84
Child Health	81
Prenatal Care	76
Primary Care	
Adult	36
Pediatric	47
Community Health Education	81
Interpretation, Spoken Language	81
Laboratory Services	82
Pharmacy Services	57
ENVIRONMENTAL HEALTH	
Restaurant/Lodging/Institutions Sanitation and Inspections	85
On-Site Sewage and Wastewater Disposal	84
Water Sanitation and Safety	
Public Water Supply	33
Private Water Supply	77
Milk Sanitation	9
Shellfish Sanitation	9
Public Swimming Pool	83
Bedding Control	11
Pest Management	
Mosquito	42
Rodent	36
Lead Abatement	75
PERSONAL HEALTH	
Maternal Health	
Prenatal and Postpartum Care	78
Maternity Care Coordination	85

Table 3. **Public Health Services** *(continued)*
(As of 7/1/2003 with all 85 Health Departments/Health Districts reporting)

SERVICE	Number of Health Departments Offering Service
PERSONAL HEALTH (continued)	
SIDS Counseling	77
WIC Services — Mother	80
Family Planning	
Preconceptional Counseling	77
Contraceptive Care	85
Fertility Services	32
Pregnancy Prevention— Adolescent	79
Child Health	
Well-Child Services	79
Genetic Services	25
Services to Developmentally Disabled Children	52
Child Service Coordination	84
Adolescent Health Services	65
School Health Services	58
Lead Poisoning Prevention	82
WIC Services — Children	80
Immunizations	85
Chronic Disease Control	
Early Detection and Referral	
Kidney Disease	24
Hypertension	71
Cancer	69
Diabetes	74
Cholesterol	67
Arthritis	22
Glaucoma	15
Epilepsy	15
Patient Education	
Kidney Disease	38
Hypertension	75
Cancer	73
Diabetes	76
Cholesterol	71
Arthritis	38
Glaucoma	28
Epilepsy	28
Asthma	36
Chronic Disease Monitoring and Treatment	38
Home Health Services	37
Health Promotion and Risk Reduction	
Nutrition Counseling	80
Injury Control	56
Communicable Disease Control	
Tuberculosis Control	85
Acute Communicable Disease Control	81

Table 3. **Public Health Services** *(continued)*
(As of 7/1/2003 with all 85 Health Departments/Health Districts reporting)

SERVICE	Number of Health Departments Offering Service
PERSONAL HEALTH (continued)	
STD Control	
Case Management	66
Drugs	78
Training/Education	80
Technical Assistance	58
AIDS/HIV Screening	85
Rabies Control	79
Dental Health	
Dental Health Education	64
Fluoride Prophylaxis	55
Sealant Application	56
Dental Screening and Referral	66
Dental Treatment	43
Community Fluoridation	24
Other Personal Health	
Migrant Health	24
Refugee Health	16

Bilingual Health Initiatives (Section C)

Non-English Information & Education Material in LHDs

As was true in FY1999, all health departments in FY2003 provided educational and informational material in Spanish. Besides Spanish, eleven health departments also provided educational material in a least one of these other languages: French, Russian, Hmong, Laotian, Cambodian, Japanese, Vietnamese, and several other Asian dialects.

Regarding the **use** of non-English material in health department service areas, Family Planning clinics (83) were most often cited as using non-English material; this was followed by Maternal Health (80), Child Health (78), Patient Education and Communicable Disease Control (73), Health Promotion/Risk Reduction (58), Dental Health (53), and Chronic Disease Control (48).

Examining the **need** for non-English education/information material in these service areas, 36 respondents – the highest number – reported the need for these materials in Chronic Disease Control and Health Promotion services. The next highest level of need was associated with Dental Health and Communicable Disease Control (27 LHDs).

Bilingual Outreach & Bilingual Staff

Fifty-nine health departments reported "yes" to having bilingual outreach efforts targeting the non-English population in their service areas, while 25 reported "no" to this question. The current number of health departments with outreach efforts exceeds the FY1999 number by 19 – an increase of close to 50 percent over the time period.

Sixty-three health departments (74%) reported having staff positions designated as interpreters and 22 health departments (26%) did not have designated interpreters. In FY1999, 52 health departments or about 60 percent had designated interpreters.

Among the 22 health departments in FY2003 that did not have designated staff interpreters, about two-thirds (14) also had no specific outreach efforts targeting the non-English populations.

