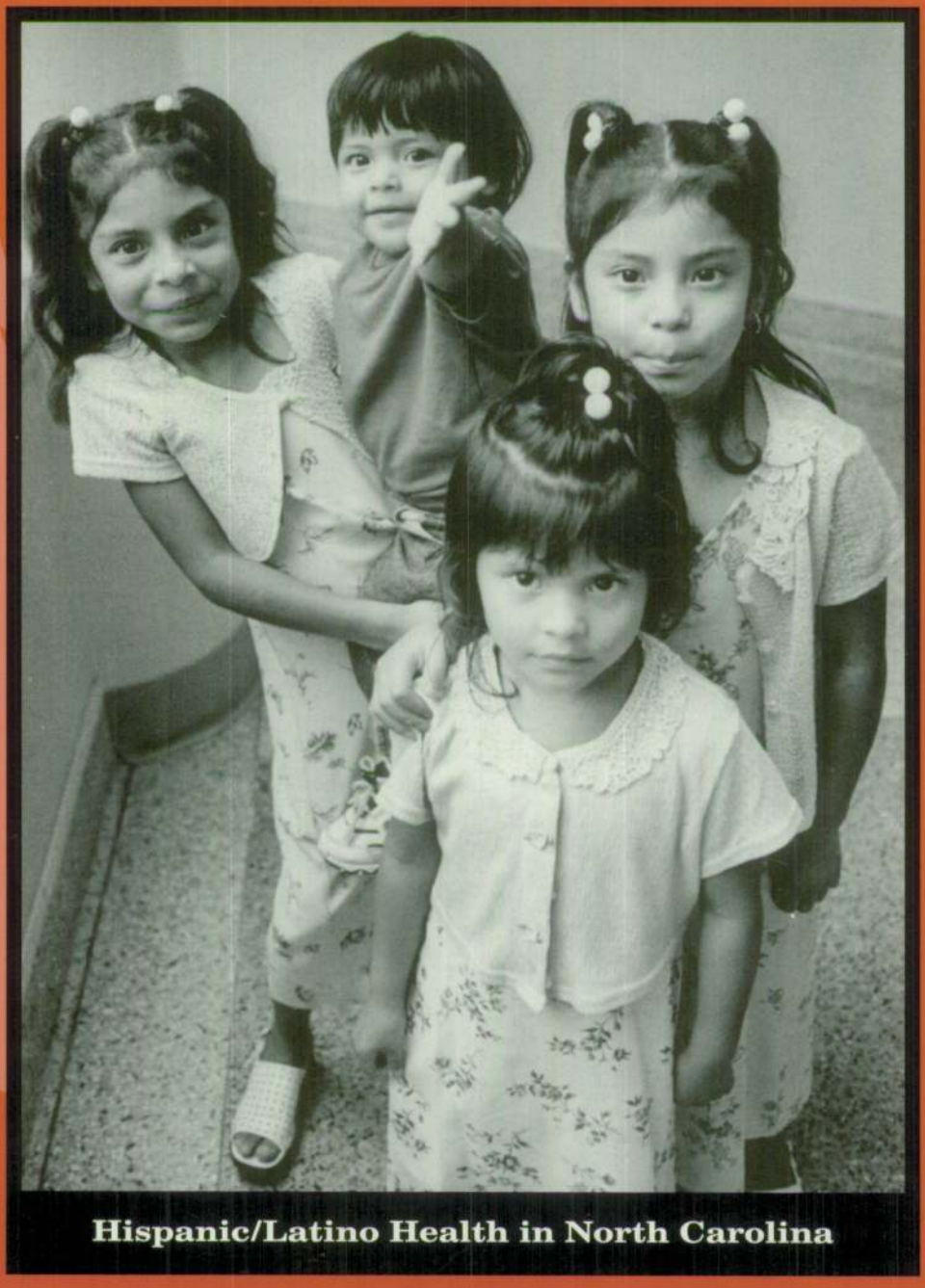
North Carolina Insight

$16 August 1999 Vol. 18, nos. 2–3



Hispanic/Latino Health in North Carolina

Plus: Wood Chip Mills and Sustainability of North Carolina Forests

North Carolina Center for Public Policy Research

N.C. Center for Public Policy Research

The North Carolina Center for Public Policy Research is an independent, nonprofit organization dedicated to the goals of a better-informed public and more effective, accountable, and responsive government. The Center identifies public policy issues facing North Carolina and enriches the dialogue among citizens, the media, and policymakers. Based on its research, the Center makes recommendations for improving the way government serves the people of this state. In all its efforts, the Center values reliable and objective research as a basis for analyzing public policy, independence from partisan bias and political ideology, the richness of the state's diverse population, and a belief in the importance of citizen involvement in public life.

The Center was formed in 1977 by a diverse group of private citizens "for the purpose of gathering, analyzing, and disseminating information concerning North Carolina's institutions of government." It is a nonpartisan organization guided by a self-elected Board of Directors and has individual and corporate members across the state.

Center projects include the issuance of special reports on major policy questions; the publication of a magazine called *North Carolina Insight;* joint productions of public affairs programs with WUNC-FM, WPTF-AM, the N.C. Radio News Network, WRAL-TV, and WTVD-TV; and the regular participation of members of the staff and the Board in public affairs programs around the state. An attempt is made in the various projects undertaken by the Center to synthesize the thoroughness of scholarly research with the readability of good journalism. Each Center publication represents an effort to amplify conflicting ideas on the subject under study and to reach conclusions based on sound rationalization of these competing ideas.

NORTH CAROLINA INSIGHT is a magazine published by the North Carolina Center for Public Policy Research, Inc. (a nonprofit, tax-exempt corporation), Suite 701, 5 W. Hargett St., P.O. Box 430, Raleigh, N.C. 27602. Telephone (919) 832-2839. Annual membership rates; Individual, $36; Organizational, $50; Supporting, $100; Corporate, $200; Full-Service, $250; Corporate Donor, $300; Supporting Corporate, $500; Patron, $1000; Benefactor, $2000. Third class postage paid at Raleigh, N.C. Graphic design by Carol Majors. Production by PUBLICATIONS UNLIMITED. Printed by Theo. Davis Sons, Inc., Zebulon, N.C. The Center is supported in part by grants from the Z. Smith Reynolds Foundation, as well as by 13 other foundations, 190 corporate contributors, and almost 900 individual members across the state. The views expressed in this publication are those of the authors and are not necessarily those of the Center's Board of Directors or staff. Published August 1999. Printed on recycled paper with soy ink.

Cover photo by Karen Tam

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Hispanic/Latino Health in North Carolina:

FAILURE TO COMMUNICATE?

Executive Summary

North Carolina is experiencing a wave of Hispanic/Latino immigration that shows no signs of cresting. The U.S. Census Bureau and state officials estimate that the Hispanic/Latino population has nearly doubled since the 1990 Census to more than 200,000, or some 2 percent of the state's population. Some estimates range as high as 350,000. Of course, not all Hispanic/Latino residents are immigrants. Many have lived in the state for years, speak fluent English, and are firmly entrenched in the middle class. Yet the influx of new or recent immigrants, most of whom speak little or no English, is creating a challenge for providers of public services in North Carolina. In the health care arena, Hispanics/Latinos are heavy users of state services, which means that service providers must make a special effort to meet their needs. This article examines how Hispanics/Latinos are currently being served by local health agencies and discusses how local health agencies might better serve Hispanics/Latinos in the future.

The Center first discussed the new wave of Hispanic/Latino immigration in a 1993 edition of North Carolina Insight *entitled "North Carolina's Demographic Destiny." In that issue, the Center identified the rise in the Hispanic/Latino population as a major demographic trend for years to come. Health issues involving Hispanics/Latinos surfaced in our 1995 study entitled, "The Health of Minority Citizens in North Carolina." Thus, the Center was well positioned to undertake a more detailed study of Hispanic/Latino health in North Carolina.*

This most recent study included a review of recent literature, extensive interviews and field visits, and a survey of all 87 local health departments, 22 community and migrant health centers, 34 rural health centers, and 75 rural hospitals. The response to this survey was excellent, with 94 percent of local health departments participating, and majority participation by each of the remaining types of health care providers. The survey centered on key health issues concerning Hispanic/Latino residents, as well as barriers to receiving adequate care, and steps taken by health care providers to address these barriers.

Barriers To Receiving Care. *The primary barrier affecting Hispanic/Latino health issues in North Carolina is the language barrier, respondents indicated. Asked to identify the three most significant barriers to Hispanics/Latinos obtaining adequate health care in their communities, respondents most frequently cited: (1) the language barrier, followed by (2) lack of insurance or other means to pay for services, and (3) lack of transportation. A distant fourth was lack of information and/or awareness about services available.*

Most Significant Health Issues. *Asked to indicate the three most significant health issues affecting Hispanics/Latinos in their communities, respondents ranked access to health care and no or inadequate health insurance as two of the three most significant health issues. The significance of remaining issues varied by the age and gender. For example, prenatal care ranked as the most significant issue for females. For males, health care providers indicated that the key issues beyond access and health insurance were (1) on-the-job-injuries, (2) sexually transmitted diseases, and (3) drug and alcohol abuse. For children, the key issues were (1) immunization rates, (2) dental care, and (3) nutrition.*

Steps Taken To Address Barriers. *Nearly all of the respondents indicated that they use interpreters to address the language barrier, including all but one of the North Carolina health departments that responded to the Center's survey. More than half the health departments had interpreters on staff (57.7 percent)—but many of these employees had multiple duties. Health departments also used contract and volunteer interpreters, as did other types of service providers. Other steps most frequently taken to reduce health care barriers for Hispanics/Latinos included: (1) offering bilingual information and materials; (2) providing Spanish language training and/or cultural training for staff; (3) conducting outreach efforts such as health fairs; (4) offering transportation or providing outreach or home visits for people without transportation; (5) opening clinics on weeknights more than one night a month; and (6) hiring bilingual staff.*

Other Key Findings. *The Center also found that Hispanics/Latinos are underserved by the state's mental health system and that Hispanics/Latinos are overrepresented among workers who are injured on the job.*

Many local health departments and other types of service providers are making a strong effort to provide health services for the burgeoning Hispanic/Latino population in North Carolina. However, more could be done. Local health departments, for example, are carving money for interpreters out of their own budgets and using dollars that would otherwise go for clinic staff or other personnel. This addresses the immediate concern but diverts funds that might go to provide additional health services. Quality of interpreter services is a separate concern, as local health officials cautioned that poor interpretation exposes patients to health risks and providers to liability lawsuits. In addition, many health care providers are risking lawsuits by asking Hispanics/Latinos to bring their own interpreters.

More effort is needed in promoting cultural sensitivity, providing language training for staff, and providing easy-to-understand health promotion materials in Spanish. In addition, many believe the most efficient means of improving care of Hispanics/Latinos is to hire more Spanish-speaking health care

providers and staff. That means educating more Hispanic/Latino health care providers.

Inadequate health insurance or a means to pay for health services is another key issue. According to the U.S. Census Bureau, in 1997, 15.5 percent of North Carolinians were not covered by health insurance. While the number of Hispanics/Latinos not covered by health insurance in the state is unknown, nationally 33.6 percent of the nation's population that were of Hispanic origin were not covered by health insurance compared to 14.4 percent for whites and 21.7 percent for blacks. North Carolina's Health Choice for Children insurance program is restricted by federal law to citizens or lawful permanent residents, which excludes Hispanic/Latino children who are legal residents if they arrived after August 22, 1996. Furthermore, while U.S.-born children are eligible for the program, their parents might not apply if they themselves aren't legal residents because they fear deportation or jeopardizing their own immigration status. There was a general sense among survey respondents that more resources are needed to serve this growing population, both to protect health of Hispanics/Latinos and the health of the population as a whole.

The Center offers seven ***recommendations*** *to provide better health services to the state's growing Hispanic/Latino population. The recommendations are: (1) that the governor include in his proposed budget to the 2000 legislative session money for interpreter services at local health departments; (2) that the governor include in the budget he presents to the 2000 General Assembly an additional $250,000 to allow more health departments, community and migrant health centers, and rural health centers to provide Maternal Care Coordination services to women ineligible for Medicaid; (3) that the N.C. General Assembly make an annual appropriation to fund immunization outreach workers in 20 counties with the largest Hispanic/Latino populations; (4) that the N.C. Department of Labor devise and implement a plan for enhancing workplace safety among Hispanics/Latinos; (5) that the N.C. Division of Mental Health, Substance Abuse, and Developmental Disabilities adopt an outreach plan for addressing the mental health needs of Hispanics/Latinos; (6) that the Department of Community Colleges, schools in the health professions within the University of North Carolina system, and the Area Health Education Centers (AHEC) Program strengthen their efforts to recruit and educate Hispanic/Latino students who will become bilingual health care providers; and (7) that the legislature form a study commission to examine reimbursement issues for facilities treating Hispanic/Latino patients, including whether to extend state-funded health care coverage to non-citizen children who by income standards alone might otherwise be eligible to participate in the state's child health insurance program.*

▼

The Center's research on Hispanic/Latino health issues in North Carolina was funded by a grant from the Kate B. Reynolds Charitable Trust. The Center thanks the Kate B. Reynolds Charitable Trust for its generous support of this project.

FAILURE TO COMMUNICATE?

by Joanne Scharer

Introduction

Robeson County Health Director William Smith keeps a tray of Hershey's Chocolate Kisses on the coffee table of the sitting area in his cramped Lumberton office. A motion-detecting pink plastic pig stands guard over the tray, and when guests reach for a snack, the pig lets out a squeal. It's a novel way to be generous while keeping a lid on expenses, and it makes for a good metaphor. As the health director in North Carolina's most diverse county and one of its poorest, Smith has become a master of stretching thin resources to meet the needs of the thousands of Robeson County citizens who crowd into the Spartan facility for health services.

The most recent newcomers to test the thin reserves of Robeson County are Hispanics/Latinos. They join a population almost equally divided between African Americans, Native Americans, and whites, and Smith is doing his best to accommodate them. His walls adorned with stuffed fish, photos of his tow-headed children, and University of South Carolina degrees, the ruddy-complected health director doesn't exactly look the part of a champion of the various racial and ethnic groups who call Robeson County home. But Smith walks the walk. For example, with no additional funding he has converted four positions in various health clinics to interpreters, and he's pushing the rest of his staff to learn as much Spanish as possible through intensive short courses. He's opened up clinics until 7:15 nightly except Saturday, and he's attempted to introduce staff to issues involving Hispanic/Latino culture. Similar efforts are taking place at many of the 87 local health departments across North Carolina as agencies assigned the task of protecting the public health attempt to deal with a wave of Hispanic/Latino immigration that shows no sign of cresting.

While local health departments may be taking the brunt of the Hispanic/Latino influx, other health care providers also have seen an impact. Hospitals—particularly in rural areas—are seeing their emergency rooms inundated with relative newcomers who can't speak English. Community and migrant health centers—some created with a mission to serve farmworkers, and all created to serve the medically underserved—are seeing ever-increasing caseloads. And even private physicians find themselves reaching for the Spanish phrase book.

> ***Illness is the doctor to whom we pay most heed: to kindness, to knowledge we make promises only; pain we obey.***
>
> —MARCEL PROUST
> *CITIES OF THE PLAIN*

The North Carolina Center for Public Policy Research first began to weigh the impact of the wave of Hispanic/Latino immigration in a 1993 study called "North Carolina's Demographic Destiny."[1] The Center acknowledged the strong growth

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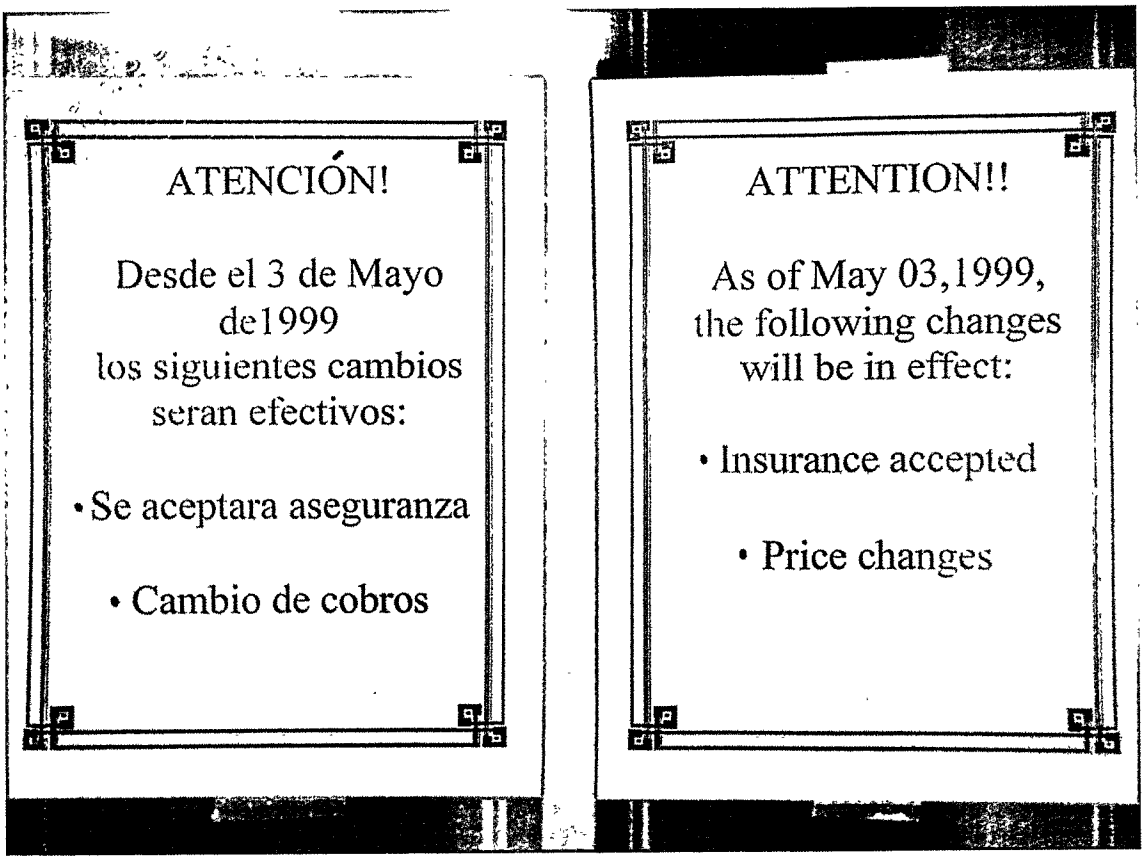

Karen Tam

of the Hispanic/Latino population and highlighted the language and cultural challenges of this changing demographic. The health needs of this growing group began to surface in the Center's 1995 report entitled "The Health of Minority Citizens in North Carolina."[2] With the population continuing to grow and many of its unique health needs either unknown or unmet, the Center most recently decided to devote a study purely to the health of Hispanic/Latino residents of North Carolina.

Apart from the basic health care policy debates, the rapid increase of the Hispanic/Latino population in North Carolina raises a whole new set of questions for policymakers. How does this scenario impact the quality and access to health care for the Hispanic/Latino population in North Carolina? How do the health care needs of this population compare to those of the white majority and other minorities? What are barriers to Hispanics/Latinos receiving adequate health care?

To find answers to these and other policy questions affecting Hispanic/Latino health in North Carolina, the Center undertook a four-part study. The Center: (1) surveyed all the state's 87 local health departments,[3] 22 community/migrant health centers,[4] 34 rural health centers,[5] and 75 rural hospitals[6] to learn more about health services provided to Hispanics/Latinos and the barriers to serving the Hispanic/Latino community; (2) conducted on-site interviews with health care providers, policymakers, and members of the Hispanic/Latino community across the state and; (3) examined existing programs addressing Hispanic/Latino health issues.

Of 218 persons surveyed, 163 participated in the Center's survey, providing an overall response rate of 74.8 percent. Response by subgroups varied, with a near unanimous response among local health departments and a majority response rate for each of the subgroups. All but five local health departments responded, for a response rate of 94.3 percent (82 of 87). The response rate among 34 rural health centers was 58.8 percent (20 of 34), while 59.1 percent of community/migrant health centers completed the Center's survey (13 of 22), and 64.0 percent of rural hospitals responded (48 of 75) (see Tables 3–5, 9, 11, 12, and 15–21 for highlights of the survey results). The results provide a good cross section of data and opinion from health care providers across North Carolina.

Demographics

Attracted by the prospect of plentiful jobs, a pleasant climate, and relatively low cost of living, North Carolina's Hispanic/Latino population has grown dramatically since 1990, and especially within the last five to six years. Like Hispanics/Latinos nationally, the Hispanic/Latino population of North Carolina increased at a rate that was double the rate of total population growth and more than double the rate of non-Hispanic white and black population growth.[7] The U.S. Census Bureau estimates that 134,384 Hispanics/Latinos lived in the state in July 1997, an 11 percent increase over 1996 and 94.7 percent more than in the 1990 census (see Figure 1, page 9 and Table 1, page 10).[8] However, local health directors estimate that the Hispanic/Latino population in North Carolina is now closer to 229,902.[9] Unfortunately, a reliable number is unavailable as new Hispanics/Latinos arrive in North Carolina every day and those that are undocumented are difficult to count.

Hispanics/Latinos are settling across North Carolina, but primarily in the following communities: metropolitan or "urban crescent" communities along the Interstate Highway 85 corridor such as Charlotte, Greensboro, and Durham, where most of the state's employment growth has occurred over the last 15 years; in western Piedmont counties such as Forsyth, Rockingham, Surry, and Yadkin; near military complexes in Onslow County (Camp Lejeune Marine Base) and Cumberland County (Fort Bragg Army Base and Pope Air Force Base); and eastern farming counties such as Johnston, Robeson, Duplin and other predominantly agricultural communities that depend on migrant workers to harvest crops (See Table 2, p. 14). The Hispanic/Latino population is relatively sparse in the extreme western part of the state and the northern coastal areas, although

The Latino Health Fair held last fall in Chapel Hill.

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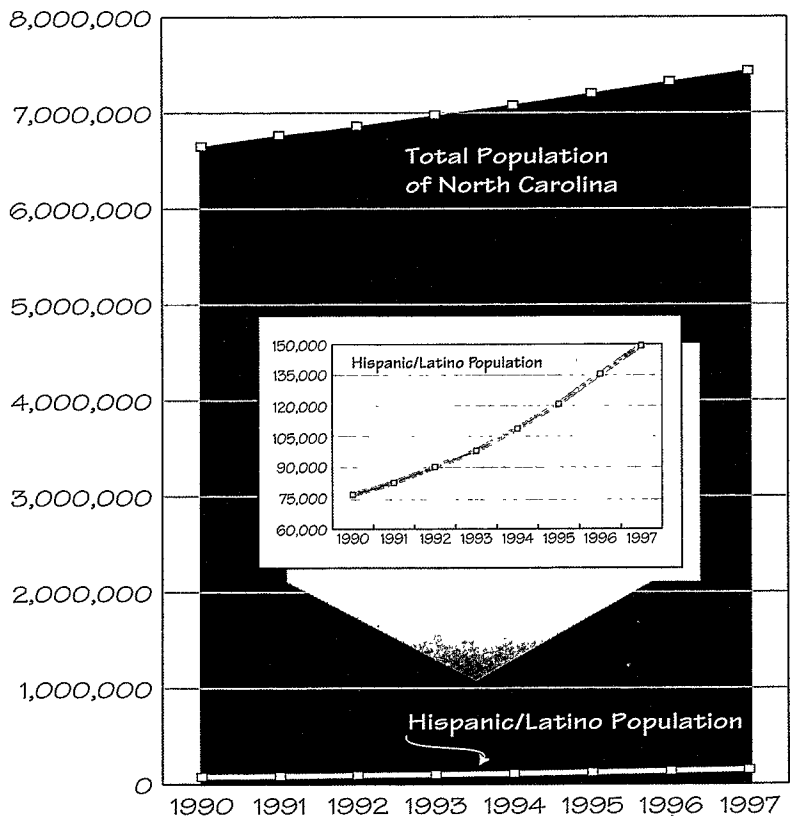
a few western counties such as Henderson and Buncombe counties have significant Hispanic/Latino populations, initially drawn to the area by the need for help in harvesting apples and Christmas trees.[10]

But the state's Hispanic/Latino population is no longer composed mainly of migrant workers who come and go with the "picking" seasons. Many of the Hispanic/Latino newcomers hold jobs in construction, food service, landscaping, factories, slaughterhouses, social services, and the military. Still, there are others who work in much higher paying jobs in engineering, medicine, law, and other professional positions. And increasingly, those who initially come to North Carolina for seasonal agricultural work are moving off the farm and into year-round jobs. Thus, the typical image of a seasonal migrant farm worker no longer applies to the North Carolina Hispanic/Latino population. They are distributed throughout the North Carolina economy in both high-wage and low-wage occupations.[11]

Overall, Hispanics/Latinos make up a small portion of North Carolina's total population. However, that portion is rapidly increasing and has already changed the demographic, economic, cultural, and social character of North Carolina. As a result, the state's residents, communities, and state and local governments are beginning to address a broad range of issues. One of these issues is the Hispanic/Latino population's health needs and access to health care.

Figure 1. North Carolina's Hispanic/Latino Population, 1990–1997



Source: Population Estimates Program, Population Division, U.S. Bureau of the Census, Washington, D.C.

Table 1. North Carolina's Hispanic/Latino Population

County	Total Population 1990 Census	Hispanic Population 1990 Census	% of Total	Total Population 1997[1]	Hispanic Population 1997[2]	Rank by Number	% of Total	Total Population Growth 1990–1997	Hispanic Population Growth 1990–1997
Alamance	108,213	736	0.68%	119,820	1,519	23	1.27%	10.73%	106.39%
Alexander	27,544	184	0.67%	31,078	389	62	1.25%	12.83%	111.41%
Alleghany	9,590	85	0.89%	9,682	149	81	1.54%	0.96%	75.29%
Anson	23,474	67	0.29%	23,854	122	88	0.51%	1.62%	82.09%
Ashe	22,209	102	0.46%	23,596	179	78	0.76%	6.25%	75.49%
Avery	14,867	118	0.79%	15,460	211	77	1.36%	3.99%	78.81%
Beaufort	42,283	197	0.47%	43,400	347	66	0.80%	2.64%	76.14%
Bertie	20,388	32	0.16%	20,248	51	96	0.25%	-0.69%	59.38%
Bladen	28,663	150	0.52%	30,314	276	72	0.91%	5.76%	84.00%
Brunswick	50,985	376	0.74%	65,200	873	39	1.34%	27.88%	132.18%
Buncombe	174,819	1,173	0.67%	191,122	2,425	13	1.27%	9.33%	106.73%
Burke	75,740	344	0.45%	83,143	745	43	0.90%	9.77%	116.57%
Cabarrus	98,935	483	0.49%	116,502	1,071	34	0.92%	17.76%	121.74%
Caldwell	70,709	315	0.45%	74,728	645	46	0.86%	5.68%	104.76%
Camden	5,904	24	0.41%	6,308	46	98	0.73%	6.84%	91.67%
Carteret	52,553	450	0.86%	59,057	953	37	1.61%	12.38%	111.78%
Caswell	20,693	136	0.66%	22,059	234	75	1.06%	6.60%	72.06%
Catawba	118,412	923	0.78%	129,540	1,932	15	1.49%	9.40%	109.32%
Chatham	38,759	564	1.46%	45,130	1,186	31	2.63%	16.44%	110.28%
Cherokee	20,170	131	0.65%	22,416	290	71	1.29%	11.14%	121.37%
Chowan	13,506	95	0.70%	14,219	146	82	1.03%	5.28%	53.68%
Clay	7,155	40	0.56%	8,066	92	92	1.14%	12.73%	130.00%
Cleveland	84,713	376	0.44%	90,650	751	42	0.83%	7.01%	99.73%
Columbus	49,587	242	0.49%	51,942	413	61	0.80%	4.75%	70.66%
Craven	81,613	1,821	2.23%	88,475	3,327	8	3.76%	8.41%	82.70%
Cumberland	274,713	13,298	4.84%	295,255	23,411	1	7.93%	7.48%	76.05%

Table 1, *continued*

County	Total Population 1990 Census	Hispanic Population 1990 Census	% of Total	Total Population 1997[1]	Hispanic Population 1997[2]	Rank by Number	% of Total	Total Population Growth 1990–1997	Hispanic Population Growth 1990–1997
Currituck	13,736	110	0.80%	16,571	274	73	1.65%	20.64%	149.09%
Dare	22,746	199	0.87%	27,394	456	59	1.66%	20.43%	129.15%
Davidson	126,677	602	0.48%	140,442	1,247	28	0.89%	10.87%	107.14%
Davie	27,859	129	0.46%	31,192	293	70	0.94%	11.96%	127.13%
Duplin	39,995	1,015	2.54%	44,080	1,873	17	4.25%	10.21%	84.53%
Durham	181,855	2,054	1.13%	197,710	3,842	7	1.94%	8.72%	87.05%
Edgecombe	56,692	255	0.45%	55,396	373	63	0.67%	-2.29%	46.27%
Forsyth	265,878	2,102	0.79%	287,160	4,084	6	1.42%	8.00%	94.29%
Franklin	36,414	290	0.80%	43,487	595	50	1.37%	19.42%	105.17%
Gaston	175,093	863	0.49%	180,082	1,660	19	0.92%	2.85%	92.35%
Gates	9,305	21	0.23%	9,914	40	99	0.40%	6.54%	90.48%
Graham	7,196	29	0.40%	7,504	64	95	0.85%	4.28%	120.69%
Granville	38,341	356	0.93%	42,802	628	47	1.47%	11.64%	76.40%
Greene	15,384	169	1.10%	17,651	357	65	2.02%	14.74%	111.24%
Guilford	347,420	2,887	0.83%	383,186	5,564	5	1.45%	10.29%	92.73%
Halifax	55,516	237	0.43%	55,841	359	64	0.64%	0.59%	51.48%
Harnett	67,833	1,159	1.71%	81,358	2,437	12	3.00%	19.94%	110.27%
Haywood	46,942	240	0.51%	51,267	496	56	0.97%	9.21%	106.67%
Henderson	69,285	846	1.22%	79,148	1,861	18	2.35%	14.24%	119.98%
Hertford	22,523	81	0.36%	21,916	128	86	0.58%	-2.70%	58.02%
Hoke	22,856	218	0.95%	28,882	442	60	1.53%	26.37%	102.75%
Hyde	5,411	43	0.79%	5,280	83	94	1.57%	-2.42%	93.02%
Iredell	92,935	672	0.72%	109,261	1,473	24	1.35%	17.57%	119.20%
Jackson	26,846	155	0.58%	29,142	301	68	1.03%	8.55%	94.19%
Johnston	81,306	1,262	1.55%	103,181	2,844	9	2.76%	26.90%	125.36%
Jones	9,414	53	0.56%	8,988	88	93	0.98%	-4.53%	66.04%

Table 1, *continued*

County	Total Population 1990 Census	Hispanic Population 1990 Census	% of Total	Total Population 1997[1]	Hispanic Population 1997[2]	Rank by Number	% of Total	Total Population Growth 1990–1997	Hispanic Population Growth 1990–1997
Lee	41,370	800	1.93%	48,369	1,606	20	3.32%	16.92%	100.75%
Lenoir	57,274	463	0.81%	59,038	815	41	1.38%	3.08%	76.03%
Lincoln	50,319	570	1.13%	57,896	1,291	27	2.23%	15.06%	126.49%
McDowell	35,681	114	0.32%	39,424	231	76	0.59%	10.49%	102.63%
Macon	23,499	165	0.70%	27,664	324	67	1.17%	17.72%	96.36%
Madison	16,953	86	0.51%	18,330	174	79	0.95%	8.12%	102.33%
Martin	25,078	99	0.39%	25,628	135	84	0.53%	2.19%	36.36%
Mecklenburg	511,481	6,692	1.31%	608,567	14,409	2	2.37%	18.98%	115.32%
Mitchell	14,433	50	0.35%	14,729	101	91	0.69%	2.05%	102.00%
Montgomery	23,352	556	2.38%	24,473	1,012	36	4.14%	4.80%	82.01%
Moore	59,000	470	0.80%	69,502	1,039	35	1.49%	17.80%	121.06%
Nash	76,677	606	0.79%	87,101	1,183	32	1.36%	13.59%	95.21%
New Hanover	120,284	924	0.77%	146,601	2,069	14	1.41%	21.88%	123.92%
Northampton	20,798	116	0.56%	20,800	146	82	0.70%	0.01%	25.86%
Onslow	149,838	8,035	5.36%	147,352	12,587	4	8.54%	-1.66%	56.65%
Orange	93,851	1,279	1.36%	107,253	2,775	10	2.59%	14.28%	116.97%
Pamlico	11,368	61	0.54%	11,973	131	85	1.09%	5.32%	114.75%
Pasquotank	31,298	246	0.79%	34,519	492	58	1.43%	10.29%	100.00%
Pender	28,855	273	0.95%	37,208	621	48	1.67%	28.95%	127.47%
Perquimans	10,447	28	0.27%	10,900	51	96	0.47%	4.34%	82.14%
Person	30,180	249	0.83%	32,920	493	57	1.50%	9.08%	97.99%
Pitt	108,480	979	0.90%	124,395	1,911	16	1.54%	14.67%	95.20%
Polk	14,416	115	0.80%	16,393	259	74	1.58%	13.71%	125.22%
Randolph	106,546	734	0.69%	121,550	1,547	22	1.27%	14.08%	110.76%
Richmond	44,518	293	0.66%	45,658	504	55	1.10%	2.56%	72.01%
Robeson	105,170	704	0.67%	112,704	1,102	33	0.98%	7.16%	56.53%

Table 1, *continued*

County	Total Population 1990 Census	Hispanic Population 1990 Census	% of Total	Total Population 1997[1]	Hispanic Population 1997[2]	Rank by Number	% of Total	Total Population Growth 1990–1997	Hispanic Population Growth 1990–1997
Rockingham	86,064	620	0.72%	89,156	1,207	29	1.35%	3.59%	94.68%
Rowan	110,605	651	0.59%	122,774	1,346	25	1.10%	11.00%	106.76%
Rutherford	56,919	342	0.60%	59,396	648	45	1.09%	4.35%	89.47%
Sampson	47,297	727	1.54%	52,650	1,339	26	2.54%	11.32%	84.18%
Scotland	33,763	318	0.94%	35,004	541	53	1.55%	3.68%	70.13%
Stanly	51,765	309	0.60%	55,131	598	49	1.08%	6.50%	93.53%
Stokes	37,223	254	0.68%	42,848	583	51	1.36%	15.11%	129.53%
Surry	61,704	602	0.98%	66,834	1,206	30	1.80%	8.31%	100.33%
Swain	11,268	78	0.69%	11,994	128	86	1.07%	6.44%	64.10%
Transylvania	25,520	154	0.60%	27,845	297	69	1.07%	9.11%	92.86%
Tyrrell	3,856	11	0.29%	3,672	17	100	0.46%	-4.77%	54.55%
Union	84,210	675	0.80%	106,119	1,561	21	1.47%	26.02%	131.26%
Vance	38,892	271	0.70%	40,981	519	54	1.27%	5.37%	91.51%
Wake	426,300	5,413	1.27%	556,853	12,648	3	2.27%	30.62%	133.66%
Warren	17,265	98	0.57%	18,140	162	80	0.89%	5.07%	65.31%
Washington	13,997	65	0.46%	13,297	109	90	0.82%	-5.00%	67.69%
Watauga	36,952	249	0.67%	40,862	555	52	1.36%	10.58%	122.89%
Wayne	104,666	1,356	1.30%	113,182	2,625	11	2.32%	8.14%	93.58%
Wilkes	59,393	362	0.61%	63,105	744	44	1.18%	6.25%	105.52%
Wilson	66,061	537	0.81%	68,724	928	38	1.35%	4.03%	72.81%
Yadkin	30,488	388	1.27%	35,199	865	40	2.46%	15.45%	122.94%
Yancey	15,419	49	0.32%	16,349	111	89	0.68%	6.03%	126.53%
North Carolina	**6,632,448**	**76,745**	**1.16%**	**7,431,161**	**149,390**	**N.A.**	**2.01%**	**12.04%**	**94.66%**

[1] Office of State Planning 1997 Certified Population Estimates

[2] Population Estimates Program, Population Division, U.S. Bureau of the Census, Washington, DC 20233.

Table 2. N.C. Counties with the Largest Hispanic/Latino Populations

County	1997 Hispanic Population	% Growth 1990-1997
Cumberland	23,411	76.05%
Mecklenburg	14,409	115.32%
Wake	12,648	133.66%
Onslow	12,587	56.65%
Guilford	5,564	92.73%
Forsyth	4,084	94.29%
Durham	3,842	87.05%
Craven	3,327	82.70%
Johnston	2,844	125.36%
Orange	2,775	116.97%

Source: Population Estimates Program, Population Division, U.S. Bureau of the Census, Washington, DC 20233.

The Meaning of Hispanic and Latino

Over the last decade, North Carolinians have heard the terms Hispanic and Latino more and more frequently. People generally understand what someone means when they hear these terms, as the Hispanic/Latino segment of North Carolina's population has grown and continues to grow at a phenomenal rate. However, some people get confused between the terms. What is the difference? Generally, "Hispanic" refers to the language spoken in one's home country, while "Latino" refers to the location of those countries—in Latin America. So, for a Latin American from a Spanish-speaking nation, there really is no difference. It's just a matter of personal preference, and most Hispanics/Latinos actually prefer to be referred to according to their country of origin.

The U.S. Census Bureau uses "Hispanic" as an ethnic rather than a racial category. For example, Hispanic origin in Census publications refers to persons who identify themselves as Mexican, Puerto Rican, Cuban, Central or South American, or of other Hispanic origin or descent. In other words, persons of Hispanic origin may be of any race and can be included in both the white and black population groups.

—Joanne Scharer

Health Issues

Traditionally, local health departments and health centers cater to the medically underserved population. As one survey respondent explains, "The Health Department operates as a safety net for individuals without other means of accessing health care." Most Hispanics/Latinos in North Carolina have low incomes and don't have health insurance, so they must turn to public or community health facilities that offer free or low-cost health services. Hispanics/Latinos seek health care from local health departments, community/migrant health centers, rural health centers, and hospital emergency rooms. Many health departments and other health care providers responding to the Center's survey served Hispanics/Latinos in numbers far disproportionate to their official share of the county population. The Durham County Health Department, for example, reports serving 5,000 Hispanics in 1997–98—or 22.6 percent of its total caseload. At the Randolph County Health Department, 2,823 Hispanics were served, or 40 percent of the total caseload. And the Wilson County Health Department served 5,000 Hispanics/Latinos, or 30 percent of the department's caseload. Furthermore, most (82.4 percent) of the survey respondents indicated that they think health care is a problem for the Hispanics/Latinos in their community (See Table 3).

The survey results also suggest that the Hispanic/Latino clients who have lower wage occupations (such as farm work, construction, landscaping, and food service jobs that pay little better than the minimum wage of $5.15 per hour)[12] are highly dependent on health care facilities where they are more likely to receive free or reduced-cost services. In fact, most of the Hispanic/Latino clients served at the respondent facilities receive free services, have Medicaid, or pay for services on a sliding fee scale (See Table 4, p. 17).

A young Hispanic/Latino couple waiting for a prenatal care appointment at the Robeson County Health Department is typical of the Hispanic/Latino families with low household incomes who seek health department services. Maria and Roberto (not their real names) sit at the end of a long row of plastic chairs in the dreary waiting room. Maria waits nervously, her hands hidden in her blue, hooded jacket. Speaking through an interpreter, Roberto says that they came to the health department because they had heard about it from a friend. Maria, who is here to see the maternity care coordinator, says she has been in North Carolina for eight months and had worked at a local chicken plant until she got pregnant. While Roberto has insurance through his employer, Maria receives the health department's services free of charge. Like many Hispanic/Latino immigrants, Maria and Roberto speak no English. They rely on an inter-

Table 3. Do you think health care is a problem for Hispanics/Latinos in your community?

	Yes	No
Health Departments	92.7%	7.3%
Rural Health Centers	65	35
Community/Migrant Health Centers	66.7	33.3
Rural Hospitals	75.6	24.4
Total	**82.4%**	**17.6%**

Total # of responses: 159
(Health Departments 82, Rural Health Centers 20, Community/Migrant Health Centers 12, Rural Hospitals 45)

Poster at the Duplin County Health Department. Translation: "Your family deserves the best foods. Eat healthier foods. Ask us how to do it."

preter provided by the agency to translate their words as they speak.

At the Duplin County Health Department, a rambunctious little boy waits in the television lounge with a weathered looking man who is his father. Later, an obviously pregnant woman comes out to join them. Lorena (not her real name) excitedly explains that she is having her fourth child as her husband sits quietly but protectively to the side. Lorena and her husband Juan (not his real name) traveled from Albertson, about a 25-minute drive, to the health department for her appointment, a trip they will eventually make weekly once Lorena is in the latter stages of her pregnancy. Her husband's older model black Pontiac is the family's only car, requiring him to drive her to her appointments, missing work without pay. Lorena, like Maria at the Robeson County Health Department, is receiving prenatal care free of charge through emergency Medicaid funds. By bringing in her husband's pay stubs and a note from his boss, she proves that with three other children they are unable to afford the services that the health department provides. Once Lorena's baby is born, she will be ineligible for further Medicaid benefits, though she still may receive most health department services. Again, the couple must communicate through an interpreter provided by the agency. Although Juan has been in the United States a number of years, he speaks only a few words of English.

Despite the communications barrier, the Center saw strong evidence of community networks for treating the Hispanic/Latino population. Most of the survey respondents make referrals on some basis. While some make referrals to specialists and private physicians, these local health agencies usually make referrals to other health departments and other community-based organizations. Like other low-income populations, for example, a Hispanic/Latino patient who does not need emergency care may visit the hospital emergency room and be referred to the local health department or some other community-based health center.

Health Needs

Assessing the health needs of the Hispanic/Latino population is a difficult task because limited data is available about Hispanic/Latino health status, use of services, and health practices.[13] The lack of data on specific Hispanic/Latino health issues at local and regional levels is one of the main concerns in disease prevention and health promotion among Hispanics/Latinos.[14] Because of the increasing number of Hispanics/Latinos within the U.S. population, it has become crucial to analyze available data on Hispanic/Latino Americans and ensure that the unique Hispanic/Latino health profile is taken into account with the delivery of preventive health services. The health status of His-

Table 4. Please indicate how most of the Hispanic/Latino clients you serve pay when using your services.

	Free Services	Sliding Fee Scale	Private Health Insurance	Medicaid	Other
Health Departments	83.8%	52.5%	6.3%	38.8%	8.8%
Rural Health Centers	5.3	36.8	15.8	47.4	47.4
Community/Migrant Health Centers	0.0	75.0	8.3	16.7	33.3
Rural Hospitals	19.5	7.3	14.6	53.7	51.2
Total	**50.0%**	**40.1%**	**9.9%**	**42.1%**	**27.0%**

Total # of responses: 152
(Health Departments 80, Rural Health Centers 19,
Community/Migrant Health Centers 12, Rural Hospitals 41)

Note: These percentages do not add to 100 as the survey respondents selected all the options that applied to their facility.

panics/Latinos, by subgroup and by gender, has thus far been insufficiently analyzed because of the late start of federal and state bureaucracies in collecting health data based on ethnic background.[15] Likewise, one of the problems in determining the health needs of Hispanics/Latinos in North Carolina is that the data on this population has typically been included with the overall minority population. In fact, many of the health agencies surveyed did not have data available on the Hispanic/Latino ethnicity of their clients.

Confusion over race and ethnic definitions also contributes to the data problem. The U.S. Census Bureau considers people of Hispanic origin to be those who identify themselves as Mexican, Puerto Rican, Cuban, Central or South American, or of other Hispanic origin or descent. Persons of Hispanic origin may be of any race; thus they are included in both the white and black population groups.

Because health data often is unavailable, the Center's survey addressed this issue by asking respondents about the most significant health needs/issues for the Hispanic/Latino population in their communities. Asked to indicate the three most significant health issues affecting Hispanic/Latinos in their communities, respondents ranked access to health care and no or inadequate health insurance as two of the three most significant health issues. The significance of remaining issues varied by the age and gender of the Hispanics/Latinos served. For example, prenatal care ranked as the most significant issue for females. For males, the key issues beyond access and health insurance were: (1) on-the-job-injuries; (2) sexually transmitted diseases; and (3) drug and alcohol abuse. For children, the key issues beyond access and health insurance were: (1) immunization rates; (2) dental care; and (3) nutrition (See Table 5).

Access to Health Care and Insurance

The most frequently cited health issue of the Hispanic/Latino population for all groups (male, female, adults, and children) was "no or inadequate health insurance." National estimates place the number of uninsured Hispanics/Latinos at nearly three in 10, not including undocumented and uncounted immigrants.[16]

While some might not consider the lack of health insurance as a health need compared to such

Table 5. What are the most significant health issues affecting Hispanics/Latinos in your community?

	Males[1]	Females[2]	Children[3]
1	No/Inadequate health insurance (94)	Prenatal care (107)	Access to health care (98)
2	Access to health care (80)	No/Inadequate health insurance (93)	No/Inadequate health insurance (85)
3	On-the-job injuries (49)	Access to health care (92)	Immunization rates (62)
4	Sexually transmitted diseases (40)	Dental care (24)	Dental care (58)
5	Drug/alcohol abuse (36)	Nutrition (14)	Nutrition (38)

[1] Total # of responses: 147
(Health Departments 78, Rural Health Centers 16, Community/Migrant Health Centers 12, Rural Hospitals 41)

[2] Total # of responses: 151
(Health Departments 82, Rural Health Centers 16, Community/Migrant Health Centers 12, Rural Hospitals 41)

[3] Total # of responses: 145
(Health Departments 82, Rural Health Centers 14, Community/Migrant Health Centers 12, Rural Hospitals 37)

THE POOR
clean our homes
take care of our children
bus our students to school
assist our teachers
tend to our grandparents
aid our nurses
assist our dentists
process meat, fish and poultry
pick our fruit
harvest our vegetables
check out our groceries
prepare our meals
serve us fast food
janitor in our churches
housekeep our motel rooms
check us into hotels
wash our dishes
sew our clothes
clean and press our suits and shirts
clerk for our retail purchases
wrap our packages
tend bar for us

IN CONSEQUENCE

THEY
have to live in poor housing
in danger of crime and drugs
are often hungry
have more medical problems
cannot afford health insurance
have more legal problems
can never save for emergencies
cannot provide for own pensions

WE
have help on which we depend
are freed from essential tasks
get food at lower costs
pay less for personal services
get better medical care
live in greater safety
can prepare for emergencies
have greater mobility and opportunities

—AUTHOR UNKNOWN

needs as prenatal care or immunizations, limited access to health care through lack of health insurance erodes the health status of the Hispanic/Latino population.[17] Local health agencies and providers have found that Hispanics/Latinos delay seeking health care because they don't have insurance. "Many [Hispanics/Latinos] fear not being able to pay for services," wrote one provider. Another explained, "They [Hispanics/Latinos] have inadequate insurance plans so they feel they can only go to the doctor for a sick visit and do not keep follow-up [appointments] due to a lack of money." Unfortunately, failing to get care not only aggravates the health situation, but often leads to higher treatment costs as health problems worsen.

On-The-Job Injuries

Fatal occupational injuries in North Carolina increased 9.5 percent from 190 in 1996 to 210 in 1997.[18] The N.C. Department of Labor attributes this increase to inexperienced workers doing dangerous jobs without proper training and safety equipment. According to Labor Commissioner Harry Payne, the department believes this to be especially true among Hispanic/Latino workers.[19] The Center's survey supports this belief, as on-the-job injuries ranked as the third-most-often-cited health issue for Hispanic/Latino males.

The largest percentage of workplace deaths in 1997 occurred among white workers at 76 percent, compared to black workers at 14 percent, and Hispanic/Latino workers at 9 percent. Yet Hispanics/Latinos represent only 2 percent of the population by official estimates, and fatal injuries have risen steadily for Hispanic workers since 1993, when Hispanics/Latinos accounted for only 3 percent of workplace deaths.[20]

Some Hispanics/Latinos are at risk because they may not speak English and because they hold risky jobs—in construction, agriculture, food processing, and manufacturing. These are the sectors

Table 6. Prenatal Care and Infant Mortality in North Carolina, 1997

	Whites	African Americans	Hispanics/Latinos
Receive First Trimester Prenatal Care	87.7%	72.6%	68.1%
Infant Death Rate (per 1,000 live births)	6.9	15.6	4.8
Low Birth Weight Babies (less than 2,500 grams)	7.1%	13.7%	6.1%

Source: North Carolina Center for Health Statistics (1998)

where most workplace accidents and deaths occur.[21] Employers and health care workers agree that the language barrier exacerbates the workplace dangers associated with these occupations.

Most employers recognize the opportunities and pitfalls associated with the language barrier, and some are taking action. For example, some companies are taking advantage of entrepreneurial language experts like those at Start-From-Scratch Spanish, a Durham business that teaches English to Hispanic/Latino construction workers while also teaching customized crash courses in survival Spanish to hundreds of non-Spanish-speaking general contractors, plumbers, and paving and grading workers. While some may see this approach as a way to create cross-cultural understanding, companies that offer language classes may gain a competitive advantage over those that don't, boosting productivity and workplace safety.[22]

The North Carolina Occupational Safety and Health Project (NCOSH), a private, nonprofit membership organization of workers, unions, and health and legal professionals, also serves as a valuable resource to employers and workers concerning workplace safety issues. Still, some employers are especially lax in training Hispanic/Latino workers and use the "language barrier" as an excuse to avoid talking about safety and thereby increasing the risk of injury. Also, Hispanic/Latino workers often do not report injuries because they fear losing their jobs or being deported.[23]

Luisa Hawkins, a local hospital employee and member of the Migrant Interest Committee in Halifax County, says she had been seeing increasing numbers of Hispanic/Latino workers coming into the hospital emergency room with cuts and injuries that occurred on the job. Accompanying some of these workers to the hospital, the owner of a local lumber company expressed his concern to Hawkins about the safety and liability issues with his Hispanic/Latino employees. "I really need help," the employer said. Seeing an opportunity to make a difference, Hawkins agreed to hold a monthly safety class at the lumber company. In

You survived because you were the first.
You survived because you were the last.
Because you were alone. Because of people.
Because you turned left. Because you turned right.
Because rain fell. Because a shadow fell.
Because sunny weather prevailed.

—WISLAWA SZYMBORSKA
"THERE BUT FOR THE GRACE"

doing so, she found that the Hispanics/Latinos didn't understand safety procedures or the importance of wearing their goggles, back braces, and other safety equipment. She also found that the workers weren't reporting their injuries, which later resulted in more acute, and more costly, infections and problems. However, since beginning the class, Hawkins has found that the employees are beginning to understand. "From what they have seen happen, they realize there is danger," Hawkins says. "They're very scared."

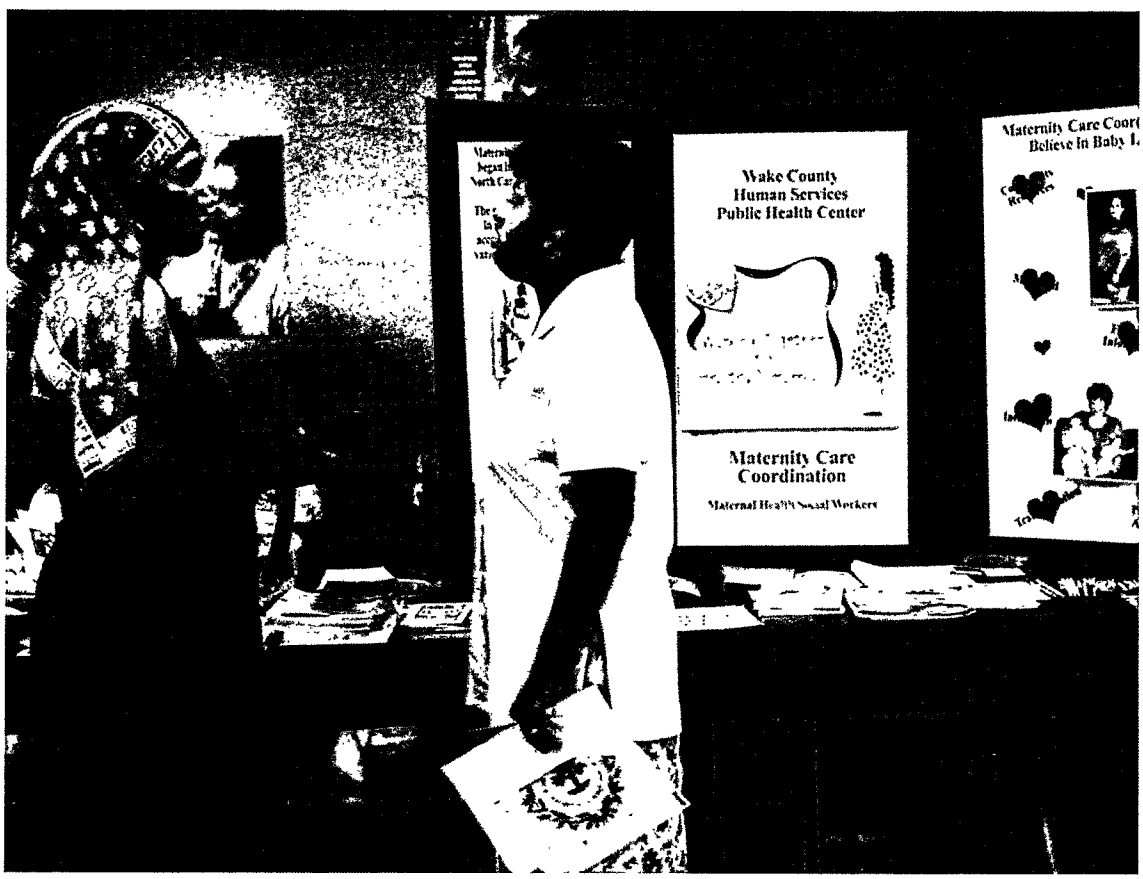
While on-the-job injuries are generally thought of as falls, cuts, and other bodily injuries, another workplace hazard for Hispanic/Latino farm workers is pesticide poisoning. Harvest Family Medical Center, a migrant health center, sees more of this type of on-the-job injury than any other type, according to medical center staff. Rosario Wilkins, Operations Manager at Harvest, said that when she sees a crew leader bringing in "a whole truckload" of workers, she knows there's been chemical exposure. "You can smell it on them," Wilkins says.