Currently there are 307 LHD staff members (including contract staff) who are reportedly bilingual; in FY1999, that number was 169. In Table 4, we show the number of FY1999 and FY2003 bilingual staff by county. Based on the difference in counts between the two survey years, 21 health departments moved from no (0) bilingual staff in FY1999 to one or more bilingual staff members in FY2003. For 17 health departments, the number of bilingual staff remained unchanged. Six counties had no bilingual staff members in FY1999 *and* in FY2003. The largest gain in bilingual staff occurred from FY1999 to FY2003 in Buncombe and Durham counties (+13). The largest loss in bilingual staff from FY1999 to FY2003 occurred in Mecklenburg (-12).

Bilingual Training

In the current survey, 53 LHDs reported having special training for their providers who work with non-English speaking clients; 40 LHDs had such training in FY1999. In FY2003, 69 LHDs have had cultural diversity training for their staff, more than double the number of LHDs in FY1999 (34). About the same number of FY2003 respondents (21) and FY1999 respondents (22) reported the need for cultural diversity training.

Table 4. **Bilingual Health Initiatives:**
Change in Number of Bilingual Staff from FY1999 to FY 2003, by County LHD

	FY1999 Bilingual Staff	FY2003 Bilingual Staff	Change		FY1999 Bilingual Staff	FY2003 Bilingual Staff	Change
Alamance	4	2	-2	Jackson	0	5	+5
Alexander	0	0	0	Johnston	0	5	+5
Aleg/Ashe/Watauga	0	2	+2	Jones	1	0	-1
Anson	1	1	0	Lee	4	8	+4
Beaufort	2	2	0	Lenoir	2	3	+1
Bertie/Cam/Chow/ Curr/Pasq/Perq	1	1	0	Lincoln	n/a	2	–
Bladen	3	2	-1	Macon	1	1	0
Brunswick	3	1	-2	Madison	3	1	-2
Buncombe	0	13	+13	Mecklenburg	17	5	-12
Burke	2	2	0	Mitchell/ Avery/Yancey	n/a	5	–
Cabarrus	n/a	9	–	Montgomery	0	8	+8
Caldwell	1	4	+3	Moore	4	4	0
Carteret	1	2	+1	MTW Health District	0	2	+2
Caswell	0	0	0	Nash	5	7	+2
Catawba	2	6	+4	New Hanover	2	3	+1
Chatham	9	10	+1	Northampton	0	2	+2
Cherokee	0	0	0	Onslow	3	3	0
Clay	0	0	0	Orange	0	5	+5
Cleveland	0	1	+1	Pamlico	1	1	0
Columbus	3	2	-1	Pender	3	3	0
Craven	1	3	+2	Person	0	1	+1
Cumberland	0	3	+3	Pitt	6	4	-2
Dare	0	1	+1	Randolph	2	5	+3
Davidson	4	2	-2	Richmond	0	1	+1
Davie	1	1	0	Robeson	5	9	+4
Duplin	6	7	1	Rockingham	2	3	+1
Durham	8	21	+13	Rowan	2	6	+4
Edgecombe	3	2	-1	Rutherford/Polk/ McDowell	1	4	+3
Forsyth	10	15	+5	Sampson	1	2	+1
Franklin	0	1	+1	Scotland	0	1	+1
Gaston	0	8	+8	Stanly	0	1	+1
Graham	0	0	0	Stokes	0	2	+2
Granville/Vance	5	4	-1	Surry	0	7	+7
Greene	1	2	+1	Swain	0	0	0
Guilford	4	5	+1	Transylvania	0	1	+1
Halifax	1	1	0	Union	5	0	-5
Harnett	4	3	-1	Wake	0	–	–
Haywood	3	1	-2	Warren	1	2	+1
Henderson	6	13	+7	Wayne	2	6	+4
Hertford/Gates	n/a	0	–	Wilkes	0	5	+5
Hoke	1	6	+5	Wilson	3	5	+2
Hyde	n/a	1	–	Yadkin	2	4	+2
Iredell	1	5	+4	**NC Total**	**169**	**307**	**121**

Insurance (Section D)

When asked if their agency bills private insurance, 76 health department respondents checked “yes” (89%) and nine respondents checked “no” (11%).