Prenatal Care

A framed picture of a bright-eyed Mexican boy dressed in a black outfit and a sombrero hangs proudly on the wall of the Harvest Family Medical Center in Nash County. This little boy holds a place of honor at the facility because he was born there in 1988. The little boy's family are migrant workers who return to the area every year. Rosario Wilkins says the boy's mother returns to visit the clinic every year. "She comes by and tells us that the boy is so smart because he was born at our clinic," Wilkins says. While most Hispanic/Latina mothers don't end up actually delivering their babies at local health clinics, prenatal and maternal care is one of the most widely used and needed services at these facilities.

Sixty-eight percent of Hispanic/Latina women in North Carolina receive prenatal care in the first trimester of pregnancy, compared to 87.7 percent for whites and 72.6 percent for blacks.[24] Despite the lack of prenatal care, Hispanic/Latina females have

Health workers meet with members of the Hispanic/Latino community at La Fiesta del Pueblo Health Fair in Chapel Hill.



Karen Tam

lower rates of premature deliveries at low birth weight (See Table 6, p. 20).[25] Health researchers call this trend the birth weight paradox.[26]

In studying this paradox, researchers at the University of North Carolina at Chapel Hill (UNC-CH) found that the influential factors described by the women are the strong extended family ties, including the tradition of a daughter depending on her mother for emotional and physical support during pregnancy.[27] However, as Hispanic/Latina women conform to the predominant culture in the United States, the risk of giving birth to low birth weight babies increases.[28]

Immunization Rates

One area in which there is a lack of adequate health promotion and primary care in Hispanic/Latino communities nationwide is vaccine-preventable illness.[29] Immunization shots represent basic preventive care and are extremely important to the health of the entire community. Because Hispanic/Latino immigrants seem to have less information about, awareness of, and access to preventive care than do other populations in the state, they are less likely to obtain immunization shots. For example, in the 1990 U.S. measles outbreak, Hispanic/Latino preschool children were 7.3 times more likely than non-Hispanic white children to contract the illness. The data available indicated that this higher incidence rate was tied to a lack of immunizations.[30]

Since, both in importance and in time, health precedes disease, so we ought to consider first how health may be preserved, and then how one may best cure disease.

—GALEN, CIRCA 170 A.D.

In 1995, 67.6 percent of Hispanic/Latino children 19–35 months of age in the United States were fully immunized against childhood diseases[31] compared to 77 percent for whites and 70.1 percent for blacks.[32] Although these are national figures, North Carolina's rates are similar. In 1995, as part of a larger study of minority health in North Carolina, the N.C. for Public Policy Research conducted field audits at nine local health departments to determine what percentage of children had received their immunizations on time. The Center found that Hispanic/Latino children had a lower on-time-immunization rate (58.8 percent) than white children (66.4 percent) but a slightly higher rate than black children (53.9 percent).[33]

Table 7. Cases of Reportable Communicable Diseases in North Carolina

	Hispanics/Latinos		Whites		African Americans	
	Number of cases	Rate per 1,000[1]	Number of cases	Rate per 1,000	Number of cases	Rate per 1,000
Hepatitis B	7	0.05	109	0.02	139	0.08
Rubella	58	0.4	13	0.002	0.0	0.0
Tuberculosis[2]	38	0.3	150	0.03	286	0.2

[1] Rates calculated per 1,000 of the Hispanic/Latino, white, and black populations using 1997 population estimates from the U.S. Census Bureau

[2] Verified cases, all forms.

Source: North Carolina Center for Health Statistics (1998)

Lisa Muñoz, an outreach worker employed by the Duplin County Health Department, meets with a mother and her child in their trailer near Mount Olive.

While Hispanic/Latino children generally have lower immunization rates than the overall population, Hispanics/Latinos in North Carolina also experience higher rates of Hepatitis B, rubella, and tuberculosis (See Table 7, p. 22). Rubella is a primary concern for the Hispanic/Latino population because the vaccination against the disease is not routinely given in Mexico. In fact, in the rubella outbreaks that occurred in North Carolina over the last three years (1996, 1997, and 1998), reported cases were concentrated in the Hispanic/Latino community.[34]

Between 1987 and 1995, North Carolina reported only nine confirmed cases of rubella, according to the Immunization Section of the Division of Health Services in the N.C. Department of Health and Human Services. But in a three-month period in 1996, 83 cases were confirmed, 79 of which struck Hispanics/Latinos. One outbreak was traced to a poultry-processing plant in Chatham County that employs mostly Hispanics. The second was traced to a young Hispanic male who traveled to North Carolina from Sonora, Mexico, and infected co-workers at a local plastics factory.

This potentially serious disease causes rashes, swollen glands, and arthritis and can lead to ear infection, pneumonia, diarrhea, seizures, hearing loss, meningitis, and sometimes death. When pregnant women contract the disease, their babies can suffer birth defects such as deafness, blindness, heart disease, and brain damage.

The N.C. Department of Health and Human Services has responded aggressively to this public health threat, distributing free vaccines through the Universal Childhood Vaccine Distribution Program, private obstetrician/gynecologist offices, and publicly funded family planning clinics.[35] Bilingual outreach workers have been made available to vaccinate people who have been exposed in the homes and workplaces of infected individuals, and the state has undertaken an information campaign through the Spanish media and through flyers distributed in Hispanic/Latino communities and at Hispanic festivals and special events. All local

health directors have received copies of these flyers and have received information on how to conduct outreach and on culturally competent treatment of the Hispanic/Latino community. Since 1996, 12,750 vaccinations have been administered by North Carolina health care providers. The recipients are recorded either as white or non-white, so there is no record of how many were Hispanic/Latino.

Dental Care

Income, access to affordable dental services, and educational attainment influence the likelihood that a person will receive dental care. In 1993, 60.8 percent of all U.S. adults reported visiting a dentist during the prior year.[36] But only 35.9 percent of those below the poverty level had had a dental visit in the prior year, and 38 percent of those with less than 12 years education had received treatment. Generally, dental practices are privately owned and therefore not as accessible or affordable to those with lower incomes, including Hispanics/Latinos. Among adults of Hispanic/Latino origin, 46.2 percent visited the dentist, compared to 47.3 percent of African-American adults, and 64 percent of white adults.[37] Although similar data is not available on the state level, this national finding is supported by the Center's survey results.

The local health agencies surveyed indicated that dental care is one of the most important health needs for the Hispanic/Latino population. While most local health agencies do offer some level of dental services, these services are often limited to education and screening rather than full treatment. The state Migrant and Refugee Health Program offers reimbursement to health providers giving dental services to farmworkers and refugees, some of whom are Hispanic/Latino. Harvest Family Medical Center in Nash County does have a dental clinic, but medical center officials say they have been hard pressed to find a dentist who is willing to contract for providing these services. On the other hand, Blue Ridge Community Health Center in Henderson County is building a new dental facility and currently has two dentists on staff. A task force headed by Lieutenant Governor Dennis Wicker has issued recommendations aimed at increasing the number of North Carolina dentists who accept Medicaid patients.

Just as despair can come to one only from other human beings, hope, too, can be given to one only by other human beings.

—ELIE WIESEL

Sexually Transmitted Diseases and AIDS

Although sexually transmitted diseases (STDs) did not rank as one of top three health issues overall, several of the Center's survey respondents did indicate that STDs are an increasing problem among adult Hispanic/Latino clients (See Table 8, p. 25). The STDs most commonly seen by the respondents were chlamydia, gonorrhea, and syphilis. Infection rates were higher than those of whites but not as high as African Americans. However, the number of cases of chlamydia in North Carolina tripled among Hispanics/Latinos from 1991 to 1995—a greater increase than that seen in other racial and ethnic groups.[38] Chlamydia is a marker of high-risk sexual activity and can be used as a benchmark for other sexually transmitted diseases.[39]

Four AIDS related deaths were reported for Hispanics/Latinos in North Carolina for 1997. While survey respondents did not mention AIDS as a problem among the Hispanic/Latino population being served, the number of AIDS cases in the state has been increasing since 1990 (See Figure 2, p. 25). And AIDS is considered a problem for the Hispanic/Latino population nationwide. Of all cases of AIDS reported among men in the United States in 1997, 21 percent were among Hispanics/Latinos. For females, Hispanics/Latinos made up 20 percent of the cases reported. Finally, 23 percent of the pediatric AIDS cases reported were among Hispanic/Latino children and of these, 95 percent were due to maternal transmission.[40]

Mental Health

Mental health issues have received more attention over the last several years as people begin to realize that mental health is just as important as physical health to the vitality of communities. The Hispanic/Latino population also is not immune to these mental health issues. Dr. Jane Delgado, president and CEO of the National Coalition of Hispanic Health and

Table 8. Reported Cases of AIDS and Sexually Transmitted Diseases in N.C., 1997

	Hispanics/Latinos		Whites		African Americans	
	Number of cases	Rate per 1,000[1]	Number of cases	Rate per 1,000	Number of cases	Rate per 1,000
AIDS	NA	NA	194	0.04	595	0.4
Chlamydia	722	4.8	5,031	0.9	11,689	7.1
Gonorrhea[2]	340	2.3	2,263	0.4	14,379	8.8
Syphilis[3]	95	0.6	325	0.06	1,841	1.1

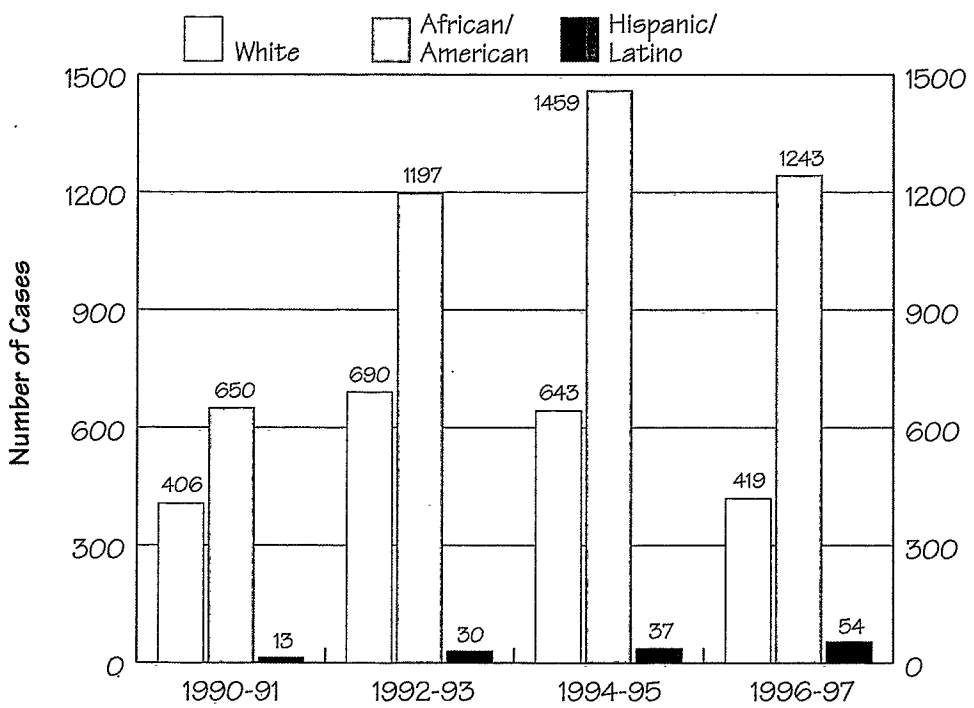
[1] Rates calculated per 1,000 of the Hispanic/Latino, white, and black populations using 1997 population estimates from the U.S. Census Bureau

[2] All sites

[3] All stages

Source: North Carolina Center for Health Statistics (1998)

Figure 2. AIDS Cases in North Carolina



Source: HIV/STD Prevention and Care Branch

Table 9. Do you think mental health/substance abuse services are needed for the Hispanics/Latinos in your community?

	Yes	No
Health Departments	77.8%	22.2%
Rural Health Centers	58.8	41.2
Community/Migrant Health Centers	83.3	16.7
Rural Hospitals	62.5	37.5
Total	**71.6%**	**28.4%**

Total # of responses: 141 (Health Departments 72, Rural Health Centers 17, Community/Migrant Health Centers 12, Rural Hospitals 40)

Human Service Organizations, indicates that Hispanics/Latinos living in the United States have extraordinary rates of depression and also face profound substance abuse issues.[41]

The majority (71.6 percent) of the Center's survey respondents indicated that there is a need for mental health services among the Hispanic/Latino population in North Carolina (See Table 9 above). While substance abuse (mainly alcohol) was seen as the greatest problem, domestic violence (especially alcohol-related) was frequently mentioned as well. Depression and stress/anxiety issues weren't cited as frequently, but often enough to suggest that these types of problems also exist in the Hispanic/Latino community.

A survey of 128 Hispanic/Latino adults (not a random sample) conducted by graduate students at the University of North Carolina at Chapel Hill found that 73 percent of respondents felt alcohol had been a problem for them at some point.[42] In addition, 85 percent felt that drinking had been a problem for someone in their family.[43] These researchers concluded that the isolation experienced by many Hispanics/Latinos as they adjust to their new community leads to more alcohol use, especially among single men who are here without any family.

Another reason for the perceived alcohol abuse problem among Hispanics/Latinos is the notion that alcohol consumption patterns of Hispanics/Latinos reflect the drinking norms and practices of the U.S.[44] Several studies have found this to be the case for Hispanic/Latina women, who generally drink less than women of European descent.[45] While alcohol use is a health risk in itself, there are those in the Hispanic/Latino population who are not aware of or do not understand the state's Driving While Impaired laws and are finding themselves in trouble with the law.

The barriers to care for Hispanics/Latinos are more profound for substance abuse treatment services than for health care in general. The Division of Mental Health, Developmental Disabilities, and Substance Abuse Services within the N.C Department of Health and Human Services provides community-based services in 41 area programs covering all 100 North Carolina counties. In the 1998 fiscal year, only 1.2 percent of persons served in the mental health and substance abuse programs were Hispanic/Latino, while 61.4 percent were white, and 34.5 percent were black.[46] While the lack of utilization may be attributed to a lack of awareness, few of these programs are equipped to serve the Spanish-speaking community. Casa Cosecha (Harvest House) in Newton Grove does offer an addiction treatment program for adult male migrant and seasonal farmworkers, and the Nash County mental health substance abuse program recently has hired an interpreter.

Domestic violence may or may not be more prevalent among Hispanics/Latinos than it is among other racial/ethnic groups.[47] However, the added stresses of language and cultural barriers and isolation from family members often make it more difficult for Hispanic/Latina women to seek and find help.[48] These women either don't know where to go, are afraid of being deported, or are unable to communicate with those who can help.

Underlying Health Conditions

Although not specifically addressed in the Center's survey, there are underlying conditions that affect a community's health, such as housing, water and sewer, and living wage jobs. "Public health is more than just medicine," says Bill Lail, human services planner in Chatham County and chairman of the board of the Family Resource Center in Siler City, a nonprofit spin-off of the Chatham County Health Department. In discussions with local health directors and members of the Hispanic/Latino community, the lack of adequate housing for Hispanics/Latinos emerged as one of these underlying health issues. For example, Harriette Duncan, Health Director in Duplin County, says one new mother served by the health

Every civilization creates its own disease. . . . The state can protect society very effectively against a great many dangers, but the cultivation of health, which requires a definite mode of living, remains to a large extent an individual matter.

—HENRY E. SIGERIST, 1941
MEDICINE AND HUMAN WELFARE

Table 10. Leading Causes of Death in North Carolina 1995–1997

	Hispanics/Latinos		Whites		African Americans	
	Number of deaths	% of total	Number of deaths	% of total	Number of deaths	% of total
Unintentional Motor Vehicle Accidents	149	25.4%	3,246	2.2%	1,128	2.5%
Homicide	85	14.5%	857	.57%	1,095	2.4%
Other Injuries	70	11.9%	3,400	2.3%	1,062	2.4%
Diseases of the Heart	53	9.0%	45,969	30.6%	11,961	26.7%
Cancer	46	7.8%	35,017	23.3%	9,758	21.8%
Suicide	22	3.7%	2,356	1.6%	310	.69%
AIDS	18	3.1%	711	.47%	1,584	3.5%
Cerebrovascular Disease	17	2.9%	11,936	8.0%	3,670	8.2%
Liver Disease/Cirrhosis	6	1.0%	1,500	1.00%	502	1.12%
Pneumonia & Influenza	6	1.0%	6,095	4.06%	1,269	2.8%
Diabetes	4	0.7%	3,407	2.3%	1,885	4.2%
Chronic Obstructive Pulmonary Disease	2	0.3%	7,908	5.3%	1,081	2.4%

Source: North Carolina Center for Health Statistics (1998)

department was renting a house with no stove or refrigerator—a poor living situation made even poorer by the presence of an infant in the house. "She was depending on someone to bring in food and couldn't even boil water," says Duncan.

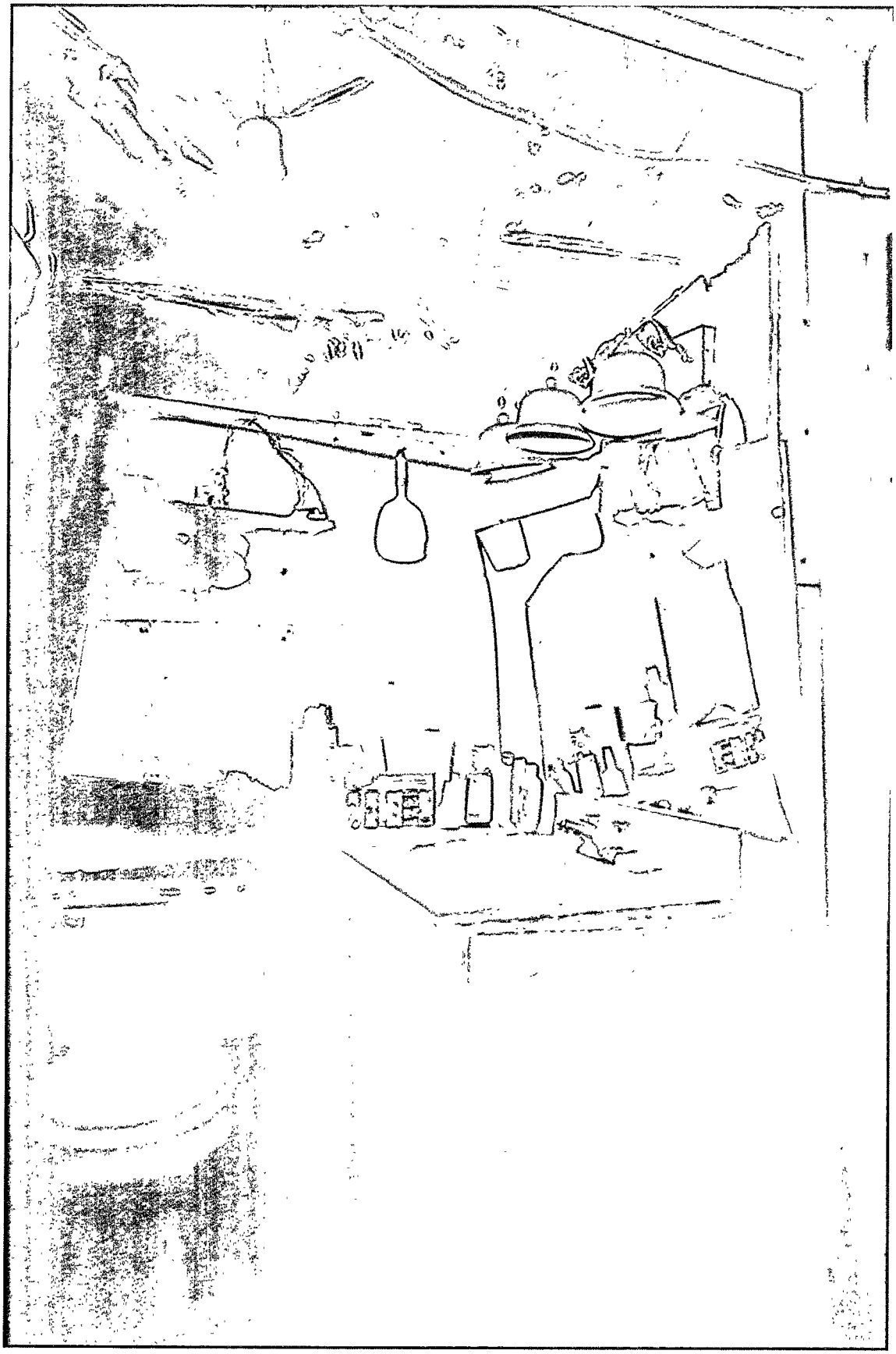
Hispanic/Latino Health Needs Different from the Needs of the White or African American Population

Nationally, some Hispanic/Latino health activists argue that many of the programs that have been developed for Hispanics/Latinos are based on a "minority" model of health rather than incorporating the unique needs and experiences of specific racial and ethnic groups. Such a minority model is based on research that has either looked at minority groups as a whole or applied research done with African American communities to all other racial and ethnic groups.[49] But advocates for Hispanics/Latinos say this population has its own set of health issues that differ from the general population and from other minorities. While this notion may hold some truth, the main differences cited by the Center's survey respondents were the obvious language barrier, cultural issues (such as religious beliefs and practicing folk medicine), and immigration/legal status. As one survey response tersely stated, "Same problems associated with low incomes complicated by language barrier." In other words, the health issues may not be so different than those faced by other lower income groups, just more complicated.

The North Carolina death rates are affected by the relative youth of the Hispanic/Latino population (See Table 10, p. 27). For example, motor vehicle accidents are the leading cause of death for Hispanics/Latinos at 25.4 percent, compared to only 2.2 percent for whites and 2.5 percent for African Americans.[50] The situation is reversed for diseases that strike mostly older adults. For example, diseases of the heart claim 30.6 percent of whites and 26.7 percent of African Americans but only 9.0 percent of Hispanics. Similarly, the death rate by cancer is 23.3 percent for whites, 21.8 percent for African-Americans, and 7.8 percent for Hispanic/Latinos. Injuries (11.9 percent) and homicide (14.5 percent) also are elevated for Hispanics, again, causes of death that claim primarily younger people.

Three Hispanic/Latino families go in together to pay the $300 required to rent this dwelling in Duplin County.

Karen Tam



Karen Tam

The Obstacles to Access

A number of factors influence the use of health care by Hispanics/Latinos, including what they perceive as their health care needs, insurance status, income, culture, and language. Health care use also is governed by access to comprehensive and preventive health care.[51] Nearly all of the Center's survey respondents (82.4 percent) indicated that access to health care is a problem for the Hispanics/Latinos living in their communities (See Table 3, p. 15). Among the list of barriers, those cited most frequently were the language barrier and other cultural differences, the lack of health insurance or other means to pay for services, clients' lack of transportation, and the lack of information and awareness about the services available (See Figure 3, p. 32).

Despite the fact that health care access for the Hispanic/Latino population is seen as a problem, respondents indicated that the health care services available to both whites and other minorities is "about the same" (See Table 11, p. 31). Although some indicated that they were "worse" or even "much worse," three respondents (2 percent) indicated that the services available are "better." Asked to comment, most respondents attributed access problems to the language/cultural barrier. "Services to Hispanics/Latinos are equal to other groups." one respondent wrote. "Spanish-speaking patients receive equal or better care due to the special arrangements we make for language services," wrote one respondent. "The main problem is access. Many potential patients don't come in until medically urgent since language is such a significant problem at other health organizations where they have sought care." The few who reported that services were better for the Hispanic/Latino population attributed their response to the agency's efforts to provide interpreters. According to one respondent, "The services could be considered better from the perspective that a trained interpreter is used to help make sure they (Hispanics/Latinos) understand what they are told."

Karen Tam

Table 11. In your opinion, how do health services for Hispanics/Latinos in your community compare to those available to whites and other minorities?

Compared to whites?	Much Better	Better	About the Same	Worse	Much Worse
Health Departments	0.0%	0.0%	72.0%	20.7%	7.3%
Rural Health Centers	0.0	0.0	52.9	41.2	5.9
Community/Migrant Health Centers	0.0	0.0	58.3	33.3	8.3
Rural Hospitals	0.0	2.3	90.7	4.7	2.3
Total	**0.0%**	**0.6%**	**74.0%**	**19.5%**	**5.8%**
Compared to other minorities?					
Health Departments	0.0%	0.0%	84.1%	12.2%	3.7%
Rural Health Centers	0.0	0.0	62.5	31.3	6.3
Community/Migrant Health Centers	0.0	8.3	58.3	33.3	0.0
Rural Hospitals	0.0	2.3	93.0	4.7	0.0
Total	0.0%	1.3%	82.4%	13.7%	2.6%

Total # of responses: 154
(Health Departments 82, Rural Health Centers 17,
Community/Migrant Health Centers 12, Rural Hospitals 43)

Language Barrier

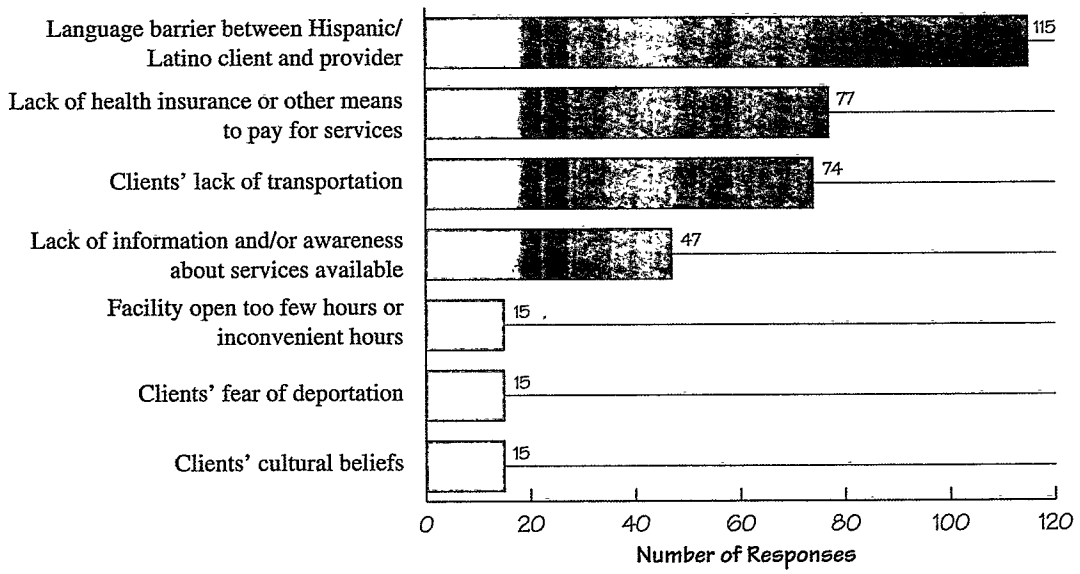
The most obvious and obtrusive barrier to integrating into the community for the Hispanic/Latino population is popularly referred to as the "language barrier." To visualize the language barrier, one need only consider the fact that according to the 1990 Census, 96 percent of North Carolina's population 5 years old and older spoke *only* English and that most of the growing Hispanic/Latino population speaks only Spanish.

The language challenge is a problem in many areas, including schools, law enforcement, the workplace, drivers license offices, and even grocery stores. However, the obstacles imposed by the language barrier can create some of the most perplexing challenges when accessing health care.

For example, a woman and her husband, both of whom speak limited English, went to see the woman's doctor about birth control. The physician prescribed birth control pills and explained how to take them. The man came back two months later angry because his wife was pregnant. "I don't know what went wrong," he said. "I took a pill every night."[52]

Doctors and other health professionals who don't speak Spanish can't ask their Hispanic/Latino patients about their medical backgrounds or symptoms or explain diagnoses or treatment. Harriette Duncan, director of the Duplin County Health Department, tells of a hiring interview role play where one applicant and long-time interpreter at the health department advised a maternity patient to take aspirin—which can contribute to birth defects—when the doctor's orders were to take Tylenol. While this mistake occurred during a role play, it sheds light on the simple misunderstandings between doctors and interpreters, even experienced ones, that can have complicated and potentially harmful results.

Figure 3. What are the most significant barriers to obtaining adequate health care for Hispanics/Latinos in your community?



Total # of responses: 134
(Health Departments 75, Rural Health Centers 13, Community/Migrant Health Centers 8, Rural Hospitals 38).
Respondents could choose more than one issue, and the top five responses are included here.

And many interpreters have little or no qualifications or training for the task other than some ability to speak two languages. Further, the practice of asking family members to interpret can lead to embarrassing moments, as well as issues of liability and ethical concerns. Betsy Richards of the Harvest Family Medical Clinic recalls an encounter at a private OB-GYN in which a Hispanic/ Latina woman who was having a miscarriage brought her 15-year-old son to interpret. Richards stepped in and offered to provide the service, but the fact that the woman was unable to communicate with the doctor in her own language only added to her struggle. Says Mary Anne Tierney of the Blue Ridge Community Health Center, "The language we want to communicate in when we're hurting is our own."

To address the language barrier and its subsequent consequences, there are laws in place that provide for the language needs of non-English speakers. Title VI of the Civil Rights Act of 1964[53] has been widely interpreted by the courts to mean that any health care facility that receives any federal funds must address the needs of its non-English speaking clients.[54] All North Carolina health departments receive at least some federal funds, including Medicaid, the Women, Infants, and Children child nutrition program (WIC), and miscellaneous grants. The Office of Civil Rights of the U.S Department of Health and Human Services mandates that all recipients of federal funds (1) have written procedures for addressing language barriers, (2) offer free interpretation services, (3) make use of clients' family and friends only at the request of the patient and after another interpreter has been offered, and (4) avoid the use of minors as interpreters. Health care facilities

"The language we want to communicate in when we're hurting is our own."

—MARY ANNE TIERNEY,
BLUE RIDGE COMMUNITY HEALTH CENTER

also must ensure that interpreters are qualified and available during hours of operation, that telephone interpretation be limited, and that written materials be translated.[55] However, many providers are not aware of the scope of their responsibilities under Title VI and lack funding to adequately address the situation.[56]

Another federal law that applies to many hospitals is the Hill-Burton Act of 1946.[57] In exchange for federal funds for construction and renovation of public and nonprofit health facilities, recipients are mandated to uphold a community service obligation.[58] According to the U.S. Office of Civil Rights, this requires them to provide clients with appropriate language services.[59] Federal Medicaid regulations also require that state programs comply with Title VI.[60] Some Medicaid managed care contracts are requiring health plans to address the needs of patients with limited English proficiency. According to Judy Walton, Managed Care Administrator of the Division of Medical Assistance in the Department of Health and Human Services, section 1.3 of North Carolina's Medicaid managed care risk contract specifically notifies contracting entities that they must comply with Title VI.

In North Carolina, some medical facilities ask non-English speakers to bring their own interpreters, usually family members or friends. Nearly half (43.4 percent) of those responding to the Center's survey make such a request (See Table 12). The Office of Civil Rights considers this a discriminatory practice.[61] There have been reports that some clinics even post notices or distribute fliers to this effect in Spanish, even though they don't devote resources to other Spanish language materials. Bill Smith, director of the Robeson County Health Department, says some counties have turned down grants to translate their patient forms and educational materials into Spanish. This creates problems for clients and could put the facility at risk for lawsuits and other penalties levied by the Office of Civil Rights. In fact, in 1997, the Union County Health Department was the defendant in a complaint filed by the Mexican American Legal Defense and Education Fund for requiring Hispanic/Latino patients to pay $4 for every 15 minutes of interpretation service, among other violations. Lorey White, director of the health department, says the department was making a well-intended effort to improve interpreter services while recovering some of the cost. Hispanic/Latino patients were coming in with their own untrained interpreters, some of whom might be family members and friends and others being paid $30–$40 to serve as an interpreter for the patient. "We were trying to make sure we could provide a service and got our hands slapped," White says.

In the short run, the language barrier is somewhat alleviated through the use of interpreters. Studies show that appointments without interpreters on average take twice as long as they normally would, another issue that frustrates busy providers and supports the cost effectiveness of hiring interpreters.[62] However, interpreters do not represent a complete solution to the language barrier.

Medical interpretation is a skill that requires training. Simply being bilingual does not make one qualified for interpreting medical information. Furthermore, the interpreter adds a third party to the doctor-patient relationship, which may not have been comfortable for the patient or doctor to begin with. It is financially difficult for local health agencies to fund interpreter positions, especially if they only see one or two Hispanic/Latino clients a day. When hiring interpreters isn't cost effective or when an interpreter isn't available, there are telephone interpreter services such as the AT&T language line available. However, these don't allow for gestures and other non-verbal signals patients send and may not be an effective way to provide health care.

Table 12. Do you ask client to bring his/her own interpreter?

	Yes	No
Health Departments	50.0%	50.0%
Rural Health Centers	60.0	40.0
Community/Migrant Health Centers	9.1	90.9
Rural Hospitals	34.1	65.9
Total	**43.4%**	**56.6%**

Total # of responses: 145
(Health Departments 78,
Rural Health Centers 15,
Community/Migrant Health Centers 11,
Rural Hospitals 41)

Sunday, August 11, 1974

Sunday afternoon and it is one-thirty and all the churchgoing latinos have crossed themselves and are now going home to share in the peace of the day, pan y mantequilla, una taza de café and many sweet recollections of el rinconcito en Juncos, donde Carmencita, Maria y Malén jugaban y peleaban.

Sunday afternoon and it is one-thirty and all the churchgoing latinos fuse each other with love and the women dress so clean and pure and the children walk so straight and pure and the fathers look so proud and pure and everything so right and pure and even as I wake up to my nephew's voice coming through the window, there is pleasure in awakening. . . .

—MIGUEL ALGARÍN

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Yet another complication to the language barrier is that the Hispanic/Latino population has diverse national origins and cultures. The literature divides Hispanics/Latinos into five subgroups: Mexican American, Puerto Rican, Cuban American, Central or South American, and "other" Hispanics/Latinos. Persons of Hispanic/Latino descent may have moved recently to the United States, or their families may have lived here for centuries. Hispanics/Latinos may be bilingual, speak only English, speak only Spanish, or speak little of both. When Spanish is spoken, Hispanics/Latinos often use different idioms among subgroups, which makes communication confusing between the different groups. In addition, cultural values, education, and family income may vary by subgroup. Therefore, having an interpreter or even a bilingual provider doesn't always completely remove the language barrier. Many believe the most efficient way to remove language and cultural barriers is to hire bilingual providers.

Cultural Differences

There are bound to be differences between any two cultures. Sometimes these differences are seen or at least recognized in more obvious details like food, clothing, and language. However, more subtle differences often go unnoticed due to a lack of awareness or visibility. While these differences affect interaction in general, they can also lead to more serious consequences in the realm of health care.

In some Hispanic/Latino cultures, the mother's name is listed last, after the father's name, and thus the mother's name gets recorded as the surname on the birth certificate. In the U.S., the father's name is typically used as the surname. While this slight cultural difference may not seem consequential, it has created a record-keeping problem at some local health departments.

Cultural misunderstandings also can lead to inappropriate dietary or other lifestyle advice, misunderstanding of complaints, unintended offenses, and, generally, failure to achieve a rapport that leads to disclosure of important information.[63] The Robeson County Health Department has experienced some of these differences and found that simply being aware of them can go along way to improving their health care relationship with Hispanic/Latino clients. "There's a lack of cultural understanding," says Health Director William Smith. "What we think is natural is intimidating to the Hispanics."

For example, eye contact, seen in the U.S. as an expression of honesty and trustworthiness, is viewed as somewhat intimidating and even threatening in the Hispanic/Latino community, says

Smith. Another difference is that Hispanic/Latina women almost always defer to their husbands. Examples such as these have prompted the Hispanic Task Force in Robeson County to consider having a Hispanic/Latino panel discussion where the general public can learn more about the Hispanic/Latino culture.

The perceived prevalence of folk healing among the Hispanic/Latino population is yet another fundamental cultural difference affecting the health of this community. While alternative forms of medicine, everything from herbal supplements to massage therapy and acupuncture, are all the rage across the country, Hispanic/Latino patients may be more likely to believe in and practice folk medicine.[64] However, controversy exists among Hispanic/Latino health experts concerning the frequency with which Hispanics/Latinos use folk healers, or "*curanderos*." While Hispanics/Latinos may regularly use home remedies, the use of folk healers is less frequent and varies among cultural subgroups.[65] The extent to which local health agencies have seen Hispanics/Latinos using folk healing remedies varies. While some seem concerned by the idea, others don't see it as a problem. In field visits to local health departments, providers mentioned little more than use of herbal teas for children with tummy aches. However, understanding this aspect of the Hispanic/Latino culture can help doctors and nurses ask important questions, educate the client, and develop a more meaningful relationship with the Hispanic/Latino community.

Lack of Health Insurance or Other Means To Pay for Care

When working families cannot afford health care, there can be dire consequences. Babies may not get the checkups that make sure they are growing healthy and strong. Families may wait until a child is very sick before seeking medical help, sometimes getting help only in an emergency. Untreated illnesses may have long-lasting consequences, such as hearing loss caused by ear infections.

Many believe that lack of money is the greatest factor in determining access to health care for the Hispanic/Latino population. Health care analysts have long understood that the quality of health care available to different groups is influenced by

Reminders from home decorate the walls of a rented trailer referred to by its Hispanic/Latino occupants as "the shed."

Karen Tam

Table 13. Socioeconomic Characteristics of the Hispanic/Latino Population[1]

	Hispanics/Latinos	Whites	African Americans	Total Population
High-school degree or more (1997)[2]	54.7%	79.8%	74.1%	78.4%
Median Family Income (1997)[3]	$28,142	$46,754	$28,602	$44,568
Poverty Rate (1997)[4]	27.1%	11.0%	26.5%	13.3%

[1] Statistics are for the U.S. as a whole except for the category "high-school degree or more" which is for N.C.

[2] *Source*: U.S. Bureau of the Census, Statistical Abstract of the United States, 1998.

[3] *Source*: U.S. Bureau of the Census, Current Population Reports, P60-200, Money Income in the United States: 1997, U.S. Government Printing Office, Washington D.C., September 1998.

[4] *Source*: Joseph Dalaker and May Nafeh, U.S. Bureau of the Census, Current Population Reports, P60-201, Poverty in the United States: 1997, U.S. Government Printing Office, Washington D.C., September 1998.

their socioeconomic status, specifically their level of education, occupational achievement, and income.[66] On the whole, Hispanics/Latinos are less well off than other Americans by a number of measures that may affect health care use. Hispanics/Latinos have lower levels of education, lower incomes, and, on average, are less likely than other Americans to be employed in jobs where health insurance is provided (See Table 13 above).[67] One study found that financial indicators, primarily insurance coverage, had a stronger impact on Hispanic/Latino use and access to health care than did measures of language and culture. Financial factors were also particularly important in predicting whether an individual had a regular place to obtain care.[68]

According to the U.S. Census Bureau, in 1997, 15.5 percent of North Carolinians were not covered by health insurance.[69] While the number of Hispanics/Latinos not covered by health insurance in the state is unknown, nationally 33.6 percent of the nation's population that were of Hispanic origin were not covered by health insurance compared to 14.4 percent for whites and 21.7 percent for blacks.[70]

The lack of health insurance is due not only to the fact that many Hispanics/Latinos work in low-paying jobs that do not offer this benefit, but also to their immigration status. Furthermore, Medicaid benefits and other assistance programs are not available to all immigrants. Without health insurance or access to some type of health care coverage, the well-being of the Hispanic/Latino community suffers. For those who do receive public assistance, benefits may be more generous than those of their native countries, though access to these aid programs is restricted. As one Hispanic/Latino immigrant writes, "I am living very well here in the United States because I have much 'help' like Medicare, welfare, WIC, all of which in Mexico, they never give me. I want that you please not take away this type of help for all the people! It's very necessary for us."[71]

North Carolina's Health Choice for Children program, the state's version of the federal government's Children's Health Insurance Program (CHIP) initiative, provides health insurance coverage to qualifying uninsured children who live in North Carolina and are citizens or lawful permanent residents. Family incomes must be at or below 200 percent of the federal poverty level but too much to qualify for Medicaid. While the applications are available in Spanish and the state's program does make outreach efforts to the Hispanic/Latino community, the citizenship requirement makes this program useless for many Hispanic/Latino children.[72] Because the state chose to establish its CHIP program as an expansion of Med-

icaid, the rules of the federal Medicaid program apply, including residency requirements and restrictions that exclude many Hispanics/Latinos. States such as New York, which set up separate programs to draw federal dollars for child health, are not bound by the federal Medicaid rules and thus can serve non-citizens. The eligibility standards also ask but do not require applicants and their parents to furnish a Social Security number or apply for a Social Security number.

Legal Status

In 1990, the U.S. Census found that nearly two thirds of North Carolina Hispanics/Latinos had been born in the U.S., Puerto Rico, or some other U.S. territory.[73] Now nearly a decade has passed and more and more of the Hispanic/Latino population are immigrants from Mexico, Guatemala, and Cuba seeking jobs and a better quality of life.

Immigration laws are federal laws enforced by the federal government, although state laws play a role in determining immigrant benefits, such as the policy decision that rendered Health Choice for Children program unavailable to non-residents. Yet the local communities are where the effects of immigration are felt most, and local officials have the least formal authority to deal with it.[74] While documentation issues are common for employers, they also come into play in terms of gaining access to health care. "Nothing we talk about can leave behind issues of immigration or issues of legal residence," says Nolo Martinez, director of Hispanic/Latino Affairs in the Office of the Governor. "We tend to think that if you have problems with access, it's because of language or transportation—the fact that the medical community doesn't speak your language. I think it goes beyond that." Martinez says in order to gain citizenship, Hispanics/Latinos must not be receiving public assistance. Yet many work in low-wage jobs that provide few benefits. "You have a wall in between what you call services and what you call access," Martinez says.

"Nothing we talk about can leave behind issues of immigration or issues of legal residence."

NOLO MARTINEZ,
DIRECTOR OF HISPANIC/LATINO AFFAIRS IN THE OFFICE OF THE GOVERNOR

Social Security numbers have become a common form of identification in the United States. Credit card companies, schools, banks, and even job applications use Social Security numbers as an easy and convenient method for identification. While many health care facilities also use the Social Security number as an identifier, not having a Social Security number doesn't mean that the client won't be treated, especially in the public health system.

Most of the facilities responding to the Center's survey (58.1 percent) do not "require" a Social Security number for their clients. Of respondents who reported they do require a Social Security number, 80.2 percent indicated that it was used as an identifier only. When asked what the facility did if the client doesn't have a Social Security number, "treat anyway" or "make up a temporary number" were the most common responses. In describing what other types of identification they require, some respondents indicated that it depended on the program, others said that immigration credentials were requested but not required, and one respondent simply wrote "Green Card," which is a permanent resident visa.

Still, as lack of insurance often deters Hispanics/Latinos from seeking health care, so does their perception that local health agencies require a Social Security card or some other documentation before treatment. This perception leads many Hispanics/Latinos to avoid treatment altogether for fear of deportation or to pass around a single valid card, creating confusion for the health facility and in some cases serious health risks; one person may be allergic to penicillin while another isn't, for example. The Social Security number problem has encouraged many local health agencies to consider implementing a different identification system, though the problem isn't easily solved. The language barrier and fear of immigration authorities create great potential for confusion no matter what the system.

Bill Smith of the Robeson County Health Department says identification issues have complicated recent efforts to immunize Hispanics/Latinos in the face of recent rubella outbreaks at local factories. "Work cards get passed around and the names don't match," says Smith. "Every time there's an outbreak, we have to go back and vaccinate everybody again." Smith's department takes a "don't ask, don't tell" philosophy toward immigration issues. "They present, we serve them," he

says. Still, he believes the identification issue needs to be solved to assure a higher level of service.

Cultural Bias

Beyond the more formal barriers of legal status, there are cultural and social barriers to overcome. Not everyone has greeted Hispanic/Latino newcomers with open arms. The issues range from complaints about crowding too many people into a single housing unit to the inevitable misunderstandings that crop up when different cultures converse in different languages. Competition for low-wage jobs has created additional friction between Hispanic/Latino immigrants and other racial and ethnic groups, particularly African Americans.

In fact, last year two legislators were criticized for statements they made about the Hispanic/Latino population in North Carolina. Former Representative Cindy Watson (R-Duplin) wrote a letter to Wayne McDevitt, Secretary of the Department of the Environment and Natural Resources, asking for a General Environmental Impact Study in Duplin and Onslow Counties concerning sewage and agricultural waste run off. Her letter appeared to lump Hispanics/Latinos with farm animals, touching off a firestorm of criticism. ". . . Looking at the number of hogs, chickens, turkeys, cows, goats and Hispanics and the amount of human and animal wastes applied to our area, I am asking you as the Director of our health, for a General Environment Impact Study," Watson wrote.[75] Watson later wrote a clarification letter indicating she didn't mean to offend the Hispanic/Latino community.

Representative Larry Justus (R-Henderson) also found himself in a controversy concerning remarks he made about the Hispanic/Latino influx. Justus' published comment that "I don't want [North Carolina] sometime in the future to be North Mexico," was particularly offensive to Hispanic/Latino leaders.[76] However, Justus responds, "I'm not anti-Mexican or anti-Hispanic but I do think we have to control our borders."

And some county commissioners are among those who have failed to roll out the welcome mat, in part on a belief that extending services will drain county resources. "They think that if you don't give them services, they'll pack up their bags and go home, but that's not really the case," says Duplin County Health Director Harriette Duncan. "Our main industry here is poultry and pork [processing], and that's the industry that's using them [Hispanic/Latino workers] left and right." Duncan points out that protecting the public health benefits

Lisa Muñoz, outreach worker from Duplin County, visits residents in a trailer community owned by Carolina Turkey near Mount Olive, N.C.

Karen Tam

everyone, regardless of the immigration status of the patient. "We'd like for them all to have their citizenship," Duncan says, "but we know many of them are illegal."

But if the Duplin County Commissioners are reluctant to serve Hispanics/Latinos, William Smith has seen no such resistance in Robeson County. "I've never heard a negative word from our commissioners," says Smith. "They [Hispanics/Latinos] are the only ones who get anything out of the field."

Importance of Hispanics/Latinos to the North Carolina Economy

The Hispanic/Latino community has undisputedly become vitally important to the North Carolina economy. With the state's record low levels of unemployment, Hispanics/Latinos are a valuable human resource. They build roads and houses, and the agriculture industry depends on their labor, as does low-wage manufacturing. Not only has the Hispanic/Latino work force provided a ready supply of labor, but the economic impact of the earnings of this population also is significant. A study conducted by East Carolina University's Regional Development Institute found that the direct impact (dollars and jobs directly attributable to Hispanic/Latino wages flowing back into the economy) of the Hispanic/Latino population is as much as $391 million and 20,000 jobs generated in the eastern region of the state alone.[77] According to the Selig Center for Economic Growth at the University of Georgia, Hispanic/Latino immigrants also add new vibrancy to the state's economy. The Selig Center reports that the Hispanic/Latino buying power in North Carolina increased from $8.3 million in 1990 to $2.3 billion in 1999.[78] As such, some wonder why Hispanics/Latinos should have to live in fear of the immigration laws when the state's economy needs them. As Patricia Tucker, former manager at the Moncure Community Health Center, puts it, "Why don't we go ahead and embrace them?"

A 1997 independent evaluation of immigration by the National Research Council, the nonprofit, policy-advisory arm of the National Academy of Sciences and the National Academy of Engineering, for the U.S. Commission on Immigration Reform (a bipartisan advisory board appointed by the President and Congress) found that immigration has a positive economic impact on states.[79] Consumers, business owners, and investors benefit from the immigration labor force. Immigrants often are willing to work for lower wages than other U.S. workers and immigrant labor has kept entire segments of certain labor-intensive industries viable.[80] While there are economic benefits from immigration, immigrants can cost more for the government services they consume than they pay in taxes in the short term. However, over the long haul, immigrant families more than pay their own way.[81] The study found that new immigrant families initially tend to receive more in public services than they pay for in taxes. Immigrants need about the same amount of government services as other households, the report said. But immigrant families tend to earn lower wages and own less property and therefore pay less in taxes. However, the study concluded that as the new arrivals and their descendants become more a part of mainstream America, earn higher incomes, and obtain more property, they tend to contribute more in taxes than they get back in services.[82] In addition, illegal immigrants who work using false documents may pay taxes and Social Security without any hope or intention of getting a tax refund or collecting Social Security when they retire. This money stays in the government coffers.

Births and deaths were at home.
Farm wives bore

children in double beds, whose mattresses remembered

their conceptions—birth stains and death stains never

entirely washed from pads and quilts. . . .

—JAMES APPLEWHITE
"THE CEMETERY NEXT TO CONTENTNEA"

Lack of Transportation

Most Americans would find it difficult to imagine walking miles to the doctor when not feeling well or when six months pregnant. However, such a scenario isn't all that far-fetched for many in the Hispanic/Latino community, as they often have no transportation of their own. "Hispanic/Latinos seem to have more transportation difficulties to get to health care," writes one of the

Karen Tam

This man goes from trailer to trailer in rural North Carolina, selling clothes to those lacking transportation.

Center's survey respondents. Another echoes this observation. "They have no transportation to access health services."

Among Hispanic/Latino families who are fortunate enough to own a car, it is usually with the husband at work, so the women have no way of getting to their medical appointments. This makes emergencies more dire, especially for pregnant women. Local health agencies that provide transportation to and from clinics do help alleviate the transportation barrier. However, another complicating factor is that a telephone is a luxury in many Hispanic/Latino communities. Without this form of communication, it often is hard to contact them to arrange for transportation. Furthermore, many Hispanics/Latinos don't know how to give directions to their home. And, transportation is especially a problem in rural communities where there is no public transportation.

Lack of Familiarity with the Health Care System and Lack of Trust

Lack of understanding about the U.S. health system is initially one of the more difficult barriers for the Hispanic/Latino population. It has been reported that because many Hispanics/Latinos feel estranged from the U.S. health care system they fail to seek preventive services.[83] According to Andrea Bazan Manson of the N.C. Office of Minority Health, many Hispanics/Latinos in North Carolina stay away from health departments because they are unfamiliar with the system or the services that public health provides. Even with adequate translation services, many Hispanics/Latinos may be unable to understand health terminology and language sufficiently to navigate the array of health care settings, technologies, health care providers, medications, and self-care instructions that may be entailed in a course of treatment.

Hispanics/Latinos may not understand the value of preventive health services, or when it is or is not appropriate to use a hospital emergency room. However, acculturation does seem to improve the likelihood that Hispanics/Latinos will seek health care. A study of Mexican Americans showed that less-acculturated persons had significantly lower likelihood of receiving outpatient care for physical or emotional problems.[84]

Part of the problem with Hispanic/Latino health care arises from the fact that Hispanics/Latinos have the highest numbers of uninsured and

underinsured of any ethnic group in the United States.[85] Communication is one reason for this disparity, as many Hispanics/Latinos don't know they need insurance. On the other hand, those who understand the need for insurance can't afford it or think that it is too expensive.

Another reason for the disparity in the number of Hispanics/Latinos with health insurance is cultural. Most Hispanics/Latinos aren't used to a competitive health care market, so many are unaware of the programs that exist. A survey conducted by Tamayo-Miyares, a Canoga Park, Calif., advertising firm, found that while Hispanics/Latinos believe that the U.S. health care system is superior to that of their country of origin, they believe private insurance and hospitals are only for the rich. They also are generally unfamiliar with the HMO (Health Maintenance Organization) concept. A Hispanic/Latino employee at one of the state's community/migrant health centers explained that in her home country, only the "elite" go to doctors, prescription medications are sold freely with little regulation, and a shot is the common form of treatment or prevention for disease. In other words, Hispanic/Latinos aren't used to dealing with health insurance, don't understand the value of it, and are confused by the more sophisticated and complicated treatment regimens of U.S. health care.

Lack of Hispanic/Latino Health Care Providers

One of the reasons Hispanics/Latinos experience difficulties in obtaining adequate health care is the fact that they are seriously underrepresented in the health occupations, particularly those requiring higher skill levels.[86] This makes for a scarcity of bilingual providers and contributes to language and cultural barriers. In North Carolina, Hispanic/Latino physicians represent only 1 percent of all physicians (whose race or ethnicity is known) compared to 87.6 percent for whites and 4.9 percent for blacks (See Table 14 below).[87] The number of physicians per 1000 population stands at 0.8 for Hispanics/Latinos—much less than the rate for whites (6.6) but greater than that of blacks (0.1). The Hispanic/Latino rates for registered nurses and licensed nurse practitioners are less than both the white and black population, although the numbers are rising. The Annual Report of the North Carolina Board of Nursing shows that the number of nursing school enrollments for Hispanic students has been steadily increasing since 1991 and actually increased by 83 percent between 1991 and 1997. The number of graduations for Hispanic/Latino nursing school students increased by 182 percent between 1991 and 1997.[88]

Table 14. Hispanic/Latino Health Professionals in North Carolina

	Physicians[1] (1997)		Registered Nurses[2] (1996)		Licensed Practical Nurses (1996)	
	% of total	Rate per 1,000	% of total	Rate per 1,000[3]	% of total	Rate per 1,000
Hispanic/Latino	1.0%	0.8	0.3%	1.3	0.6%	0.7
White	87.6%	6.6	89.7	9.6	74.9%	2.1
Black	4.9%	0.1	8.1%	2.9	22.9%	2.1

[1] Provided by N.C. Medical Board; N.C. Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, 1997.