Among the 76 health departments that bill private insurance, the number of insurance companies for which the health department is on the provider panel varied from 0 to 453 insurance companies. Clay, Gaston, Montgomery, Moore, and Wake all reported 0 (no) companies for which they were on the provider panel. At the other end of the spectrum, Robeson reported 100 companies for which they were on the provider panel, Chatham reported 139, Pamlico reported 144, Wayne reported 150, and Macon reported 453. (Given these extremes, the issue arises as to whether all respondents shared the same understanding of what was meant by being on the “provider panel.”)

For the 9 health departments (Durham, Haywood, Lenoir, Madison, Randolph, Rockingham, Stanly, Transylvania, and Union) that do not bill private insurance companies, the reasons they selected from the survey for not doing so included the following (respondents could check more than one answer):

- nine selected *Number of clients with private insurance does not justify time spent*;
- six selected *Lack staff/resources to do this*;
- five selected *Unable to get on provider panels – cannot meet minimum requirements*;
- three selected *Unable to get on provider panels – they are closed*;
- three selected *Lack knowledge on how to bill private insurance*; and
- one selected *Do not serve clients with private insurance.*

Information Technology (Section E)

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 was a total of 6,891 desktops or personal computers (PCs) in use in FY2003, nearly twice the FY1999 total of 3,599 computers. In FY2003, there was an average of 75 desktop PCs with Pentium processors per health department, compared to an average of 37 in FY1999.

Seventy-nine health departments reported having a Local Area Network (LAN) system, up from 58 health departments in FY1999 (Table 6). A total of 50 health departments had a LAN administrator on staff, up from 28 in FY1999. Sixty-two percent of health departments were connected to the state's Wide Area Network (WAN), compared to 28 percent in FY1999.

Regarding internet access, all health department respondents (85) in FY2003 reported having access to the internet. Thirty-four of these health departments used the State WAN as their internet provider and 38 used the county as their internet provider. In FY1999, 81 out of 86 health departments reported having access to the internet, and 23 reported using the state WAN as their provider (Table 6). Among those with internet access, 69 health departments in FY2003 reported having T1 or better connection levels, compared to 23 in FY1999.

Fifty-five health departments had an internet homepage in FY2003, up from 31 in FY1999. The availability of desktop video conferencing more than doubled in FY2003, while GIS in-house capabilities declined slightly from 22 in FY1999 to 18 in FY2003 (Table 6).

New to the information collected in FY2003, most health departments had improved security systems and also had back-up/recovery systems. A much smaller number, however, had a Virtual Private Network system, or wireless connection to E-mail or to their Network.

Table 5. **Information Technology**:
Summary of Technological Capabilities Among Health Departments, FY2003

		Count
Local Area Network (LAN)		79
	Ethernet	71
	Token Ring	3
	Other	3
LAN Administrator on staff		50
Part of Wide Area Network (WAN)		53
Security Enhancement Measures		74
Has Virtual Private Network (VPN)		37
Back-up/Recovery for systems		75
Redundant or fail over systems		34
Access to Internet		85
Number of Internet users:		7,654
Provider of Internet services:		
	State WAN	34
	County	38
	Cable	6
	DSL	4
	Dial-up	2
Internet connection:		
	56kb or less	2
	Fractional T1	14
	T1	60
	T3	3
	Better	3
E-mail system		79
E-mail provider:	County	51
	NC Mail	16
	Other	16
Wireless connection to E-mail		14
Wireless connection to Network		15
County-wide GIS		62
Health Department GIS		18
Global Positioning Systems (GPS)		15
Desktop Video Conferencing		23
Staff with Video Conferencing access		922
Has Internet Homepage		55

		Count
Number of Personal Computers by Model and Operating System		
Desktop:	Pentium Win95	492
	Pentium Win98	2,100
	Pentium Win NT4	465
	Pentium Win 2000	2,365
	Pentium Win XP	988
	Pentium Other OS	16
	Other Win 95	379
	Other Win 98	78
	Other Win NT4	0
	Other Win 2000	5
	Other Win XP	3
Laptop:	Pentium Win 95	76
	Pentium Win98	355
	Pentium Win NT4	25
	Pentium Win 2000	337
	Pentium Win XP	169
	Pentium Other OS	0
	Other Win 95	52
	Other Win 98	20
	Other Win NT4	0
	Other Win 2000	4
	Other Win XP	11

Table 6. **Information Technology**:
Percent Change in Selected Technologies from FY1999 to FY2003