[2] Provided by the N.C. Center for Nursing, N.C. Board of Nursing

[3] Rates calculated per 1,000 of the Hispanic/Latino, white, and black population using 1996 and 1997 population estimates from the U.S. Census Bureau

Community Outreach Efforts

The needs of the Hispanic/Latino community haven't gone unnoticed. Many churches, civic groups, businesses, and individuals are working to integrate and welcome Hispanics/Latinos to the state. While these efforts range from providing job training to organizing community awareness activities, the health care community also is doing its part. "North Carolina state and local public health services, hospitals, community health centers, and individual health providers are already responding to the health challenges of the new [Hispanic/Latino] arrivals," says Dr. A. Dennis McBride, state health director.

The State's Role

The fact that the Hispanic/Latino population in North Carolina is rapidly increasing certainly justifies the need for reaching out to this segment of many North Carolina communities. However, some question whether the state itself should take action to embrace the Hispanic/Latino community. "This is a social issue," wrote one of the Center's survey respondents, implying that it isn't the responsibility of state government or local health agencies to ensure that Hispanic/Latinos have the same level and quality of health services as the rest of the population. Ongoing immigration policy debates also have raised questions about the impact of the new Hispanic/Latino arrivals.

Those who believe that it is the state's role to reach out to the Hispanic/Latino community think that helping groups with special circumstances ultimately benefits the entire state. As McBride puts it, "We will have to work very hard to maintain a system of public health assurance for all who reside in or visit our state. Human diseases do not make distinctions based on nationality, ethnicity, or language spoken."

Respondents to the Center's survey agreed nearly unanimously (96.7 percent) that it is the role of their facility to ensure that Hispanics/Latinos have access to the same level and quality of health services as the rest of the population in their community. In explaining why or why not, the most frequent responses pertained to the "missions" of their facilities or to the assertion that, "All are created equal." "Inadequate health care to one population affects the health of [the] entire community" noted one local health director. Mary Anne Tierney, Health Educator at Blue Ridge Community Health Center agrees. "The bottom line is, we're talking about health care. This is not a luxury service." Still, the question of whether it is the state's role to specifically target the Hispanic/Latino population in providing health services is sometimes avoided. Concerns about or even objections to increased immigration may play a role here.

What's Being Done Now?

The Center's survey assessed the efforts of local health agencies to reduce health care access barriers for Hispanic/Latinos (See Figure 4, p. 43). Most (93.1 percent) of the respondent facilities use interpreters to some degree, while other efforts include offering bilingual informational materials (83.6 percent); providing services free of charge or on a sliding fee scale (69.2 percent); providing Spanish language and cultural training classes for providers and staff (44.5 percent); reaching out through health fairs and visiting migrant farm camps (41.1 percent); and offering transportation to and from the clinic (39.7 percent). Other efforts include opening clinics on week nights more than one night per month (35.9 percent); offering home visits for people without transportation (34.5 percent); and hiring Hispanic/Latino providers (27.5 percent).

Interpreters

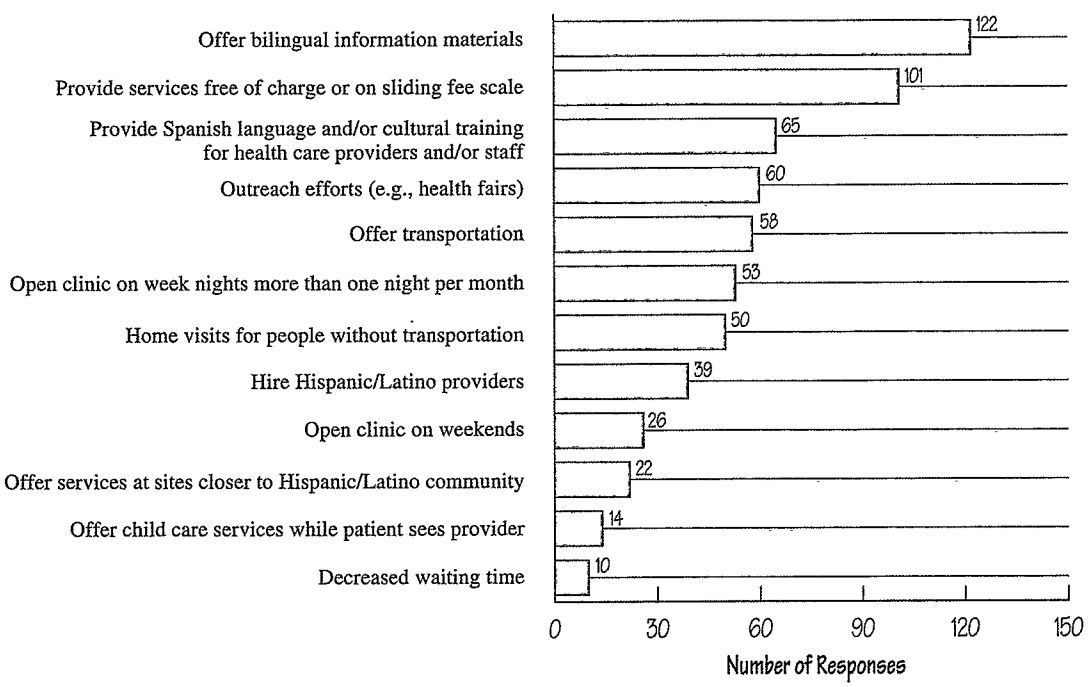
Several of the health facilities make an effort to scale the language barrier from the first point of contact. For example, Blue Ridge Community Health Services, Tri-County Community Health Center, Wilson Community Health Center, and the Surry County Health Department all have phone messages or menus in Spanish. Many of the facili-

ties also have their signs posted in both English and Spanish. For Hispanic/Latino clients, these efforts may provide both useful information and a sense of inclusiveness. However, actually seeing the doctor is when the language barrier matters most.

The use of interpreters at health care facilities has increasingly become a solution for addressing the language barrier in serving the Hispanic/Latino population. In fact, 93.1 percent of the Center's survey respondents indicated that their facility uses interpreters/translators (See Table 15, p. 44). Not surprisingly, the facilities that serve more Hispanics/Latinos tend to have more hours when interpreters are available. The actual hours available ranged from "as needed" to the standard 40-hour work week. However, some hospitals indicated that they have interpreters available 24 hours a day (at least in the emergency room). Overall, health facilities use a mix of staff (63.3 percent), contractees (41.8), and volunteers (38.4 percent) to provide interpreter services, and many facilities use all three (See Tables 16 and 17, pp. 44–45). Thus far, the state and federal government have provided no funding for interpreter services. The N.C. Department of Health and Human Services developed a proposal for $2.3 million for interpreter services in the 1999–2000 budget year. The Department is seeking state and private funds to support such an initiative. The funds would be enough to provide 85 full-time equivalent positions to counties with medium (500–1,500), high (1,501–2,999) and very-high density (3,000 or more) Hispanic/Latino populations. (The N.C. Center for Public Policy Research first recommended state funding for interpreter services in a January 1995 *North Carolina Insight* article entitled "The Health of Minority Citizens in North Carolina.")[89]

Not surprisingly, given the scarcity of funding, most of the interpreters who are on the facilities' staffs aren't just interpreters; 70.7 percent are employed in a dual capacity (See Table 18, p. 46). Besides being an interpreter, "other duties" range from

Figure 4. Besides offering interpreters/translators, what other steps has your facility taken to reduce health care barriers for Hispanics/Latinos?



Total # of responses: 146
(Health Departments 82, Rural Health Centers 17, Community/Migrant Health Centers 11, Rural Hospitals 36). Respondents could choose more than one issue.

Table 15. Does your facility use interpreters/translators?

	Yes	No
Health Departments	98.8%	1.2%
Rural Health Centers	70.0	30.0
Community/Migrant Health Centers	83.3	16.7
Rural Hospitals	95.7	4.3
Total	93.1%	6.9%

Total # of responses: 160
(Health Departments 82, Rural Health Centers 20,
Community/Migrant Health Centers 12, Rural Hospitals 46)

housekeeping to the chief of staff at a rural hospital, Angel Medical Center in Macon County. However, the most common other duties include acting as nurses, nursing assistants, or some type of clerical worker.

Overall, only about half (50.4 percent) of the interpreters at the respondents' facilities have received training on "interpreter issues" (See Table 19, p. 49). Some respondents did indicate that their interpreters were either currently in training or on a waiting list to receive training.

Providing interpreter services is important to addressing the language barrier. However, the quality of these services is even more important. To address the quality of interpreter services, the North Carolina Area Health Education Centers (AHEC) Program, through a three-year grant from the Duke Endowment, is cooperating with the North Carolina Department of Health and Human Services' Office of Minority Health, the UNC-Chapel Hill School of Public Health, the UNC Health Sciences Library, and Duke University

Table 16. Is the interpreter on staff, volunteer, or contractee?

	Staff	Volunteer	Contractee
Health Departments	57.7%	32.5%	42.5%
Rural Health Centers	53.8	23.1	38.5
Community/Migrant Health Centers	90.0	10.0	30.0
Rural Hospitals	67.4	60.5	44.2
Total	**62.3%**	**38.4%**	**41.8%**

Total # of responses: 146
(Health Departments 80, Rural Health Centers 13,
Community/Migrant Health Centers 10, Rural Hospitals 43)

Note: These percentages do not add to 100 as the survey respondents selected all the options that applied to their facility.

Table 17. Facilities with Interpreters on Staff (in alphabetical order)

Alamance County Health Dept.
Albemarle Hospital
Alexander Community Hospital
Angel Medical Center
Annie Penn Hospital
Anson County Hospital
Bakersville Community Medical Clinic, Inc.
Beaufort County Hospital
Benson Area Medical Center
Bladen County Health Dept.
Bladen County Hospital
Blue Ridge Community Health Services, Inc.
Brunswick County Health Dept.
Buncombe County Health Center
Burke County Health Dept.
Caldwell County Health Dept.
Caldwell Memorial Hospital
Carteret County General Hospital
Celo Health Center
Chatham County Health Dept.
Columbus County Community Health Center
Columbus County Health Dept.
Columbus County Hospital Inc.
Dare County Health Dept.
Davidson County Health Dept.
District Memorial Hospital
Duplin County Health Dept.
Duplin General Hospital
Durham County Health Dept.
Edgecombe County Health Dept.
First Health Moore Regional Hospital
Gaston Family Health Services, Inc.
Good Hope Hospital
Goshen Medical Center, Inc.
Greene County Health Care, Inc.
Guilford County Dept. of Public Health
Halifax Regional Medical Center
Harnett County Health Dept.
Harris Regional Medical Center
Harvest Family Health Center
Haywood County Health Dept.
Haywood Regional Medical Center
Health Serve Ministry, Inc.
Henderson County Health Dept.
Hoke County Health Dept.
Hugh Chatham Memorial Hospital
Iredell County Health Dept.
Iredell Memorial Hospital
Johnston County Health Department
Jones County Health Dept.
Kinston Community Health Center
Lee County Health Dept.
Lenoir County Health Dept.
Lenoir Memorial Hospital
Lincoln Community Health Center, Inc.
Macon County Health Dept.
Madison County Health Dept.
Mecklenburg County Health Dept.
Mitchell County Health Dept.
Montgomery County Health Dept.
Moore County Health Dept.
Nash County Health Dept.
New Hanover County Health Dept.
Northern Hospital of Surry County
Ocracoke Health Center, Inc.
Our Community Hospital
Pamlico County Health Dept.
Pender County Health Dept.
Penslow Health Clinic, Inc.
Piedmont Health Services, Inc.
Plainview Health Services, Inc.
Randolph Hospital
Richmond County Health Dept.
Roanoke-Chowan Hospital
Robeson County Department of Health
Rockingham County Dept. of Public Health
Sampson County Health Dept.
Sloop Memorial Hospital
Southeastern Regional Medical Center
Stanly Memorial Hospital
Stokes Family Health Center
Surry County Health and Nutrition
Swain County Health Dept.
Transylvania Community Hospital
Union County Health Dept.
Wake County Health Dept.
Watauga Medical Center
Wayne County Health Dept.
Wilkes County Health Dept.
Wilson County Department of Public Health
Yadkin County Health Dept.

Note: This list is based on responses to the Center's survey.

Table 18.
Is interpreter/translator on staff employed in a dual capacity?

	Yes	No
Health Departments	60.0%	40.0%
Rural Health Centers	80.0	20.0
Community/ Migrant Health Centers	83.3	16.7%
Rural Hospitals	84.6	15.4%
Total	70.7%	29.3%

Total # of responses: 82
(Health Departments 45,
Rural Health Centers 5,
Community/Migrant Health Centers 6,
Rural Hospitals 26)

Medical Center in Durham, N.C., to provide a comprehensive statewide approach to Spanish language and cultural training. The training is being offered to clinical and administrative health practitioners working in North Carolina hospitals, health departments, community health centers, and other health care settings. The initiative includes Spanish language training for health practitioners and students, interpreter training, immigrant health information resources, Spanish language instructor training, and mental health and substance abuse training.[90] The Interpreter Training Initiative, housed at the Office of Minority Health, is providing training for interpreters, technical assistance to agencies on such issues, and policy guidance to state and local entities.

Generally, slightly less than half of the respondents (43.4 percent) said they ask the client to bring their own interpreter (See Table 12, p. 33). But even though these respondents indicated that they do ask the client to bring an interpreter, many added "if available." None of the respondents indicated that they currently charge for interpreter services.

Half (50.0 percent) of the respondents use an interpreter phone service for their Hispanic/Latino clients (See Table 20, p. 49). Most of the respondents who use an interpreter phone service use AT&T's service although other sources are available.[91]

Spanish Health Literature

Providing health information and education in Spanish is one way that the health care community is trying to address the needs of the Hispanic/Latino population. Most of the local health agencies surveyed offer patient forms and health information pamphlets in Spanish. However, due to the fact that the Hispanics/Latinos served at these facilities often have low education levels and even limited Spanish literacy, these pamphlets may not serve their intended purpose. Bill McCann, a pediatrician at the Blue Ridge Community Health Center in Henderson County, believes that the Spanish health literature provided is sometimes complicated and difficult for the patient to read. "They claim the literature is written at a 4th or 5th grade level, but that's a pretty smart 5th grader," McCann says, adding, "I don't believe that."

McCann and his colleagues have found that the literature provided is packed with too much information, and the reading level is too high. In fact, McCann believes that even the reading level of English literature provided to English speaking patients is above that of the average patient. "Any literature we give them needs to be understandable with simple diagrams and pictures," says McCann. "The more basic the better."

Transportation Services

Riding in a county-owned car to the eye doctor or to the hospital to have an ultrasound may seem strange to those who have cars of their own. But this scenario is becoming more commonplace in the Hispanic/Latino community.

Providing transportation for those who live too far from the local health agency's clinics or who don't own a car helps to reduce the transportation barrier for the Hispanic/Latino community. Recognizing this, many (39.7 percent) of the facilities that responded to the Center's survey provide transportation for their clients. As a result, many in the Hispanic/Latino community have become regular customers of local health agencies that offer transportation services. However, some agencies only provide transportation for their prenatal and maternal care programs.

The Chatham Family Resource Center (FRC) in Siler City provides transportation for many in

Building Bridges: The Chatham County Family Resource Center

On a cold and windy winter's day, a well-traveled tan Chevrolet Caprice bearing the Chatham County Government seal pulls into the driveway of an unpainted, box-like home. The weathered wooden house barely looks sturdy enough to withstand the wind.

A young, bright-eyed pregnant woman darts out of the house and speaks briefly to the car's driver, an Americorps Volunteer with the Chatham Family Resource Center. Then she heads to an identical house next door. Although she is on her way to Chatham Hospital to have an ultrasound examination, Elia (not her real name) must first tell the little girl who lives next door that she won't need to come along to interpret, as the Americorps Volunteers will be there to interpret for her.

Elia has just come to the United States and has been in Siler City for less than two weeks. Like most newcomers, she knows little about her new home, but fortunately she knows about the family resource center, which has become a lifeline for the many Hispanics/Latinos who now call Chatham County home.

Three AmeriCorps members from the ACCESS Project at the University of North Carolina at Greensboro (all of Hispanic/Latino descent), Ruth Tapia, Nelinda Benitez, and Rosa Ayala, provide the backbone of the family resource center. They are deeply involved in the community, offering not only services but empathy. "When I call my mom to tell her about the things we are doing here, she says 'Oh, I wish there was something like that when I first came here [to the U.S.],'" says Tapia, a lifelong U.S. resident who nonetheless identifies with the new arrivals. "My heart is very big towards them [Hispanic/Latino immigrants]," she says, "I know where they're coming from."

During a recent Christmas season, one Hispanic/Latino mother's work permit expired. While waiting for a renewal, she fell behind on her rent and bills. With no income, she faced a bleak Christmas—not to mention the problem of how to house and feed her children. Fortunately, the center was able to find resources to help her pay her bills, obtain free school lunches for her children, and get the family set up with a Christmas sharing program through the Salvation Army. "We came back from picking up the gifts and put them on the back of the county car," says Tapia. "When she [the mother] turned around and saw them, she picked up one of the presents and hugged it to her and said, 'I thought I wasn't going to have a Christmas this year.'"

Joanne Scharer

The inconspicuous brick building that houses the family resource center is situated at the corner of a shopping center parking lot on busy U.S. Highway 64. But the center and the services it provides are well known to Hispanics/Latinos living in Siler City.

—continues

Now a nonprofit agency, the family resource center grew out of a health department response to unparalleled Hispanic/Latino immigration into Chatham County, where chicken processing plants and other industry were generating huge demand for low-wage workers. As the county's largest provider of prenatal care, the health department needed a comprehensive health and community education program for the immigrants who represented up to 70 percent of the department's clientele. Existing ways of providing human services simply did not work well in newly established Hispanic/Latino communities. "We had an old system tried and true and needed to change it," says Bill Lail, Chatham County human services planner and chairman of the family resource center's board.

Unlike many assistance programs, the family resource center does not require documentation or proof of residency. In fact, the center opens its arms to anyone in the community who needs its help, regardless of race or ethnicity. But the majority of those in the community who need the services the center provides are Hispanic/Latino immigrants.

Chatham County's center is funded by Smart Start through the local Chatham County Partnership for Children. The health department and the Joint Orange-Chatham Community Action agency unsuccessfully applied for a Family Resource Grant through a program enacted by the N.C. General Assembly in 1994.[1] The health department then applied for a grant from the Chatham County Partnership for Children and received enough funding to pay for the facility and employ a part-time coordinator.

The primary purpose of family resource centers is to redirect and focus the delivery of fragmented human services to support and preserve families. Family resource centers are intended to help close the gap between the needs of families and the resources available in the community. "This is especially true with our unprecedented immigrant population growth," says Lail. "If ever an industry needed to reinvent itself, government human services in this county had to. Decisions made early on will have a rippling effect for decades."

The center provides a one-stop source of help through information and referrals so that families don't have to find their way through a maze of agencies and applications to get the help they need. Lail says the family resource center is the only place where Siler City government, Chatham County government, major industries, churches, nonprofit agencies, schools, and families themselves can work together for solutions to family issues in the community. "We're building bridges but looking for responsibility from everybody," says Lail.

The 15,000 square foot facility that houses the center is owned by Faith Family Ministries, which uses about half of the building for its church and related programs. The family resource center's portion of the building includes two child-care centers, a kitchen, four classrooms, five offices, and a large meeting hall. The center is home to many agencies with staff and offices in the building, including a complete Head Start program, Girl Scouts, the Chatham County Health Department, Smart Start, the Chatham County Housing Authority, and AmeriCorps.

There also are many agencies that conduct programs at the center, including Child Care Networks, Hispanic/Latino Alcoholics Anonymous, Narcotics Anonymous, Hispanic/Latino parenting classes, two minority Brownie Scout Troops, and Central Carolina Community College, which offers a General Education Diploma program and classes in English as a Second Language. Through case management and home visiting, the human service needs of the Hispanic/Latino community are identified and appropriate referrals made. Schools, nonprofit agencies, churches, and industry all make referrals to the family resource center for services such as transportation, housing assistance, food, clothing, interpreter services, education, immigration assistance, and psychological services.

The family resource center's experiment is successfully bringing together federal, state, and local resources to help the growing Hispanic/Latino community in Chatham County. As Lail sees it, helping the Hispanic/Latino community ultimately benefits the entire community. "By literally working together, we better understand the needs and resources of our diverse cultures, and we just might discover how we can all live together and raise healthy, happy families."

—Joanne Scharer

[1]N.C.G.S. 143B-152.10.

the Hispanic/Latino community without access to a car. The service that the FRC provides is so widely known and used that the Family Resource Center often gets calls from Hispanics/Latinos asking to be taken to work or even shopping. However, the FRC only provides transportation for health-related appointments or classes. "We are not a taxi service," says Ruth Tapia, one of the Americorps Volunteers who staffs the Family Resource Center and has driven many pregnant Hispanic/Latina women to their prenatal appointments at the health department.

In addition, because many Hispanic/Latino families don't have telephones, it is difficult for them to call and arrange for transportation or even to make an appointment. With this in mind, the FRC staff not only provide transportation for clients who have doctor appointments but they often make trips to the homes of Hispanic/Latino families to remind them of their upcoming appointments or classes. (For more on the Family Resource Center, see pp. 47–48.)

Health Fairs

The crowd at La Fiesta del Pueblo mingles among the exhibits sponsored by businesses, state and local service agencies, community groups, churches, and craftsmen. Festive music fills the air, along with the fragrant aroma of the food vendors' offerings like chorizo (a traditional Spanish or South American sausage) and fresh grilled vegetables wrapped in warm tortillas. The atmosphere is one of celebration on this bright fall day in Chapel Hill. Surprisingly, one of the largest exhibits at this annual gathering is a health fair.

Celebrations of the Hispanic/Latino culture across the state have started including health fairs as a way to celebrate and advance the health of the Hispanic/Latino community. These health fairs provide specific health information on various ailments and afflictions, but also inform the Hispanic/Latino community about services available, including low-cost or free services. The intent is to help chip away some of the access barriers that impede Hispanic/Latino health care. La Fiesta del Pueblo includes a health fair complete with blood pressure screenings, free immunizations for children, and information about heart disease and sexually transmitted diseases. While some may question the appropriateness of having a health fair at a fiesta, celebrating the cultural community certainly involves celebrating a healthy community.

"Some people say La Fiesta is a fiesta and not about health," says Andrea Bazan Manson, the event's co-director. "But part of being a healthy community is not only recreation, but taking care of yourself."[92]

Table 19. Has the interpreter received training on interpreter issues?

	Yes	No
Health Departments	50.0%	50.0%
Rural Health Centers	40.0	60.0
Community/ Migrant Health Centers	77.8	22.2
Rural Hospitals	47.2	52.8
Total	50.4%	49.6%

Total # of responses: 129
(Health Departments 74,
Rural Health Centers 10,
Community/Migrant Health Centers 9,
Rural Hospitals 36)

Table 20. Do you use an interpreter phone service for your Hispanic/Latino clients?

	Yes	No
Health Departments	50.6%	49.4%
Rural Health Centers	35.7	64.3
Community/ Migrant Health Centers	18.2	81.8
Rural Hospitals	61.4	38.6
Total	50.0%	50.0%

Total # of responses: 148
(Health Departments 79,
Rural Health Centers 14,
Community/Migrant Health Centers 11,
Rural Hospitals 44)

Table 21. Do you involve Hispanics/Latinos or Hispanic/Latino groups in planning health services for your community?

	Yes	No
Health Departments	35.8%	64.2%
Rural Health Centers	26.7	73.3
Community/Migrant Health Centers	75.0	25.0
Rural Hospitals	37.1	62.9
Total	**38.5%**	**61.5%**

Total # of responses: 143 (Health Departments 81, Rural Health Centers 15, Community/Migrant Health Centers 12, Rural Hospitals 35)

Task Forces, Committees, and Other Hispanic Groups

Overall, only about a third (38.5 percent) of the local health agencies that responded to the Center's survey indicated that they involve Hispanics/Latinos or Hispanic/Latino groups in planning health services for their community (See Table 21 above). However, the reverse was true for community/migrant health centers. Fully three quarters (75 percent) *did* involve Hispanics/Latinos in planning health services, perhaps providing a lesson for other providers. As to how respondents involve Hispanics/Latinos, most said they used focus groups and committees, while a few indicated that they have Hispanic/Latino representatives on their local board of directors. But despite the fact the majority of local health agencies do not involve Hispanics/Latinos in planning for community health services, grassroots efforts across the state abound for addressing Hispanic/Latino health and other issues. It seems that many communities, especially those with a large Hispanic/Latino population, have some group or committee organized to acknowledge and confront these issues. Examples of these advocacy groups include El Pueblo, Inc. a statewide advocacy Hispanic/Latino organization based in Chapel Hill, the Latino Advocacy Coalition in Henderson County, ALAS (Asheville Latin American Society) in Buncombe County, and HOLA (Helping Our Latin Americans) in New Hanover County, among many others.

While grassroots and community efforts advocate for the Hispanic/Latino community, Katie Pomerans, the Hispanic/Latino Ombudsman with the N.C. Department of Health and Human Services, works with the Hispanic/Latino community from a state government perspective. And in May 1998, the Governor announced the creation of a special liaison and an advocacy council (the Governor's Advisory Council on Hispanic/Latino Affairs) to give Hispanic/Latino residents a greater voice in state government. The 15-member council advises the Governor on issues and policies affecting the Hispanic/Latino community, helps efforts to improve race and ethnic relations, and promotes cooperation and understanding. The council includes members of the clergy, business community, nonprofit groups, teachers, and a farmworker organizer. In addition to appointed (voting) members, the council includes participants from the state's Departments of Administration, Health and Human Services, and Crime Control and Public Safety, as well as the Employment Security Commission, Division of Motor Vehicles, and Division of Community Affairs. While the Governor gave the council discretion in setting its agenda, he saw the language barrier between health care professionals and the Spanish-speaking community as a particular problem.

To address the various issues affecting Hispanics/Latinos in N.C., the council decided to divide into eight different committees. "We've got some big plans," says Andrea Bazan Manson, Chair of the council's Health and Human Services Committee. "We've pulled together 25 key individuals from all over the state to serve on the [health and

human services] committee. According to Bazan Manson, the committee is going to develop a comprehensive manual for providers, policymakers, and consumers to set the standard of health care for Hispanics/Latinos across the state. With so much confusion about eligibility, provision of services, and how to serve a non-English speaking population, this document will be educational as well as instructive, Bazan Manson says. "Our vision is that this document will include both the policy guidance and implementation strategies for appropriately serving Hispanics/Latinos in N.C.," says Bazan Manson. "It's going to be a huge project. It makes me nervous thinking about it."

New Research, Program Development, and Program Evaluation

Programming and planning alone will not address the broad array of health issues that confront the Hispanic/Latino population and the health professionals and policymakers that serve them. In many cases, the existing knowledge about how to best reach this dynamic population and address their complex health, social, and economic needs is inadequate. New models and methods are needed to ensure that the state's investments in Hispanic/Latino health intervention are effective in reaching this population and addressing the most pressing gaps in health status and health care access.

With this in mind, UNC-Chapel Hill's School of Public Health and the Kenan-Flagler Business School, also at UNC-CH, are developing a partnership to begin responding to some of the needs for new research, program development, and program evaluation through the creation of the Center for Ethnicity, Culture, and Health. The center will support an array of research, education, and service activities in the area of Hispanic/Latino health. A key activity for the center will be the design, evaluation, and dissemination of evidence-based strategies for addressing the health issues and resource needs of the Hispanic/Latino population and other minority groups in North Carolina. A second approach will be the recruitment, education, and retention of Hispanic/Latino students who can become bilingual health professionals in North Carolina. "The intent is that the new center will become an invaluable resource for the state in making effective public investments and policy or program decisions in these areas," says Dr. William L. Roper, dean of the UNC School of Public Health.

Karen Tam

What More Can Be Done?

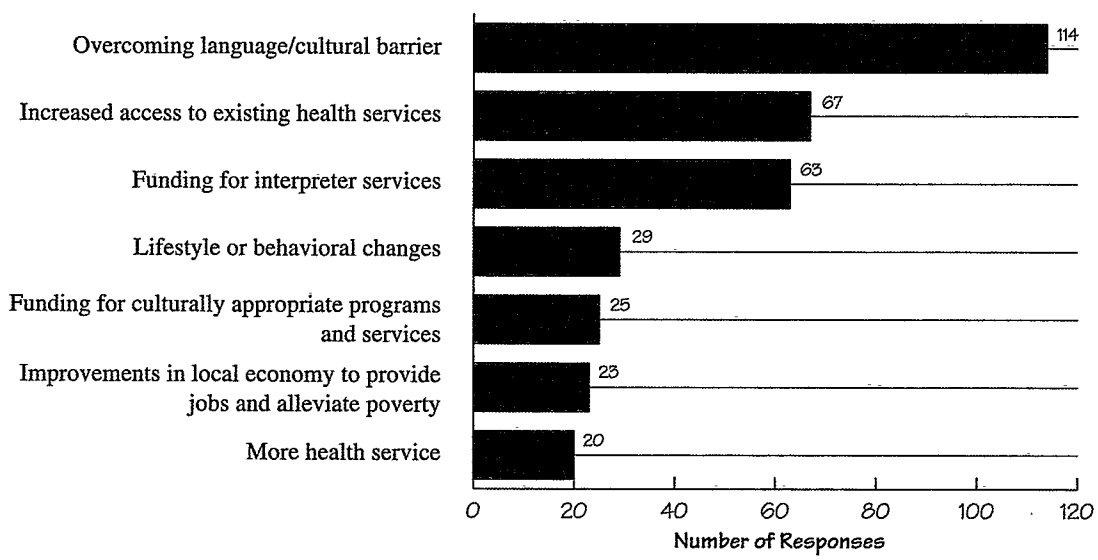
The health care community has started to ask some important questions about the health of the growing Hispanic/Latino community in North Carolina. The state and local health agencies are working together to implement programs and plan other initiatives to address the health care needs and barriers to access for Hispanics/Latinos. However, there is more to be done. Asked what steps could be taken to improve health outcomes for Hispanics/Latinos, respondents most frequently chose overcoming language and cultural barriers (74 percent), increased access to existing health services (43.5 percent), and funding for interpreter services (40.9 percent). (See Figure 5 below.)

Consistent with these responses and the overall survey results concerning the health issues, access barriers, and improving health outcomes for Hispanics/Latinos, most of the comments concerned the language and cultural barriers. Several respondents commented on the need for funding interpreter services, training materials, and reimbursement for services provided to those who can't pay through such measures as assisting with their sliding fee scales. Respondents also encouraged addressing the lack of health insurance for Hispanics/Latinos.

More Funding

While Title VI of the Civil Rights Act of 1964 requires health care facilities that receive federal funds to address the needs of their non-English speaking clients, many of these facilities lack funding to adequately address the situation. Furthermore, there are no state or federal funds designated specifically for interpreter services. The lack

Figure 5. Which of the following are the most important in improving health outcomes for Hispanics/Latinos?



Total # of responses: 154
(Health Departments 81, Rural Health Centers 17, Community/Migrant Health Centers 11, Rural Hospitals 45). Respondents could choose more than one issue.

of funds not only limits the number of interpreters available, but it also limits the compensation of these interpreters. Inadequate compensation leads to high turnover rates and requires bilingual employees with other duties to perform translation services for free. The Area Health Education Centers program does provide funding for training, but it doesn't help pay the salaries of the interpreters. Some health departments have converted other existing positions into interpreter positions, such as the Robeson County Health Department. "We lost positions in the clinic," says Robeson County Health Director Bill Smith. But Smith says the scarce staffing dollars were more valuably deployed for interpreters because the language barrier was clogging the flow of patients receiving services at clinics. "To be candid, it was all glommed up," says Smith. "You couldn't move them through the clinic."

Robeson County employs four full-time interpreters—three in the health department proper and one who conducts home visits. Smith also is sending staff to short-term Spanish courses such as those offered by the Coastal AHEC. "At least we can help them [Hispanics/Latinos] figure out if they're in the right building," Smith says.

The funding issue isn't just about interpreters. As many local health agencies have found, it is difficult to provide health care to those without the ability to pay and still maintain financial viability. At the Johnston County Health Department, maternity care often is provided for free because the patient is unable to pay for the service. However, Stacy Eason, nursing director at the health department, says some of these patients can pay at least some portion of the costs but don't give accurate income information. "Some of us resent that because we feel like they aren't telling us the truth," Eason says, "and sometimes we find out that they aren't."

And due to the additional time needed to serve the Hispanic population, facilities aren't able to see as many patients, which ultimately means lower revenues. "Reimbursement is critical for an organization to feel they can open their doors to this [the Hispanic/Latino] community," says Mary Anne Tierney, Health Educator at Blue Ridge Community Health Center.

The Division of Public Health's Migrant Fee-for-Service Program does provide reimbursement (up to $150 per user) to private physicians, dentists, pharmacists, and outpatient hospital departments for primary care services for migrant farm workers. However, the state-funded program receives approximately $700,000 per year, which equates to only $5 per eligible farm worker. And the state's Hispanic/Latino population consists of more than just migrant farm workers, so reimbursement remains an issue. But given the percent of users, this program is meeting some urgent needs and provides direct primary care, as well as recruiting "non-traditional" providers to serve the population.

Affordable Health Insurance

More affordable health insurance likely would lead to a higher percentage of Hispanics/Latinos with health care coverage and to greater practice of preventive health. North Carolina does have some options for extending affordable health insurance to Hispanic/Latino families or at least their children. For example, by extending the state's Health Choice Program for Children to all children, not just citizens, the state can make health care more accessible to many working families.

Recruitment/Training of Bilingual Providers

Instead of listening to the radio when driving to work, one emergency room doctor at Iredell Memorial Hospital listens to medical terminology tapes—in Spanish. While some might not consider this the most entertaining way to spend morning drive time, this doctor and others across the state have realized the importance of their learning Spanish in order to serve their communities.

There is no escaping the great and growing need for interpreters in North Carolina's health care system. However, the need for recruiting and training bilingual providers is just as great and is considered to be a far more efficient and cost-effective solution. In interviews with representatives of several local health agencies, many conveyed the long-range importance of recruiting bilingual providers and training current staff. Patricia Tucker, former manager of the Moncure Community Health Center in Chatham County, says, "Having bilingual staff gives more ownership into the care of the [Hispanic/Latino] patient."

On the other hand, Harriette Duncan, Health Director at the Duplin County Health Department, has found that it is easier to train interpreters about medical terminology than to have non-Spanish speaking providers and staff learn Spanish. "I have enough trouble correcting English, much less teaching Spanish," she says. Instead, she would like to have well-trained interpreters and the funds for ap-

propriate compensation. Regardless of one's position on whether professionalizing interpreters or teaching providers is more effective, having bilingual staff/providers is imperative to the health of the Hispanic/Latino community.

Unarguably, interpreters do alleviate the language barrier to some degree. However, having bilingual providers can further these efforts by improving the doctor-patient relationship. One study found that patients are more likely to recall medical information and instruction related by their doctor, to ask more questions, and to discuss their personal problems with physicians who speak their native tongue.[93] "They appear so appreciative that somebody cares enough to try and speak their language," says Kevin Allen, Vice President of Iredell Memorial Hospital.

Of course, teaching and having health professionals learn Spanish isn't the same as recruiting Hispanic/Latino providers. While having bilingual providers is advantageous, speaking the same language is hardly synonymous with sharing the same culture. Increasing the number of Hispanic/Latino providers either through recruitment or encouraging more Hispanics/Latinos to enter the health professions would further break down barriers of language and culture.

English Classes

But attacking the language barrier is a two-way street, as some health care providers were quick to point out. "I wish they would learn to speak English—it would be so much simpler," says Stacy Eason, Nursing Director at the Johnston County Health Department. Many health care providers agree with Eason, believing the best way to approach the language barrier is for the Hispanic/Latino population to learn English. And many in the Hispanic/Latino community acknowledge that learning English is important to their success. As one Hispanic/Latino farm worker puts it, "I don't know how to speak English, and at least right now, where I'm working I can do everything with signs. I cannot

People Caring for People: Blue Ridge Community Health Service

The Blue Ridge mountains make most North Carolinians think of gloriously colorful autumn leaves, winter ski trips, spring picnics along the Blue Ridge Parkway, and bustling summer campgrounds. But the staff at Blue Ridge Community Health Services in Henderson County knows a different mountain region than the tourist brochures advertise. Because the county has the fifth largest migrant farmworker population in the state (1,650), Blue Ridge knows a lot about migrant farmworkers.[1] In fact, the U.S. Department of Health and Human Services recently honored Blue Ridge—the second oldest migrant health center in the country—with an "Appreciation Award for 35 years of dedicated and compassionate service to the migrant and seasonal farm worker population."

Blue Ridge Community Health Services started more than 35 years ago as a clinic providing medical and dental care to migrant and seasonal farm workers who came to Henderson County to harvest apples and other crops. In 1988, Blue Ridge incorporated to become a 501(c)(3) private, non-profit corporation and became a year-round community health center. Under this arrangement, Blue Ridge receives grants from the United States Bureau of Primary Health Care, enabling it to provide health care to the entire community. Today, Blue Ridge is the largest primary care organization in the area, providing both medical and dental services to the community at large. While the overall mission is "to enhance the health of individuals and families within the community," as a community health center the health service also places an "emphasis on the medically underserved."[2] In Henderson County, many of those underserved are migrant farm workers. More often than not, these farm workers speak Spanish.

As the number of Hispanic/Latino North Carolinians has been increasing, the state's migrant farmworker population is experiencing a similar demographic shift. In 1997, 94 percent

Health is a state of complete physical, mental and social well-being, and not merely the absence of infirmity.

—THE WORLD HEALTH ORGANIZATION

speak, but I can understand. It's very important for us, the immigrants, to learn how to speak English."[94]

According to Andrea Bazan Manson of the N.C. Office of Minority Health and Vice President of El Pueblo, Inc., Hispanics/Latinos are eager to learn English. She says many of the English classes offered through community colleges, churches, and other institutions have waiting lists.

But teaching and learning a new language aren't simple tasks. For example, with the influx of Hispanic/Latino children, schools across the state are faced with providing special language classes to children with limited English proficiency (LEP). To do so, school officials have had to use already limited resources to hire translators and buy instructional materials. Fortunately, in the state's FY 98–99 budget, the General Assembly laid out statewide standards for serving LEP students and provided $5 million to the English as a Second Language Program (ESL) to help schools meet them.

While the younger Hispanic/Latino population, particularly those who attend public schools, have the advantage of learning English through the English as a Second Language (ESL) program, their parents and other Hispanic/Latino adults don't have the same opportunity. In fact, some of the same barriers that affect their use of health care also make learning English more difficult. While English classes are offered in many communities, these classes aren't always held at the most convenient time or location. And after working a 12-hour day, going to an English class may be diffi-

of migrant farmworkers were Spanish-speaking compared to 88 percent in 1990.[3] Furthermore, the number of Spanish-speaking migrant farmworkers in North Carolina increased 40 percent from 1990 to 1997.[4] Because migrant farmworkers are increasingly Hispanic/Latino, Blue Ridge faces the same language and cultural issues challenging local health agencies across the state. The latest census estimate, which indicates that Henderson County's total Hispanic/Latino population grew by nearly 120 percent between 1990 (846) and 1997 (1,861),[5] is considered by Blue Ridge staff to be an underestimate.

Any client would feel comfortable walking into the nicely furnished, plant-filled waiting area at the Kate B. Reynolds Women's and Children's Center, one of four health service locations. "We want to make sure every person feels like a human being when they come here," says Paul Horn, CEO/Executive Director at Blue Ridge Community Health Service. Spanish signs and bilingual staff and providers provide additional hospitality and reassurance to Hispanic/Latino clients.

Elaborately decorated with sequins and beads, a black sombrero hangs on the door of one office in the center. The touch suggests that Blue Ridge embraces its Hispanic/Latino clients not only through providing much needed health services, but also through appreciating their culture. In fact, many Blue Ridge staff members have Hispanic/Latino backgrounds. Blue Ridge is committed to recruiting bilingual providers and staff. Some 15 percent of its 119 employees speak Spanish, while 22 percent of its clients are

—continues

Joanne Scharer

Hispanic/Latino. In addition, those staff who aren't bilingual have opportunities to take Spanish language immersion courses sponsored by Blue Ridge. Many staff members recently completed one of these classes.

When asked to identify the most significant health needs for Hispanic/Latino clients, respondents to the Center's survey frequently mentioned dental care. Indeed, dental care was mentioned as the fourth most significant health issue for both women and children. (See Table 5, p. 18.) Blue Ridge is about to open a new dental center and will soon employ three full-time dentists to more adequately meet the community's dental care needs.

The Blue Ridge Dental Practice concentrates on reaching people living in Henderson County, but the fact that the practice accepts Medicaid brings in clients from a wider area, even South Carolina border counties. "We are the largest dental practice in Western North Carolina that accepts Medicaid, so our patients come from all over," says Horn. The dental practice recently completed a three-year preventive dental program funded by the Kate B. Reynolds Charitable Trust in Winston-Salem, N.C., that provided dental screenings, sealants, education, and follow-up care to low-income children in the local schools, the Boys and Girls Club of Henderson County, and the migrant camps.

Sexually transmitted diseases (STD) and HIV also are health concerns for the Hispanic/Latino population. STD/HIV prevention and education are an important part of the services provided by Blue Ridge to the migrant farmworkers in the county. A grant from the N.C. Department of Health and Human Services helped provide STD/HIV education for 1,400 farmworkers in the migrant camps and 460 farmworkers in the community. Blue Ridge also offers confidential, free testing for HIV and low-cost screening and treatment of STDs.

The transportation barrier that faces the Hispanic/Latino population is also apparent in Henderson County. Like many other local health agencies across the state, Blue Ridge provides transportation services for clients with its three mini-vans and one larger van. But in addition to bringing clients to Blue Ridge service facilities, these vehicles also take staff out to the community. During the harvest season, clinical staff and outreach workers offer a rural version of house calls, traveling to outlying farms to provide health assessments and health education for migrant farm workers and their families.

The bilingual maternity care coordinators at Blue Ridge work diligently to reach out to Hispanic/Latino pregnant women. Their goal is to assure consistent health care for pregnant women and infants up to two months of age. They provide prenatal and family planning education, transportation to medical appointments, and referrals to dental care, affordable child care, and other needed services. They screen and counsel women regarding domestic violence, assist them in applying for available Medicaid assistance, and help to assure that newborns receive timely immunizations. Maternity care coordinators also intervene as needed to help mothers secure assistance with housing, food, furniture, clothing, and other necessities.

Besides offering transportation for medical care, Blue Ridge in some cases provides transportation for families to shop for food and clothing. An intake interview usually reveals the extent to which transportation is a problem and if the family needs additional transportation services. These intake interviews also allow staff to identify the lower-income families that need further assistance.

Participation in the N.C. Migrant Health Program also benefits Hispanic/Latino migrant farm workers. Farm workers pay only $8 for most prescription drugs and receive low-cost care from participating specialists. Blue Ridge also has a medication assistance program, offering prescription medications to its low-income clients for only a $5 dollar administrative fee, with medicines provided by a host of pharmaceutical companies. Through its "Caring to Share Program," Blue Ridge employees donate emergency funds to cover the cost of essential medications for needy patients who are not able to access other benefits, in keeping with the Blue Ridge theme of "People Caring for People."

Not only does Blue Ridge Community Health Service offer primary care at four locations, but it also offers health care services through several outreach programs. For example, the comprehensive school-health pro-

gram at Apple Valley Middle School, funded through the "Healthy Schools/Healthy Communities" program of the U.S. Department of Health and Human Services, provides on-site medical care to students. "Our school-based health services are uniquely designed to meet the needs of adolescents," says Horn. Along with medical and dental care, the program provides health education, nutrition counseling, and mental health services.

Blue Ridge currently is working with a committee to expand similar school-based health services to all middle schools in the county. The idea of offering school-based health services could be a model for reaching Hispanic/Latino children, as it eliminates some of the health access barriers for this population. School-based health care improves access to primary care, improves the appropriate and timely utilization of health services, reduces inappropriate use of hospital emergency rooms, reduces parents' time away from work, and eases the transportation barrier for many families.

Blue Ridge Community Health Services isn't the only local health agency working to create and sustain a healthy North Carolina, but the agency clearly goes the extra mile to serve Hispanics/Latinos and address their health needs. As North Carolina communities continue to confront the challenges presented by the growing Hispanic/Latino population, the Blue Ridge model of "people taking care of people" may be one for others to emulate.

—Joanne Scharer

FOOTNOTES

[1] Data compiled by the N.C. Employment Security Commission, Raleigh, N.C., (919) 733-2936.

[2] Community health centers are entities that serve a population that is medically underserved, or a special medically underserved population comprised of migratory and seasonal agricultural workers, the homeless, and residents of public housing, by providing required primary health services and additional health services (The Health Centers Consolidation Act of 1996—Public Law 104-299).

[3] Data compiled by the N.C. Employment Security Commission.

[4] Data compiled by the N.C. Employment Security Commission.

[5] Population Estimates Program, Population Division, U.S. Bureau of the Census, Washington, D.C. 20233, (301) 457-2122.

cult, especially for families who bear the additional burdens of poverty and lack of transportation and child care. Offering English classes closer to the Hispanic/Latino community—such as at migrant camps or predominantly Hispanic/Latino neighborhoods—may ease some of the burden by eliminating the transportation problem and the need for child care.

Transportation

Unfortunately, the ways to address the transportation barrier are limited. While offering transportation services is one solution, some local health agencies are using mobile health units to reach people who either don't have transportation or who live in remote areas. New Hanover Regional Medical Center has a mammography and women's health unit, and the Duplin County Health Department is considering the idea, says Health Director Harriette Duncan. Mobile units can be a good strategy for providing health care to the underserved, but they also can be a drain on resources. Members of the Migrant Interest Committee in Halifax County believe that maintaining mobile units can be more costly than simply providing transportation to and from clinics. Ultimately, the best and most efficient way to confront transportation barriers depends on the resources available and the overall strategy of the community and local health agencies in serving the Hispanic/Latino population.

Private Sector Role

The private sector should continue to acknowledge the health care needs of the Hispanic/Latino population. Since more Hispanics/Latinos are entering the labor force, the contribution of employee health promotion programs to the improvement of the health status of Hispanic/Latino communities could be considerable. Employee health promotion programs can offer preventive services, health or physical exams, and health education and information. Such services are essential to targeting Hispanic/Latino communities, given the lack of access to and awareness about health services. The workplace is often an ideal setting for overcoming many of the barriers faced by Hispanics/Latinos when dealing with health care.[95] The workplace also can be an ideal setting for offering culturally appropriate interventions. The worksite offers a more comfortable environment for Hispanics/Latinos than many health facilities.

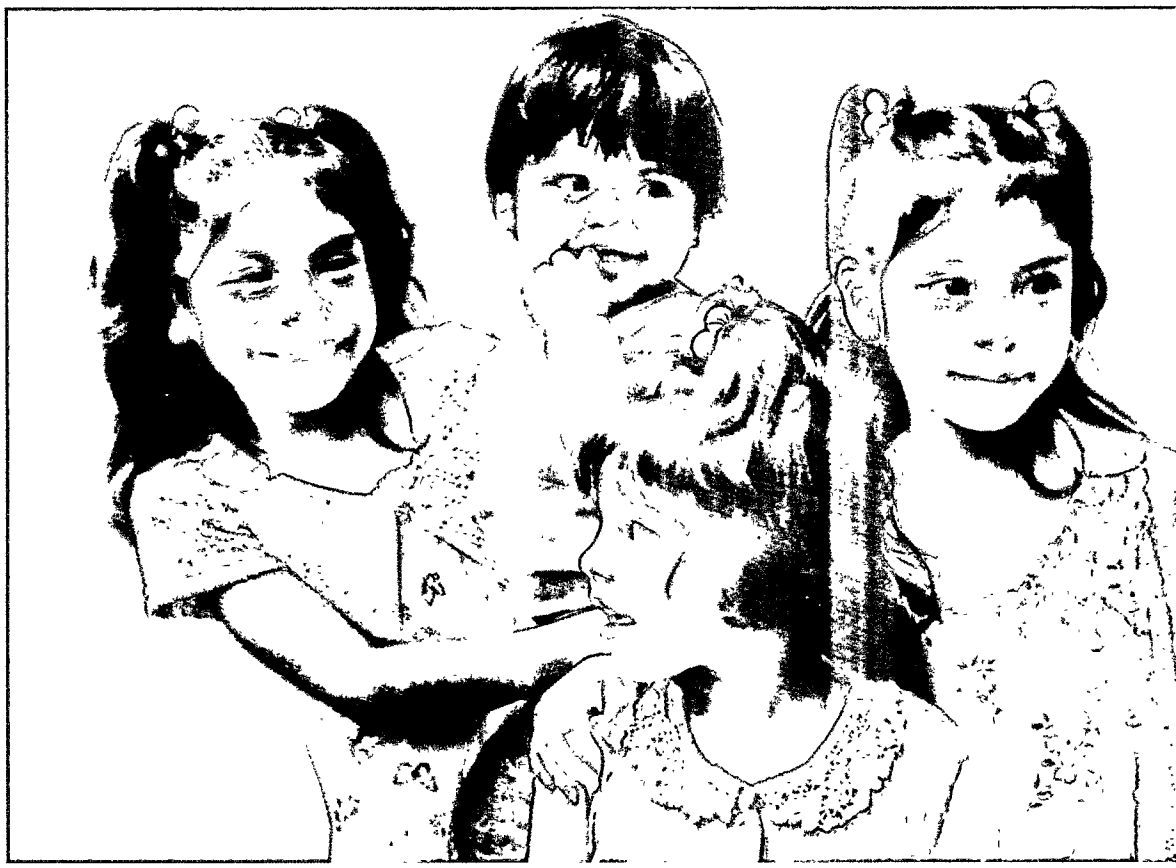
Conclusion

Resources are a limiting factor in providing any public service, especially health care. However, the growth of the Hispanic/Latino population in N.C. necessitates considering the long-term costs of not properly serving the Hispanic/Latino community as well as the implications for public health on a grander scale. This includes the increased costs for treating more acute problems that prevention and early intervention could have contained.

Ultimately, broad collaboration between medical providers, human service providers, government agencies, and the private sector will be the only way to ensure the health, safety, and well-being of the Hispanic/Latino population and the community as a whole.

The literature suggests that as Hispanics/Latinos adjust to the U.S. health system, both culturally and linguistically, they will use health services more often and more beneficially. However, the literature also suggests that as Hispanics/Latinos assume the values of the larger culture, their health status worsens (they increase their use of tobacco and alcohol and consume a less healthy diet as they adapt to the U.S. culture).[96] This means an increasing role for Hispanic/Latino health promotion in the future. In the meantime, the Center's study suggests several issues that should be addressed soon to improve health service delivery and health outcomes for Hispanics/Latinos in North Carolina.

Primary among these is the need to address the language barrier from the state level by providing funding for interpreter services at local health



Karen Tam

departments and at the local level by hiring more bilingual health care providers. The Center's survey found the language barrier to be the most significant barrier to providing health care to Hispanics/Latinos in local communities. Overcoming the language and cultural barrier also was viewed as most important to improving health outcomes. Yet another key issue regarding language is the lack of interpreter training. A full 50 percent of health department respondents and 49.6 percent of respondents overall indicated their interpreters had received no training on medical interpretation issues. This is a sobering thought, given the risks and liabilities that lurk in the health care field. And half the health departments asked the client to bring his or her own interpreter, an invitation considered an act of discrimination by the U.S. Office of Civil Rights.

Lack of health insurance or other means to pay for services was viewed as second only to language and cultural issues as a barrier to obtaining adequate health care for Hispanics/Latinos. While Medicaid rules may foreclose serving nonresidents in the Health Choice for Children insurance program, the state may need to explore other means of providing health care coverage to Hispanic/Latino children. In addition, there is clear evidence of a need to extend mental health services to more Hispanics/Latinos and to explore means of preventing on-the-job injuries among Hispanic/Latino adults.

Recommendations

Foremost among the needs the Center uncovered in its research is the need for state funding for interpreter services. Yet the research makes clear that the need goes deeper than just providing interpreters. As State Health Director Dennis McBride noted in an appearance before the legislature's joint Appropriations Subcommittee on Human Resources, "This is an area where local health departments are really carrying the load." It's time the state shared some of the burden. Therefore, the Center offers the following recommendations:

1. The Governor should include in the budget he proposes to the 2000 General Assembly $2.3 million annually to fund interpreter services at local health departments. The Center's survey found the language barrier to be the most significant barrier to providing health care to Hispanics/Latinos in local communities. The N.C. Department of Health and Human Services has developed a proposal for $2.3 million for interpreter services in the 1999–2000 budget year. This appropriation would be used to fund 85 interpreters in counties with medium (500 to 1,500), high (1,501 to 2,999), and very high density (more than 3,000) Hispanic/Latino populations, providing at least some interpreter funding in 79 North Carolina counties. The remaining counties—where Hispanic/Latino populations remain sparse—would continue to rely on their existing resources and on volunteer and telephone interpretation. The Center first recommended state funding for interpreter services in its January 1995 study of "The Health of Minority Citizens in North Carolina."[97] Neither the governor nor the legislature has acted on this recommendation. In the meantime, the problem has grown much larger. And failure to act could have legal consequences.

The Office of Civil Rights of the U.S. Department of Health and Human Services mandates that all recipients of federal funds: (1) have written procedures for addressing language barriers; (2) offer free interpretation services; (3) make use of clients' family and friends only at the request of the patient and after another interpreter has been offered; and (4) avoid the use of minors as interpreters. Health care facilities also must ensure that interpreters are qualified and available 24 hours a day, that telephone interpretation be limited, and that written materials be translated.[98] All North Carolina health departments receive at least some federal funds, including Medicaid, the Women, Infants, and Children child nutrition program (WIC), and miscellaneous grants.