	FY1999	FY2003	Percent Change
Total PCs in Health Departments	3,599	6,891	+91.5%
Local Area Network (LAN)	58	79	+36.2%
Connected to State Wide Area Network	23	53	+130.4%
Access to the Internet	81	85	+4.7%
Internet homepage	31	55	+77.2%
Desktop Video Conferencing	8	23	+187.5%
Health Department GIS	22	18	-18.2%

Special Section

The Association of Bilingual Services and Size of County Population of Spanish-speaking Only Adults

Introduction

In the Spring of 2003, the State Center for Health Statistics conducted a survey of North Carolina's Local Health Departments and their partnership with Community Based Organizations (CBOs). This study examined various components of their working relationships. One of the key findings to emerge from the study was the need for spoken language interpreters, both in health departments and in CBOs. In this section of the Report, we re-visit this important issue. We briefly explore whether the existence of bilingual services, i.e., LHDs having designated interpreters and outreach programs targeting the non-English populations, is associated with the size of their county's population of Spanish-speaking only adults (Spanish speakers unable to converse in English). One can reasonably expect that the existence of bilingual services would be driven, at least in part, by need: health departments serving large county populations of Spanish-speaking only adults would be more likely to provide these services than health departments serving relatively small populations.

Defining Spanish-speaking Only Adults

The number of Spanish-speaking only adults (hereafter, Spanish-speaking adults) by county was derived from two questions on the U.S. 2000 Census Long Form Questionnaire that identify persons who speak Spanish at home *and* who speak English either "not well" or "not at all." Since the Long Form is given to a sample of households (about one in six households), the total number of adults in a given county – the numbers that appear in Table 7 – are estimated from the county sample of household respondents.

LHD Bilingual Services and County Populations of Spanish-speaking Adults

The results shown in Table 7 form the basis of this brief report. The numbers depicted under the column heading, "Number Spanish-speaking Adults," are the estimated total number of Spanish-speaking adults, who resided in the county on April 1, 2000. Next to these numbers, we show whether the LHD reported having a bilingual outreach program or staff positions for designated interpreter(s), as derived from the FY2003 Survey. In looking at the results, one can see that health departments in counties with very low numbers of Spanish-speaking adults (less than 200, for example) appear less likely to have outreach programs or designated interpreters than health departments in counties with large numbers of Spanish-speaking adults (greater than 3,000, for example). Initially, there appears to be some degree of association between service provision and the population numbers.

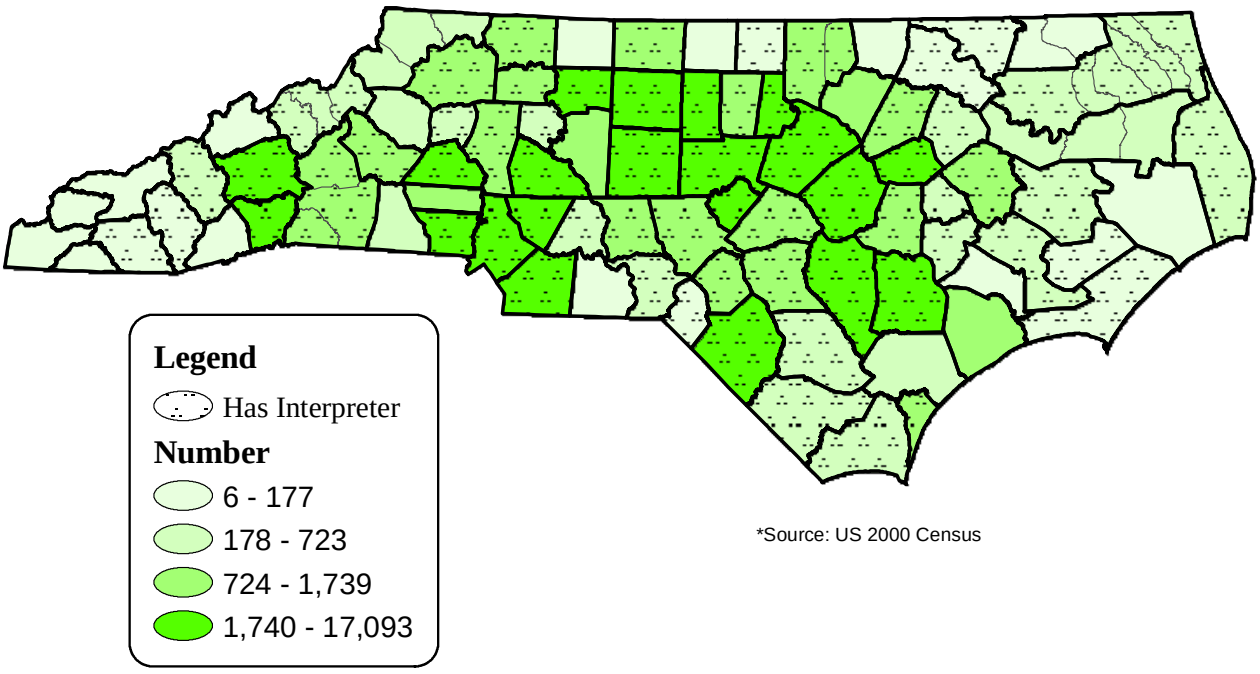
Table 7. **Special Section:** LHD Outreach Program, Designated Interpreters in FY2003 & Number of Spanish-Speaking Only Adults,* by County

	Out-reach Pgm.	Inter-preters	Number Spanish-speaking Adults*		Out-reach Pgm.	Inter-preters	Number Spanish-speaking Adults*
Alamance	Yes	Yes	3,620	Jackson	Yes	Yes	125
Alexancer	Yes	Yes	248	Johnston	Yes	Yes	3,417
Alleg/Ashe/Watauga	No	No	540	Jones	Yes	No	51
Anson	No	No	86	Lee	Yes	Yes	2,168
Beaufort	Yes	Yes	433	Lenoir	No	Yes	533
Bertie/Cam/Chow/ Curr/Pasq/Perq	Yes	Yes	259	Lincoln	Yes	No	1,015
Bladen	Yes	Yes	350	Macon	Yes	Yes	124
Brunswick	Yes	Yes	723	Madison	No	No	49
Buncombe	Yes	Yes	1,818	Mecklenburg	Yes	Yes	17,093
Burke	Yes	Yes	997	Mitchell/Avery/ Yancey	No	Yes	594
Cabarrus	Yes	Yes	2,501	Montgomery	Yes	Yes	1,025
Caldwell	Yes	No	655	Moore	No	Yes	960
Carteret	Yes	Yes	177	MTW Health District	No	No	274
Caswell	No	No	104	Nash	No	Yes	767
Catawba	Yes	Yes	3,187	New Hanover	No	Yes	1,043
Chatham	Yes	Yes	1,877	Northampton	Yes	Yes	28
Cherokee	No	No	63	Onslow	Yes	No	805
Clay	Yes	No	13	Orange	No	Yes	1,610
Cleveland	Yes	No	306	Pamlico	Yes	Yes	66
Columbus	Yes	Yes	337	Pender	Yes	No	502
Craven	No	Yes	506	Person	Yes	Yes	127
Cumberland	Yes	Yes	1,739	Pitt	Yes	Yes	1,538
Dare	Yes	Yes	184	Randolph	Yes	Yes	3,223
Davidson	No	No	1,739	Richmond	No	Yes	375
Davie	Yes	Yes	357	Robeson	Yes	Yes	1,903
Duplin	Yes	Yes	2,814	Rockingham	Yes	Yes	971
Durham	Yes	Yes	7,028	Rowan	Yes	Yes	2,005
Edgecombe	Yes	Yes	498	Rutherford/Polk/ McDowell	Yes	Yes	800
Forsyth	Yes	Yes	7,671	Sampson	No	Yes	2,138
Franklin	Yes	No	762	Scotland	–	Yes	88
Gaston	Yes	Yes	2,408	Stanly	Yes	Yes	426
Graham	No	No	7	Stokes	No	No	164
Granville/Vance	Yes	Yes	1531	Surry	Yes	Yes	1,486
Greene	Yes	Yes	435	Swain	No	No	23
Guilford	Yes	Yes	5,636	Transylvania	No	No	6
Halifax	No	Yes	102	Union	Yes	Yes	3,266
Harnett	Yes	Yes	1,446	Wake	Yes	Yes	13,367
Haywood	No	Yes	220	Warren	No	No	78
Henderson	Yes	Yes	1,783	Wayne	Yes	Yes	1,538
Hertford/Gates	No	No	123	Wilkes	Yes	Yes	746
Hoke	Yes	Yes	740	Wilson	Yes	Yes	1,976
Hyde	No	No	8	Yadkin	Yes	Yes	826
Iredell	Yes	Yes	1,295				