In North Carolina, some medical facilities ask non-English speakers to bring their own interpreters, usually family members or friends. Nearly half (43.4 percent) of those responding to the Center's survey said they made such requests. *The U.S. Office of Civil Rights considers this a discriminatory practice.*[99] There have been reports that some clinics even post notices or distribute fliers to this effect in Spanish even though they don't devote resources to other Spanish language materials. This creates problems for clients and could put the facility at risk for lawsuits and other penalties levied by the U.S. Office of Civil Rights. During the last three years, North Carolina has lost several lawsuits that cost the state more than a billion dollars; failure to provide interpreters could extend this losing streak.

Fortunately, health departments and other providers have stepped in to help meet the need, with 98.8 percent (all but one) of the 82 health departments responding to the Center's survey reporting

that they now provide interpreter/translation services. But health departments sometimes have been forced to sacrifice other staff positions in order to bring in interpreters. Not surprisingly, given the scarcity of funding, most of the interpreters who are on the facilities' staffs aren't just interpreters; 70.7 percent are employed in a dual capacity (See Table 18, p. 46) and only about half (50.4 percent) have received training on "interpreter issues." In addition, some local health care providers rely too heavily on volunteer and telephone interpretation. The Center believes growth in the Hispanic/Latino population justifies full funding of interpreter services, as requested by the N.C. Department of Health and Human Services. The Center further recognizes the need for interpreter services at other local health agencies serving Hispanics/Latinos but believes the starting point for state funding of interpreter services should be local health departments, since they are the principal point of delivery of state health services. The Center urges the governor to place this appropriation in his 2000 budget proposal for adoption by the General Assembly.

2. The Governor should include in the budget he presents to the 2000 General Assembly an additional $250,000 appropriation to allow more health departments, community and migrant health centers, and rural health centers to provide Maternal Care Coordination services to women ineligible for Medicaid. In the Center's survey, access to prenatal care ranked as the most significant health issue facing Hispanic/Latina women. One of the biggest issues for Hispanic/Latina women in accessing prenatal care is that the maternal care coordination program typically is only available to women with Medicaid. Since most Hispanic/Latina women are ineligible for Medicaid due to their immigration status and other requirements that exclude some citizens, they are also ineligible to receive services that would provide them with much needed prenatal care. Some health departments provide services to Hispanic/Latina women who are ineligible for Medicaid, but doing so stretches already limited resources.

Since 1994, the legislature has appropriated $250,000 annually to provide maternal care coordination for expectant mothers ineligible for Medicaid. The sole exception was 1997–98, when only $79,100 was appropriated. In 1998–99, nine local health departments received these services. Until 1997, when the number was cut to three, 12 local health departments received funding. The little-publicized grant program targets the 28 North Carolina counties with the highest numbers of emergency Medicaid recipients—women who are otherwise ineligible for Medicaid but receive services for child birth. Doubling the appropriation should allow for some level of service in 18 local health departments, but still would not cover all 28 target counties.

In 1998–99, six local health departments applied for a maternity care coordination grant but did not receive one. Expansion would allow funding for all local health departments that applied and provide some room for growth. Increasing the appropriation to provide prenatal services to those ineligible for Medicaid would help alleviate the access barrier created by legal status issues.

3. The Immunization Branch within the N.C. Department of Health and Human Services should develop a culturally appropriate outreach plan and ensure that greater numbers of Hispanic/Latinos are fully immunized against childhood diseases. In 1995, only 67.6 percent of Hispanic/Latino children 19–35 months of age in the United States were fully immunized against childhood diseases[100] compared to 77 percent for whites and 70.1 percent for blacks.[101] Although these are national figures, North Carolina's rates are similar. In 1995, as part of a larger study of minority health in North Carolina, the N.C. Center for Public Policy Research conducted field audits at nine local health departments to determine what percentage of children had received their immunizations on time. The Center found that Hispanic/Latino children had a lower on-time-immunization rate (58.8 percent) than white children (66.4 percent) but a slightly higher rate than African-American children (53.9 percent).[102]

Lower immunization rates place minority children at higher risk of vaccine-preventable illness. For example, between 1987 and 1995, North Carolina reported only nine confirmed cases of rubella, according to the Immunization Section of the Division of Health Services in the N.C. Department of Health and Human Services. But in a three-month period in 1996, 83 cases were confirmed, 79 of which struck Hispanics/Latinos.

This potentially serious disease causes rashes, swollen glands, and arthritis and can lead to ear infection, pneumonia, diarrhea, seizures, hearing loss, meningitis, and even death. Exposure to rubella is particularly dangerous for pregnant women, as it can cause a broad range of birth defects. For those who have not been immunized, the disease is highly contagious. It does not discriminate by race or national origin, so the risk to the larger population is

clear. The goal of the outreach plan would be to bring Hispanic/Latino immunization rates to the same level as those of whites. A similar plan should address the immunization gap for African-American children, and the state needs to raise its immunization rates in general.

4. The N.C. Department of Labor should devise and implement a plan for enhancing workplace safety among Hispanics/Latinos. Hispanics/Latinos are injured on the job in numbers greater than their proportion of the state's population. Nine percent of workplace deaths in 1997 occurred among Hispanic/Latino workers, who represent only 2 percent of the population by official estimates. The largest percentage of workplace deaths in 1997 occurred among white workers at 76 percent, compared to black workers at 14 percent and Hispanic/Latino workers at 9 percent. Fatal injuries have risen steadily for Hispanic workers since 1993, when Hispanic/Latinos accounted for only 3 percent of workplace deaths.[103] This is partly due to the fact that Hispanics/Latinos are over-represented in hazardous occupations such as construction, manufacturing, agriculture, and food processing. However, the language barrier also plays a key role, and some injuries may go unreported due to immigration concerns. The N.C. Department of Labor should devise a plan for improving workplace safety for Hispanics/Latinos, with improved communication between employers and employees as a key component.

5. The Division of Mental Health, Substance Abuse, and Developmental Disabilities within the N.C. Department of Health and Human Services should adopt an outreach plan for addressing the mental health needs of Hispanics/Latinos. While focusing primarily on the physical health needs of Hispanics/Latinos, the Center's study also suggested that the mental health needs of some Hispanics/Latinos may be going unmet. The Division of Mental Health, Developmental Disabilities, and Substance Abuse Services provides community-based services in cooperation with 41 area programs covering all 100 North Carolina counties. In the 1998 fiscal year, only 1.2 percent of persons served in the mental health and substance abuse programs were Hispanic/Latino, while 61.4 percent were white and 34.5 percent were black.[104] The majority of the Center's survey respondents (71.6 percent) indicated there is a need for mental health services of the Hispanic/Latino population in North Carolina. Problems mentioned include substance abuse (mainly alcohol), domestic violence, depression, and stress/anxiety issues. A survey of 128 Hispanic/Latino adults (not a random sample) found most believed drinking had been a problem for them or someone in their family at some point. While the lack of utilization of mental health services may be attributed to a lack of awareness, few of these programs are equipped to serve the Spanish-speaking community. Yet the Center's survey indicates that mental health issues such as depression and substance abuse are problems for the Hispanic/Latino community, as they are for other populations in North Carolina. The outreach plan should consider how to address language and cultural barriers in reaching this underserved population.

6. The N.C. Department of Community Colleges, health professional schools within the University of North Carolina System, and the AHEC Program should step up efforts to recruit, educate, and provide financial support to Hispanic/Latino students who will become bilingual health care providers, and local health agencies should increase efforts to recruit bilingual providers. While professional schools are doing a good job of producing bilingual health care providers, the need still far outstrips the supply. Enhanced recruitment efforts may be the answer here. And, there also is a need to provide cultural competency training for all students in the health professions. This should be incorporated into the curricula in both community colleges and the university system. Meanwhile, local health agencies should redouble efforts to hire bilingual providers, as health care providers who speak both English and Spanish fluently are one level better than third-party interpreters in providing high quality services to Hispanics/Latinos. Local health agencies also should take advantage of available cultural competency training for their staff.

7. The 1999–2000 legislature should establish a study commission to examine reimbursement issues for treating Hispanic/Latino patients, including whether to extend health care coverage to non-resident children who might otherwise be eligible for the state's Health Choice for Children program. In several local field visits, local health officials complained of having to provide health services to patients who are unable or unwilling to pay. According to the U.S. Census Bureau, in 1997, 15.5 percent of North Carolinians were not covered by health insurance. While the number of Hispanics/Latinos not covered by health insurance in the state is unknown,

nationally 33.6 percent of the nation's population that were of Hispanic origin were not covered by health insurance compared to 14.4 percent for whites and 21.7 percent for blacks. The 1999–2000 General Assembly should appoint a study commission to examine the magnitude of this problem and report to the 2001 session of the General Assembly as to whether reimbursement is justified for these services and what level of reimbursement might be appropriate. The study commission also should consider whether and how to extend health care coverage to non-resident children who might otherwise be eligible for the Health Choice for Children Program. In addition, this charge should be added to the assignments given the Governor's Task Force To Reduce Disparities in Health Status as outlined in House Bill 1262 of the 1999 Session if the bill establishing this task force is enacted by the General Assembly.

* * *

The seven recommendations above clearly will not cure all ills regarding health care for Hispanics/Latinos residing in North Carolina. Indeed, some problems faced by Hispanics/Latinos are systemic and beyond the scope of the health care system to address. As a rapidly expanding immigrant group, Hispanics/Latinos are likely to be plagued by such problems as inadequate housing and over representation in low-wage, sometimes dangerous jobs for the foreseeable future. Yet the modest steps outlined above may provide a healthier life for at least some of the Hispanics/Latino immigrants who in ever-growing numbers are calling North Carolina home.

FOOTNOTES

[1] Ken Otterbourg and Mike McLaughlin, "North Carolina's Demographic Destiny: The Policy Implications of the 1990 Census," *North Carolina Insight*, Raleigh, N.C., Vol. 14, No. 4 (August 1993), pp. 3–69. See especially pp. 32 and 36–38.

[2] Mike McLaughlin, "The Health of Minority Citizens in North Carolina," *North Carolina Insight*, Raleigh, N.C., Vol. 15, No. 4/Vol. 16, No. 1 (March 1995), pp. 3–69. See especially pp. 62–63.

[3] There are 87 County or District Health Departments in North Carolina.

[4] The community/migrant health centers surveyed included 18 community health centers, three community/migrant Health Centers, and one migrant health center as provided by the N.C. Office of Rural Health and Resource Development. The Health Centers Consolidation Act of 1996 amended the federal Public Health Service Act (42 U.S.C. 254b) to define health centers as an entity that serves a population that is medically underserved, or a special medically underserved population comprised of migratory and seasonal agricultural workers, the homeless, and residents of public housing by providing either through the staff and supporting resource of the center or through contracts or cooperative arrangements required primary health services and additional health services (Public Law 104-299).

[5] The rural health centers surveyed included 22 that are state funded and 12 that aren't state funded. The source was the N.C. Office of Rural Health and Resource Development in the N.C. Department of Health and Human Services.

[6] The rural hospitals surveyed included 61 rural hospitals and 14 "urban fringe" hospitals. The source was the North Carolina Hospital Association in Raleigh, N.C.

[7] Karen D. Johnson-Webb and James H. Johnson, "North Carolina Communities in Transition: An Overview of Hispanic In-Migration," *The North Carolina Geographer*, Boone, N.C., Vol. 5, Winter 1996, p. 25.

[8] Population Estimates Program, Population Division, U.S. Bureau of the Census, Washington, D.C. 20233, (301) 457-2122.

[9] Based on a 1996 survey conducted by the Division of Women and Children's Health in the N.C. Department of Health and Human Services, Raleigh, N.C.

[10] See Johnson-Webb and Johnson, note 7 above, p. 25.

[11] *Ibid.*, pp. 32 and 34–35.

[12] When asked to indicate the occupations of the majority of Hispanics/Latinos they serve in the community, most respondents listed farm work, construction, landscaping, food service, and manufacturing/industry.

[13] National Coalition of Hispanic Health and Human Service Organizations, Policy and Research. "Meeting the Health Promotion Needs of Hispanic Communities," *American Journal of Health Promotion*, Royal Oak, Mich., March/April 1995, Vol. 9, No. 4, pp. 301–302.

[14] *Ibid.*, p. 301.

[15] Eli Ginzberg, "Access to Health Care for Hispanics," *Journal of the American Medical Association*, Chicago, Ill., January 9, 1991, Vol. 265, No. 2, p. 239.

[16] U.S. Bureau of the Census, *1998 Statistical Abstract of the U.S.*, Washington, D.C., "Health Insurance Coverage Status, by Selected Characteristics: 1990 to 1996," p. 125.

[17] Antonia Coello Novello, MD, MPH, and Lydia E. Soto-Torres, MD, MPH. "One Voice, One Vision—Uniting to Improve Hispanic-Latino Health (Editorial)," *Public Health Reports*, Journal of the U.S. Public Health Service, Hyattsville, Md., Sept–Oct. 1993, Vol. 108, No. 5, p. 529.

[18] N.C. Department of Labor, Raleigh, N.C., 1997 Census of Fatal Occupational Injuries, p. 17.

[19] Shannon Buggs, "Workplace deaths rose 10.5% in 1997," *The News and Observer*, Raleigh, N.C., August 13, 1998, p. 1A.

[20] Pamela Stone, "Transportation Incidents Decline; Fatalities Increase in 1997," N.C. Department of Labor Press Release, Raleigh, N.C., August 12, 1998, p. 1.

[21] *Ibid.*

[22] Gigi Anders, "Building rapport," *The News and Observer*, Raleigh, N.C., December 27, 1998, p. 1E.

[23] See Buggs, note 19 above, p. 1A.

[24] Data provided by Nan Staggers of the North Carolina Center for Health Statistics, Raleigh, N.C., (919) 715-4490.

[25] Council on Scientific Affairs, "Hispanic Health in the United States," *Journal of the American Medical Association*, Chicago, Ill., January 9, 1991, Vol. 265, No. 2, p. 251.

[26] Deborah Bender, Dina Castro, & Karen O'Donnell, "Resilience and Risk Factors Affecting Health Among Latino Immigrants in North Carolina: Family Strengths and Family Needs," Poster presentation exhibited at the 21st Annual Minority Health Conference: Raising Resilient Children: How Communities of Color Respond to the Challenge, Chapel Hill, N.C., February 19, 1999.

[27] *Ibid.*

[28] See Council on Scientific Affairs, note 25 above, p. 251.

[29] See National Coalition of Hispanic Health and Human Service Organizations, note 13 above, p. 303.

[30] *Ibid.*

[31] The 4:3:1:3 combined immunization series consists of 4 doses of Diphtheria-tetanus-pertussis (DTP) vaccine, 3 doses of polio vaccine, 1 dose of a measles-containing (measles-mumps-rubella) vaccine, and 3 doses of Haemophilus b (HIB) vaccine.

[32] Centers for Disease Control and Prevention, National Center for Health Statistics and National Immunization Program, Hyattsville, Md., (301) 436-8500. Data is from the National Immunization Survey, the National Health Survey, and the National Immunization Provider Record Check Study and can be found on the Internet at *www.cdc.gov/nchswww/data/hus96-97.pdf*

[33] Steve Adams, "Center Study Finds Minorities Lagging in On-Time Immunizations," *North Carolina Insight*, Raleigh, N.C., Vol. 15, No. 4/ Vol. 16, No. 1 (March 1995), pp. 36–37.

[34] Andrea Bazan Manson, Amy Borg, Jean Brewer, Marilyn Lutton, and Yvonne Torres, "Latina Reproductive Health in North Carolina: Demographics, Health Status and Programs," N.C. Office of Minority Health, Raleigh, N.C., No. 19, May 1999, pp. 24–26.

[35] *Ibid.*, p. 26.

[36] U.S. Bureau of the Census, "Percent of Adult Persons with a Dental Visit Within Past Year, by Patient Characteristics: 1990 to 1993," *1998 Statistical Abstract of the U.S.*, Washington, D.C., p. 133.

[37] *Ibid.*

[38] See Bazan Manson, Amy Borg, Jean Brewer, Marilyn Lutton, & Yvonne Torres, note 34 above, pp. 27–28.

[39] *Ibid.*

[40] Miguelina Maldonado, "The HIV/AIDS Epidemic Among Latinos in the United States," information sheet published by the National Minority AIDS Council, Washington, D.C., (202) 483-6622.

[41] Lisa Lopez, "Dr. Jane Delgado Talks About Hispanic Health," *Hispanic Link News Service*, September 20, 1998, on the Internet *at www.latinolink.com.*

[42] The graduate students at the University of North Carolina at Chapel Hill School who conducted this 1998 survey of 128 Hispanic/Latino adults were Cara Siano, Ben Cook, Rebecca Elmore, and Laura Dillingham.

[43] Laurie Willis, "Forum set on services to Latinos," *The News and Observer*, Raleigh, N.C., March 7, 1998, p. 3B.

[44] Sara Torres and Antonia M. Villarruel. "Health risk behaviors for Hispanic women," *Annual Review of Nursing Research*, New York, N.Y., Vol. 13, 1995, pp. 304–306.

[45] Raul Caeteno, "Acculturation, Drinking and Social Settings Among U.S. Hispanics," *Drug and Alcohol Dependence*, Vol. 19 (1987) pp. 224–226. Other studies enumerated include K.S. Markides, L.A. Ray, C.A Stroup-Benham, & F. Trevino, "Acculturation and alcohol consumption in the Mexican-American population of the southwestern United States: Finding from HHANES 1982–1984," *American Journal of Public Health*, New York, N.Y., Vol. 80, 1990, pp. 42–46; and R.C. Cervantes, M.J. Gilbert, N.S. Snyder, & A.M. Padilla, "Psychosocial and cognitive correlates of alcohol use in younger adult immigrants and U.S. born Hispanics," *The International Journal of the Addictions*, New York, N.Y., Vol. 25, 1990–1991, pp. 687–708.

[46] Data provided by Brenda Dillard of the Division of Mental Health, Developmental Disabilities, and Substance Abuse Services, Area Program Data Support in the N.C. Department of Health and Human Services, 325 N. Salisbury Street, Raleigh, N.C. 27603, (919) 733-7011.

[47] See Bazan Manson, Amy Borg, Jean Brewer, Marilyn Lutton, & Yvonne Torre, note 34 above, pp. 21–22.

[48] Leda Hartman, "Maria's Mission," *The News and Observer*, Raleigh, N.C., February 28, 1999, p. 1D.

[49] See National Coalition of Hispanic Health and Human Service Organizations, note 13 above, p. 302.

[50] Data for the Leading Causes of Death for 1995–1997 in N.C. provided by Nan Staggers of the North Carolina Center for Health Statistics, Raleigh, N.C., (919) 715-4490.

[51] See Council on Scientific Affairs, note 25 above, pp. 248–249.

[52] "A Look at the Growing Field of Medical Interpretation," Opening Doors: Reducing Sociocultural Barriers to Health Care, The Robert Wood Foundation and The Henry J. Kaiser

Karen Tam

Family Foundation, Washington, D.C., Spring 1998, p. 1.

[53] Title VI of the Civil Rights Act of 1964 states, "No person in the United States shall, on ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

[54] *Lau v. Nichols*, 414 U.S. 563 (1974).

[55] U.S. Department of Health and Human Services, Office of Civil Rights, Guidance Memorandum: Title VI Prohibition Against National Origin Discrimination—Persons with Limited English Proficiency, Washington, D.C., January 29, 1998, pp. 1–7, on the Internet at *www.hhs.gov/progorg/ocr/lepfinal.htm*

[56] Tricia Forbes, "Denying Benefits," *The Journal of Common Sense*, Common Sense Foundation, Raleigh, N.C., Vol. 4, No. 2 (Spring 1998), pp. 12–19.

[57] Hospital Survey and Construction Act, 42 U.S.C.[sec] 291e(a)(5) (commonly known as the Hill-Burton Act) has a community service obligation that requires facilities to make services "available to all persons residing . . . in the facility's service area without discrimination on the ground of race, color, national origin, creed or any other ground unrelated to an individual's need for service or the availability of the needed service in the facility." 42 C.F.R. 124.603(a).

[58] The federal authority to make Hill-Burton grants expired in 1976.

[59] U.S. Department of Health and Human Services, Office for Civil Rights, "Community Service Assurance Under the Hill-Burton Act Fact Sheet, "Washington, D.C., on the Internet *www.os.dhhs.gov/progorg/ocr/hburton.html*

[60] 42 C.F.R. 435.905(b) and 42 C.F.R. 435.906. Health Care Financing Agency, State Medicaid Manual 2900.4 and 2902.9. 42 C.F.R. 483.10(b)(1). Health Care Financing Agency, State Medicaid Manual 5121.A.

[61] See U.S. Department of Health and Human Services, Office of Civil Rights, note 55 above, pp. 1–7.

[62] Rosa Seijo, Henry Gomez, Judith Freidenberg, "Language as a Communication Barrier in Medical Care for Hispanic Patients," *Hispanic Journal of Behavioral Sciences*, Los Angeles, Calif., Vol. 13, No. 4 (November 1991), pp. 364–365.

[63] Bart Laws, "The Special Challenges of Medicine in a Diverse Society," *The Boston Globe*, Boston, Mass., April 6, 1998, p. A19.

[64] See Council on Scientific Affairs, note 25 above, pp. 250.

[65] *Ibid.*

[66] See Ginzberg, note 15 above, p. 238.

[67] Claudia L Schur, Leigh Ann Albers, and Marc L. Berk. "Health care use by Hispanic adults: financial vs. non-financial determinants," *Health Care Financing Review*, Washington, D.C., Winter 1995, Vol. 17, No. 2, p. 71.

[68] *Ibid.*

[69] Robert L. Bennefield, "Health Insurance Coverage: 1997," *Current Population Reports,* U.S. Bureau of the Census, Washington, D.C., P60-202, September 1998, p. 5.

[70] U.S. Bureau of the Census, 1998 Statistical Abstract of the U.S., Washington, D.C., "Health Insurance Coverage Status, by Selected Characteristics: 1990 to 1996," p. 125.

[71] "I Like Living Here Better" diary excerpt, *NC Crossroads*, NC Humanities Council, Research Triangle Park, N.C. Volume 2, Issue 3, September/October 1998.

[72] For purposes of eligibility, a state resident is anyone who is living in North Carolina and declares an intent to continue to reside in North Carolina. Eligible immigrant and migrant children would be eligible to the extent allowable under federal law currently and as that law changes. Under current federal law, eligibles include: anyone born in the United States; all legal immigrant children who were in the U.S. before August 22, 1996; refugees, asylees, and certain Cuban, Haitian and Amerasian immigrants; unmarried, dependent children of veterans and active duty service members of the Armed Forces; and legal immigrants arriving on or after August 22, 1996, and in continuous residence for 5 years (The Personal Responsibility and Work Opportunity Reconciliation Act of 1996, P.L. 104-193, Title IV, sect. 400, *et. seq.*)

[73] See Johnson-Webb and Johnson, note 7 above, p. 31.

[74] Comment included in minutes from Chatham County Duke Endowment Immigrant Health Planning Team. After Chatham County received an immigrant health planning grant from the Duke Endowment, this team worked together to come up with goals and proposals to address the health care needs and access issues for the large Hispanic/Latino Community in the County.

[75] Jena Heath, "Legislator's letter ties Hispanics to pollution," *The News and Observer*, Raleigh, N.C., February 27, 1998, pp. 1A and 4A.

[76] Kirsten B. Mitchell, "Justus says Hispanics burdening the state," *Times News*, Hendersonville, N.C., April 25, 1998, pp. 1A and 5A.

[77] "Hispanic Economic Impact Study: An Eastern North Carolina Analysis," East Carolina Regional Development Institute, Greenville, N.C., January 1999, p. 2.

[78] "Fact Sheet: Growing Hispanic Population Brings Youthful, Financial Energy to States," Clearinghouse on State International Policies, Southern Growth Policies Board, Research Triangle Park, N.C., Vol. 9, No. 1, pp. 3–4.

[79] U.S. Commission on Immigration Reform, Immigration and Immigrant Policy, "Becoming an American: Immigration and Immigrant Policy, 1997 Report to Congress," Washington, D.C., p. 15.

[80] *Ibid.*

[81] *Ibid.* See 17–18. Note that the National Research Council's study was conducted before Congress eliminated welfare benefits for legal immigrants who aren't citizens.

[82] *Ibid.*

[83] See Council on Scientific Affairs, note 25 above, p. 250.

[84] See Council on Scientific Affairs, note 25 above, p. 250. See also study presented by K.B. Wells, J.M. Golding, R.L. Hough, *et al.* in "Acculturation and probability of use of health services by Mexican Americans," *Health Services Research, Chicago Ill.*, Vol. 24, 1989, pp. 237–257.

[85] Jon Ross, "Who are they, where are they and how do we talk to them? Hispanic Americans," *Hospitals and Health Networks*, Chicago, Ill., October 5, 1995, Vol. 69, No. 19, p. 66.

[86] See Ginzberg, note 15 above, p. 240.

[87] N.C. Medical Board: N.C. Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, 1997.

[88] Data provided by Linda Lacey of the N.C. Center for Nursing, Raleigh, N.C., (919) 715-0978.

[89] See McLaughlin, note 2 above, pp. 62–63.

[90] From information bulletin on N.C. Area Health Education Centers (AHEC), Chapel Hill, N.C., Spanish Language and Cultural Training Initiative, August 1998, pp.1–2, on Internet at *www.med.unc.edu/ahec/spanlang.pdf*

[91] Others include a state sponsored 800 number (1-800-255-8755); Rosario, Inc., a hospital-based Spanish language help line; Christian Ministry; and Careline.

[92] As quoted in Susan Kauffman, "A day at La Fiesta could be great for your health," *The News and Observer*, Raleigh, N.C., September 8, 1998, p. 3B.

[93] See Seijo, Gomez, and Freidenberg, note 62 above, pp. 371–372.

[94] Interview by Luis Mendoza, Student Action with Farm Workers Intern, published in *NC Crossroads*, N.C. Humanities Council, Research Triangle Park, N.C., Volume 2, Issue 3, September/October 1998.

[95] Francisco Soto Mas, Richard L. Papenfuss, and Jenni-

fer J. Guerrero, "Hispanics and worksite health promotion: review of the past, demands for the future," *Journal of Community Health*, New York, N.Y., October 1997, Vol. 22, No. 5, p. 361.

[96] See Council on Scientific Affairs, note 25 above, p. 251.

[97] See McLaughlin, note 2 above, pp. 62–63.

[98] See U.S. Department of Health and Human Services, Office of Civil Rights, note 55 above, pp. 1–7.

[99] See U.S. Department of Health and Human Services, Office of Civil Rights, note 55 above, pp. 1–7.

[100] See note 32 above.

[101] See Centers for Disease Control and Prevention, note 32 above.

[102] See Adams, note 33 above, pp. 36–37.

[103] See Stone, note 20 above, p. 1.

[104] See note 46 above.