* Source: US 2000 Census

To refine our view of this association, the list of health departments and health districts in Table 7 was divided into four groups of LHDs, based on the (25%) interquartile range of the numbers of Spanish-speaking adults. Here, we want to focus on the large differences in the size of the populations being served. The numbers that appear in Table 7 are meant to serve as a marker for the degree of service need. Using these population ranges, we constructed two county maps, as shown below and on the next page, which feature LHD status for having designated interpreters on staff (Figure 5) or having a specific outreach program for the non-English population in their service area (Figure 6). In the maps, the darkest shade of green consists of LHDs with the largest number of Spanish-speaking adults in their respective counties or districts. Each successively lighter shade of green, consists of the remaining LHDs with progressively smaller numbers of Spanish-speaking adults.

Figure 5. Local Health Departments with Designated Interpreters and County Population of Spanish-speaking Only Adults*



*Source: US 2000 Census

In Figure 5, all of the darkest shaded counties (LHDs) have one or more designated interpreters, while among the lightest shaded counties – LHDs with the lowest numbers of Spanish-speaking adults – about one-third of LHDs reported having staff positions designated as interpreters.

Figure 6. Local Health Departments with Outreach Efforts Targeting the Non-English and County Population of Spanish-speaking Only Adults*

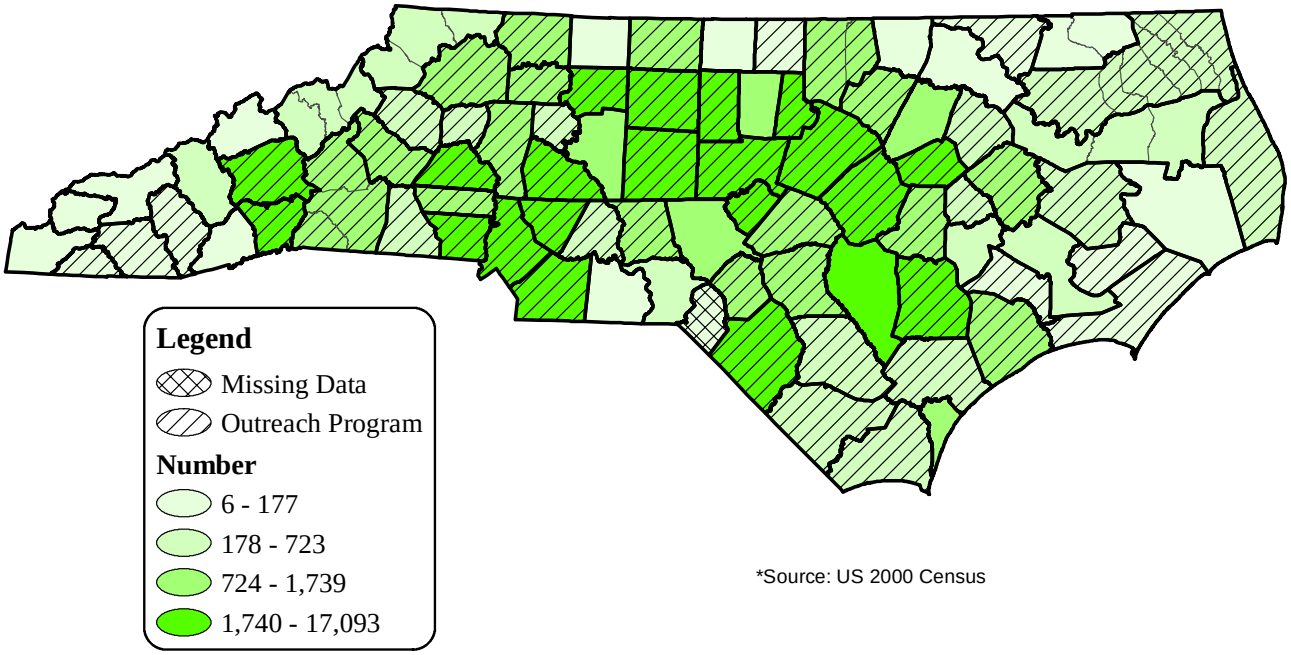


Figure 6 shows a similar pattern. The existence of outreach programs tended to occur most often in counties with the largest populations of Spanish-speaking adults.

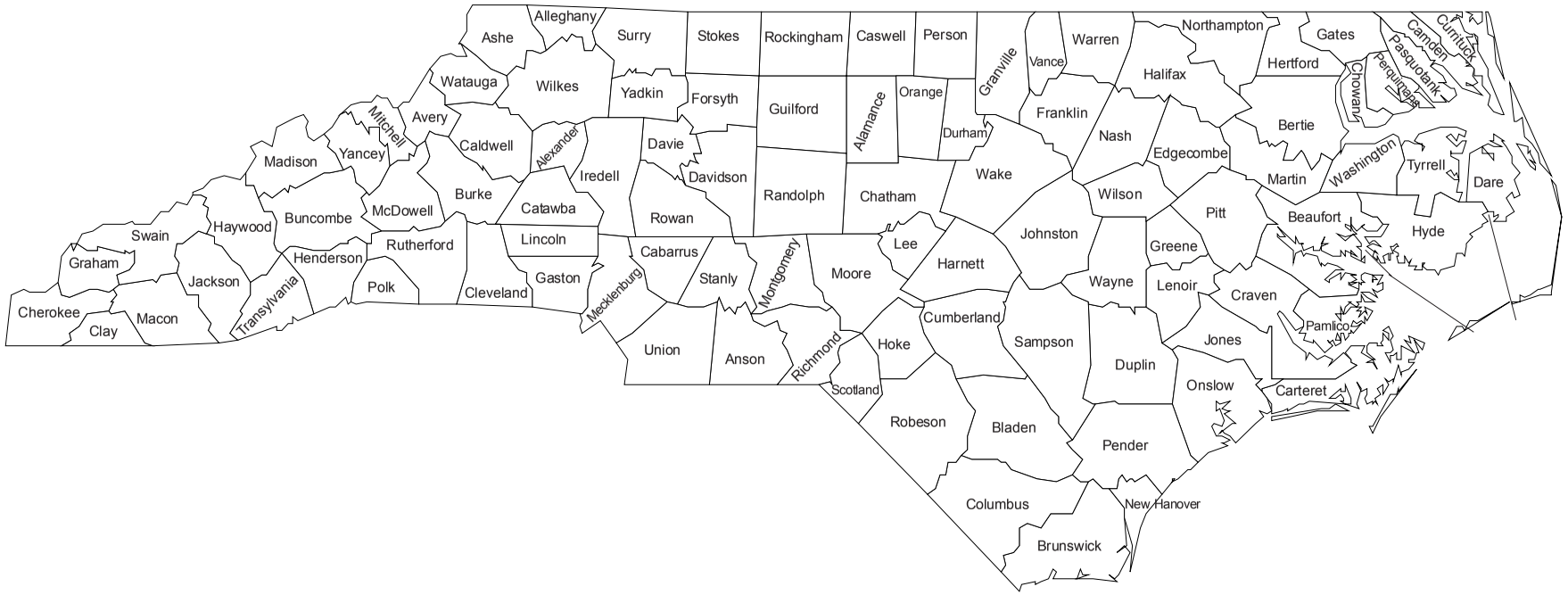
A simple statistical test (Pearson correlation coefficient) of the data revealed that both the presence of LHD interpreters and the presence of LHD outreach programs were positively and significantly ($p < 0.05$) associated with the LHD county number of Spanish-speaking adults. This is what we would expect to see – the development of services driven by need.

Of course there are exceptions to the trend noted above. Northampton County Health Department, for example, had one of lowest numbers of Spanish-speaking adults (*N*=28) in their county, but reported having both designated interpreters on staff and a bilingual outreach effort. Conversely, there were several counties with relatively large populations of Spanish-speaking adults and no reported bilingual services.

Conclusion

No doubt there are other factors besides the size of the Spanish-speaking population that impact the development of LHD bilingual services. The availability of county resources, availability of funding, or availability of bilingual staff are likely to also be determining factors in the development of LHD bilingual services. What is evident is that the need for these services will grow as the population of Spanish-speaking adults continues to grow in certain counties and regions of the state. Moreover, it will become increasingly important that the health departments have access to reliable estimates of the growth and needs of the Spanish-speaking population in their service area.

North Carolina Counties



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