Selected Resources on Hispanic/Latino Health

N.C. Office of Minority Health
Andrea Bazan Manson
225 N. McDowell Street
P.O. Box 29612
Raleigh, NC 27626-0612
Phone: (919) 715-0992
Fax: (919) 715-0997

State Center for Health Statistics
P.O. Box 29538
Raleigh, NC 27626-0538
Phone: (919) 733-4728
Fax: (919) 733-8485
Website: www.schs.state.nc.us/SCHS/

English as a Second Language Program
N.C. Department of Public Instruction
Instructional Services
301 N. Willmington Street
Raleigh, NC 27601-2825
Phone: (919) 715-1797
Fax: (919) 715-0517
Website:
www.learnnc.org/dpi/instserv.nsf/Category4

Governor's Advisory Council on
Hispanic/Latino Affairs
Nolo Martinez
116 W. Jones Street
Raleigh, NC 27603
Phone: (919) 733-5361
Fax: (919) 733-2120
Website: minorityaffairs.state.nc.us/hispaniclatino/advisorycouncil.htm

El Pueblo, Inc.
Andrea Bazan Manson
P.O. Box 16851
Chapel Hill, NC 27516
Phone: (919) 932-6880
Fax: (919) 932-2232
Website: www.elpueblo.org

Latino Advocacy Coalition
Betsy Alexander
Henderson County Health Department
1347 Spartanburg Hwy.
Hendersonville, NC 28792
Phone: (828) 696-8264 ext. 429
Fax: (828) 696-1794

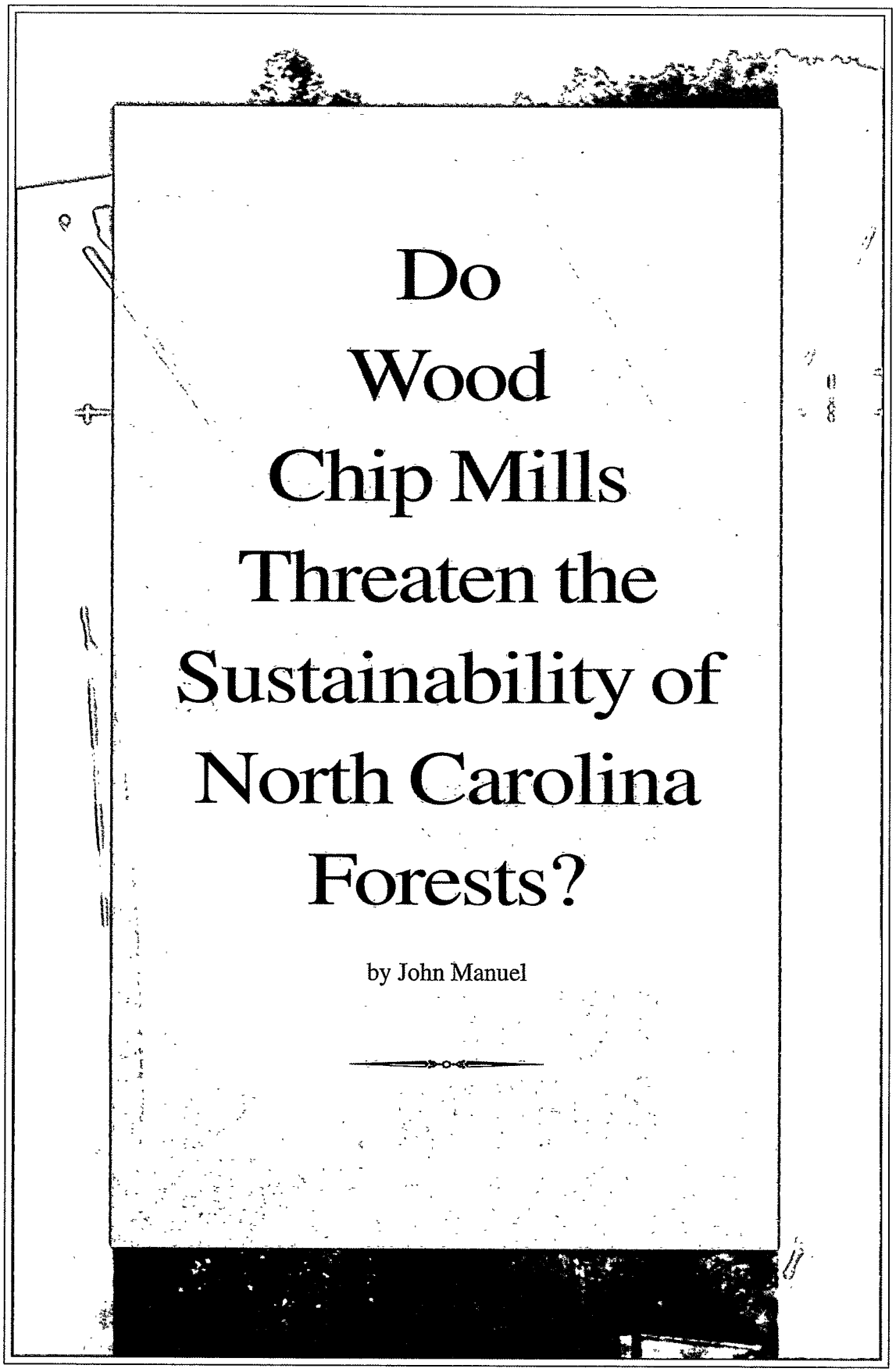
ALAS (Asheville Latin American Society)
Edna Campos
201 Glenwoods Court
Asheville, NC 28803
Phone: (828) 277-1797
Fax: same as phone #

HOLA (Helping Our Latin Americans)
6306 Evanston Ct.
Wilmington, NC 28412
Phone: (910) 815-5867
Fax: (910) 815-5943

Migrant Interest Committee (Halifax County)
Bill Remmes
P.O. Box 644
Jackson, NC 27845
Phone: (252) 534-1024
Fax: (252) 534-2841

National Coalition of Hispanic Health and
Human Service Organizations
1501 Sixteenth Street, NW
Washington, DC 20036
Phone: (202) 387-5000
Fax: (202) 797-4353
Website: www.cossmho.org

Latin American Resource Center
Aura Camacho Mass
P.O. Box 31871
Raleigh, NC 27622
Phone: (919) 870-5272
Website: www.thelarc.org



Do Wood Chip Mills Threaten the Sustainability of North Carolina Forests?

by John Manuel

Photo courtesy of the Forest City Daily Courier

Summary

Chip mills that process whole logs into tiny chunks of wood for forest products have been described as everything from one of the 10 greatest threats to the state's environment to merely a necessary step in the preparation of pulp, paper, and other forest products. But which is closer to the truth?

No one would deny that chip mills are proliferating in North Carolina and the Southeast. A number of trends are contributing to this proliferation. First, while chip mills have been a part of the forest products industry since the turn of the century, structural changes in the forest products industry and the need to become more efficient have driven the development of stand-alone facilities. Second, the woodbasket of the nation is no longer the Northwest but the South, where more timber is in private hands and there is less stringent regulation. The South had long been the leader in the pulp and paper segment of the industry, whereas lumber had been central to forestry operations in the Northwest.

As worldwide demand for wood products grows and as the timber companies continue to concentrate in the South, increased levels of harvest are anticipated. So how can the state satisfy public concerns to preserve forests without unduly limiting the rights of private citizens and businesses or restricting the supply of timber needed to sustain the forest products industry?

As many as 18 chip mills currently operate in North Carolina, each with an average annual capacity of 250,000 tons and capable of processing up to 2,600 acres of trees per year. That's up from only two chip mills in 1980. The opening of a chip mill can certainly increase the market value of timber in a local area, and that may well lead to an increase in logging in that area.

But chip mill capacity does not dictate how much wood is chipped in the state. Rather, the vagaries of the marketplace have more influence on how much wood the mills process. Natural disasters like Hurricane Fran, which felled trees across eastern North Carolina, also can have a great impact, as can economic cycles. The state has some 700,000 individual forestland owners with varying interests and motivations. How these private owners manage their tracts is the principal issue of concern. Foresters indicate that few tracts of land are purchased solely to feed chip mills.

Beyond the fact that chip mills promote clear-cutting, proponents and opponents of chip mills find little upon which to agree. Opponents generally make the following points: clear-cutting promoted by chip mills detracts from scenic beauty; succession forests that grow up after clear-cuts may contribute to declines in both the number of species and diversity of flora and fauna; clear-cutting can increase sedimentation in nearby streams and rivers; and chip mills create increased traffic by logging trucks, often on rural roads that are ill-suited to handle the extra load. In addition, there are general economic concerns around the sustainability of an industry based on extraction of natural resources.

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The Center's research on wood chip mills in North Carolina was partially funded by grants from the Blumenthal Foundation of Charlotte, N.C. and the Mary Norris Preyer Fund of Greensboro, N.C. The Center thanks these funders for their generous support of this project.

Proponents, on the other hand, argue that: the sheer number of forest owners in North Carolina—some 700,000, all with different motivations and interests in owning woodlands—provides a check against widespread clear-cuts; some game species, such as deer and grouse, seem to thrive on the browse that grows up after a clear-cut; that rivers and streams can be protected from sedimentation bearing runoff with proper site management; and that selective cutting actually damages a site more than clear-cutting because heavy logging equipment must traverse the site a greater number of times. In addition, proponents say chip mills themselves do little damage to the environment, emitting little air pollution and using little water in the chipping process.

A bottom line question is whether the hardwood pulpwood harvest in a given area of the state increases as chip mill capacity expands. This question cuts to the heart of the sustainable forestry debate. If trees are harvested faster than they can regenerate, ultimately, the forest resource is depleted. Here again, the numbers are mixed. In the Piedmont, chip mill capacity increased by 149 percent between 1989 and 1997, while hardwood pulpwood harvest increased by 170 percent. In the mountains, however, hardwood pulpwood harvest actually decreased by 52 percent from 1994–97, while chip mill capacity increased by 66 percent. Harvest rates have varied in the east, showing no clear link to the rising number of chip mills. It's important to note, however, that other factors might account for increased hardwood pulpwood harvest—such as land clearing for development.

Chip mills convert trees into the raw material for a broad array of consumer products such as paper and paper products, particle board, and siding for houses. Consumers consider many of these products necessities. Presumably, these products would be less broadly available or would cost more without chip mills.

But if wood chips produced by chipping whole logs play a vital role in the marketplace, trees also have a clear non-market or indirect value. They contribute handsomely to the scenic beauty of the state. Lawmakers may have blundered in the 1997 General Assembly when they expanded a tax credit for North Carolina ports customers to include wood chips. The credit is intended to encourage exports and may encourage more chipping of wood than otherwise would be the case.

In 1996, Governor Jim Hunt instructed the N.C. Department of Environment and Natural Resources (DENR) to conduct a study of the economic and environmental implications of wood chip production in North Carolina. DENR later contracted with the Southern Center for Sustainable Forests (a consortium of forestry experts at Duke and North Carolina State universities), but the department remains responsible for the study. The Southern Center for Sustainable Forestry is scheduled to report to DENR and, by extension, to the governor, in March 2000.

Clearly, the economic and environmental consequences of chip mills must be closely monitored and the advantages of the tax credit weighed against any threat to the state's forest resources. Chip mills have a voracious appetite that, combined with a state tax credit designed to encourage new business at the state ports, could create over-consumption and threaten sustainability of the state's forestlands for short-term profit. In the long term, that would benefit no one.

Bob Jordan, owner of Jordan Lumber Company in Mount Gilead, N.C., and former legislator and lieutenant governor (1985–89), is not used to being considered an enemy of the environment. "I worked with Bill Holman [former environmental lobbyist and now Assistant Secretary for Environmental Protection at DENR] on the phosphate ban—it wouldn't have passed without me," Jordan says of the 1983 bill that banned the sale of phosphate detergent in the Neuse River watershed. "I helped get the votes together to create the North Carolina Natural Heritage Trust Fund. You can't say I'm not a friend of the environment."

But that is exactly how Jordan was portrayed at a public hearing in Rutherford County in August 1995 over his proposal to build a mill that would cut logs into wood chips. Citizens living in the vicinity of the mill were convinced that it would spur widespread cutting of the surrounding forests, that the timbering would muddy the streams, and that the roads would be clogged with logging trucks. They demanded that the Rutherford County Commissioners deny Jordan a permit to build the mill, and they generally provided an icy reception for the self-described environmental champion.

"It was the only time I've ever had to be escorted out of a meeting by bodyguards," Jordan says. "It was a real shock."

Jordan was not the only public figure to be confronted with fear and anger over the construction of chip mills in North Carolina. By the summer of 1996, citizens opposed to Jordan's mill had formed an official group—Concerned Citizens of Rutherford County—and their ranks had swelled to several hundred. Unable to convince the commissioners to stop the mill, the group descended on Raleigh and petitioned the North Carolina Department of Environment and Natural Resources (DENR) to deny the mill a stormwater permit. That too failed, so they petitioned unsuccessfully to have Governor Jim Hunt put a moratorium on chip mills.

In the fall of 1997, another proposed chip mill came to light, this one in Stokes County, to be owned and operated by Godfrey Lumber Company. This proposal spurred another wave of citizen protest, and the formation of a second grassroots opposition group—the Hickory Alliance. Editorials for and against chip mills began sprouting up in papers across the state, and citizens demanded government action. A stormwater discharge permit for the mill is yet to be approved, and the issue is under litigation.

What are chip mills and why have they spawned such concern? Mechanical chipping of roundwood (trees cut off the stump) has been part and parcel of pulp and paper mill operations in this state since the early 1900s. Chipping is an integral stage in breaking wood fiber down into a form that can be more easily converted into pulp, which is used for paper and paper products. Until recently, most chip mills were located adjacent to the large pulp and paper mills and, thus, were largely out-of-sight and out-of-mind for most of the state's population.

However, structural changes in the marketplace and the need to become more efficient have in recent years driven the industry toward satellite operations—defined by the N.C. Division of Forest Resources as either stand-alone facilities or those located at a solid wood processing facility such as a sawmill or a pallet mill. The typical satellite chip mill employs a crane that unloads trees from logging trucks and places them into a chute. The chute feeds a rotating drum that strips the trees of their bark. The trees continue on a conveyer belt into a chipper, where sharp blades turn each tree into slices and then into chips. The chips then move on the conveyer belt and out of the mill ready for transport. Chip mills are known for their speed and efficiency. With an average annual capacity of more than 250,000 tons, each of the chip mills in North Carolina is capable of processing 1,000 to 2,600 acres of trees each year (assuming 15 cords per acre taken in a thinning operation, with all timber going to the chip mill).[1]

Transportation of wood chips to pulp mills is less costly and more efficient than transporting whole logs because the chips consist of 100 percent usable fiber, according to Bob Slocum, executive vice president of the N.C. Forestry Association. Whole logs include waste in the form of tree bark. It's also safer to transport wood chips once processed, says Slocum, since the chips are transported on the highways in enclosed vans rather than in open logging trucks and thus represent a more stable load. Finally, many pulp and paper mills have changed their procurement policies to purchase more chips from outside suppliers and store fewer whole logs on site. This reduces cost to the mill and frees up needed space on the mill site.

Combined with the growing variety of products that can be made from wood chips, this is increasing the popularity of chips in the global marketplace. In 1960, wood chips accounted for less

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Wood chips being transported by rail through Raleigh, N.C.

than 10 percent of the wood fiber trade. By 1990, they accounted for 54 percent of the market, replacing whole logs in market dominance.[2] In addition to pulp and paper, wood chips are now used to create particle board and medium-density fiber board used in siding, among others. Both hardwoods and softwoods can be used to create this material, and trees can be virtually any shape and size. Thus, trees that were formerly considered unmarketable and left on site now have a commercial value.

Another trend supporting the proliferation of chip mills in North Carolina has been the movement of the forest products industry from the Pacific Northwest to the South. Changes in federal policy toward harvesting in the national forests have greatly reduced the supply of timber available for harvest in the Pacific Northwest. Meanwhile, the South has experienced a remarkable increase of forested acres due to the decline of agriculture and the regrowth of forests heavily timbered around the turn of the century. The South has more private timberland than any other region of the nation and better growing conditions than the Pacific Northwest. In fact, Southern forests are more productive than any other region.

And, to date, the South has fewer environmental restrictions than the Northwest. North Carolina, for example, requires no permits for harvesting of timber on private land, no notification of government agencies, and has no required standards for road building, stream protection, methods of harvest, or reforestation, although Forest Practice Guidelines in North Carolina address road building and stream protection. By contrast, the state of Washington requires permits for most types of timber harvest[3] and forest road building.[4] It prescribes riparian management zones up to 300 feet wide around streams and lakes within which specific ratios, sizes, and numbers of trees must be left uncut. It requires a certain number of trees and downed logs to be left on site as wildlife habitat, and in order to comply with the federal Endangered Species Act, it prescribes specific distances around spotted owl and marbled murrelet nesting sites within which heavy equipment may not operate. It also requires reforestation of most sites not being converted to other land uses.

"We are now considering even more restrictive rules, because salmonoids [salmon and steelhead] have been declared endangered throughout

the state," says Judith Holter, rules coordinator for the Washington Forest Practices Board. "These would include additional environmental review of all permits, road maintenance and abandonment plans, and wider riparian zones."

All of these factors have spawned an increase in timber harvest in the South. Pulp harvest in North Carolina has increased from approximately 3 million cords in the early 1980s to 4.8 million cords in 1997.[5] Corresponding to this trend has been an increase in the number of chip mills. David Brown of the N.C. Division of Forest Resources says there are currently 18 satellite chip mills operating in North Carolina that use an average of 224,000 tons a year, according to a 1997 survey.[6] (See Table 1, p. 72, for a list of North Carolina satellite chip mills and their locations.) This is compared to two chip mills in 1980 with a capacity of 336,000 tons. Of the current mills, four are located in the mountains, four in the coastal plain, and 10 in the Piedmont. As to whether increased chip mill capacity has led to increased timber harvest in these areas of the state, the numbers are mixed. (See Table 2, p. 73.) And it's important to note that other factors, such as intense development, can contribute to changes in timber harvest levels. Brown says there is now a market for pulpwood in nearly every county in the state because of an increase in the number of satellite chip mills and other manufacturers that use low-quality roundwood.

Rightly or wrongly, chip mills are seen by some people as driving increased timber harvests in the region, just as slaughter houses have been associated with a proliferation of hog farms. And many people feel there should be greater state regulation of chip mills and private forest management practices. Virtually every environmental group in North Carolina lists regulation of chip mills as one of its priorities. The Rutherford County mill has since been built, while the Stokes County mill is not yet complete and is still under litigation. Environmentalists and community groups say the policy of approving mills without any public input or consideration of wider environmental impacts must change.

Environmental Concerns With Chip Mills

Unlike traditional pulp and paper mills, which emit foul-smelling odors into the air and produce vast amounts of liquid waste, chip mills themselves are relatively benign in terms of their environmental impacts. Chip mills do not use any water other than what may be needed to keep dust down or to keep log piles moist. They do not discharge

I hope that I have proven that the days [of our virgin forests] are numbered, that the hour glass is inverted. As surely as the grains of sand will seek the lower level, so certainly is the day coming when these forests, now the wonder and admiration of the world, the Nation's last reserve stock of timber, will be but a memory of the past; when the reverberating sound of the wielded axe and the roar of logging engines will cease to waken the once sylvan solitudes; when the smokestacks of a thousand mills, their days of usefulness past, their machinery gone to ruin, their thousands of busy laborers forced to other fields, will stand desolately forlorn, grim monuments of a past commercial era and a perpetual testimony to the heedless disregard for nature's treasures on the part of her servants.

—FRANK H. LAMB
WASHINGTON STATE FOREST COMMISSION, 1909
AS QUOTED IN ROBERT PYLE'S *WINTERGREEN*

Table 1. Satellite Chip Mills in North Carolina

Mill type 1: stand-alone facility used to chip roundwood for sale to other wood processors

Mill type 2: located at a solid wood processing facility such as a sawmill or pallet mill; commonly installed to chip low-quality saw logs for sale of chips to other wood processors but may also be used to process pulpwood for resale to chip buyers.

Mill Name, Location	Mill Type	County	Start-up Year
Anson Wood Products, Wadesboro	1	Anson	1970
B&B Chip Mills, Inc., New Hill	1	Wake	1990
Bristol Industries, Inc., Morganton	1	Burke	1985
Broad River Forest Products, Inc., Union Mills	1	Rutherford	1998
Bunn Hardwoods, Inc., Bunn	2	Franklin	1996
Cotton Creek Chip Co., Star	1	Moore	1991
Edwards Wood Products, Marshville	2	Union	1978
Edwards Wood Products, Laurinburg	2	Scotland	1990
Godfrey Lumber Co., Statesville	2	Iredell	1988
H&M Wood Products, Mars Hill	2	Madison	1991
International Paper Co., Snow Hill	1	Greene	1990
International Paper Co., Norlina	1	Warren	1995
North Carolina Chip Co.	1	Wilson	1990
Parton Lumber Co.	2	Rutherford	1985
Shaver Wood Products Inc., Cleveland	2	Rowan	1981
St. Laurent Forest Products, Elizabeth City	1	Pasquotank	1986
Suncrest Land and Timber, Waynesville	2	Haywood	1985
Valwood, Cherokee	1	Cherokee	1986

Source: Data prepared by James Gregory, Department of Forestry, N.C. State University, Raleigh, N.C., August 11, 1998. Compiled with the assistance of David Brown, utilization forester, N.C. Division of Forest Resources, and Bradley Bennett, N.C. Division of Water Quality, Water Quality Section.

any air pollutants other than exhaust fumes from vehicles and diesel generators that may be used on site. Noise, however, has been an issue to people living in close proximity to chip mills, particularly if a mill is not enclosed.

Only one federal Environmental Impact Statement ever has been required for a chip mill project—that involving three proposed chip mills on the Tennessee River with barge terminals directly on a navigable river. Requiring an Environmental Impact Statement is a judgment call based on what courts have decided in the past constitutes a "major federal action," according to Brooke Lamson, district counsel for the Wilmington office of the U.S. Army Corps of Engineers. In the Tennessee River case, an Environmental Impact Statement was required because navigable rivers are under federal jurisdiction.

The only environmental permit routinely required of mills in North Carolina is a general stormwater discharge permit, which deals with water runoff and erosion from the mill site. Rather than the mills themselves, off-site activities such as clear-cutting and increased truck traffic are of most concern to the public.

Increased truck traffic in the vicinity of the mill is one of the most immediately noticeable impacts of a chip mill. Although logging trucks on the state's highways are nothing new, dozens of logging trucks per day are likely to make deliveries to a large chip mill. Given the location of chip mills in rural areas, these trucks often travel winding two-lane roads that may not have been designed to handle the weight and width of such vehicles. This can and has prompted complaints from local citizens.

"The most glaring impact of the [Rutherford] chip mill has been the increase in truck traffic," says Lynne Faltraco, president of the Concerned Citizens of Rutherford County. "My son was run off the road by a logging truck, and we've heard from local citizens about a lot of other incidents. I complained to the mill owner, but he said he didn't own the trucks, so it wasn't his business to tell them how to drive."

While truck traffic is of concern to local resi-

Table 2. Number of N.C. Chip Mills and Level of Timber Harvest by Region, 1989–97

Region	Number of Chip Mills	Level of Timber Harvest
Mountains	4	Decreased*
Piedmont	10	Increased**
East	4	Varied***

* Between 1989 and 1997, chip mill capacity increased in the Piedmont by 149 percent, while hardwood pulpwood harvest increased by 170 percent, from 247,328 cords in 1989 to 669,102 cords in 1997. A cord equals about 2.8 tons of hardwood pulpwood.

** Between 1994 and 1997, chip mill capacity increased in the mountains by 66 percent, but hardwood pulpwood harvest decreased by 52 percent, from 307,158 cords in 1994 to 148,586 cords in 1997.

*** Between 1994 and 1997, chip mill capacity remained unchanged in the East. However, hardwood pulpwood harvest declined 11 percent from 1994 to 1995 (from 1,312,764 cords to 1,166,079), declined 25 percent from 1995 to 1996 (from 1,166,079 cords to 877,357 cords), and increased 33 percent from 1996 to 1997 (from 877,357 cords to 1,164,724 cords).

Source: Unpublished summary of annual series of reports on Southern Pulpwood Production issued by the Forest Service, U.S. Department of Agriculture. Prepared by Rex Schaberg, Southern Center for Sustainable Forests, for the advisory committee of the North Carolina Wood Chip Study, January 26, 1999, pp. 14–22.

"Tree cutting has not 'devastated the environment' in the Northwest. It is true that the national forests have reduced harvests, and this has created some hardships on many of the communities, but harvesting is continuing on private lands and some of the areas are increasing their production."

—BOB JORDAN, FORMER LIEUTENANT GOVERNOR AND OWNER OF JORDAN LUMBER COMPANY

dents, a more widespread fear is of increased timber harvest within the sourcing (timber supply) area of the chip mills—a radius of about 50 to 75 miles. Tree cutting is an emotional issue for many Americans, and the immediate visual impacts of some timber harvests—a denuded landscape, rutted soils, bent and broken saplings—can indeed be shocking. Environmentalists have expressed concern that the multiplication of chip mills in North Carolina will lead to over-cutting of woodlands, with trees being cut faster than they are being replaced.

"Adding up chip mill capacity year-to-year reveals a geometric progression in tree cutting that is not sustainable," says Lou Zeller of the Blue Ridge Environmental Defense League. "The example of the Pacific Northwest where tree cutting has devastated the environment and, ironically, caused a bust in the lumber business is what we seek to avoid."

But Jordan, the owner of Jordan Lumber Company and a chip mill operator since 1957, disagrees with Zeller's assessment of the forestry situation in the Northwest. "Tree cutting has not 'devastated the environment' in the Northwest," says Jordan. "It is true that the national forests have reduced harvests, and this has created some hardships on many of the communities, but harvesting is continuing on private lands and some of the areas are increasing their production."

While the construction of a chip mill may result in an increase in timber cutting within the area of the mill, the connection between actual harvest levels and chip mill capacity over time is less than exact. According to data presented by the Southern Center for Sustainable Forests, harvest levels of hardwood used for pulp and paper—called pulpwood—have increased dramatically in the Piedmont as chip mill capacity has grown. (See Table 2, p. 73.) Between 1989 and 1997, chip mill capacity increased in the Piedmont by 149 percent, while hardwood pulpwood harvest increased by 170 percent. Between 1994 and 1997, chip mill capacity increased by 66 percent in the mountains, but hardwood pulpwood harvest actually decreased by 52 percent. In the coastal plain, harvest levels have ranged up and down over the last two decades, not showing any clear correlation with chip mill capacity.[7]

Bob Beason, a retired industrial forester, says regional timber harvests rarely correlate directly to chip mill capacity. "Vagaries of timber availability and demand, clearing of land for uses other than planned timber harvest, and natural disturbances such as Hurricane Fran can all affect harvest rates in any given year, independent of chip mill capacity," Beason says.

Jordan says the construction of a chip mill doesn't necessarily mean there are more acres being harvested than in the past. Rather, he says, the chip mill often is replacing a multiplicity of smaller, less efficient operations that existed in the area. "There used to be 30–40 pulpwood yards in Moore and Montgomery counties; now there are only four," Jordan says. "Because of technical advances like the chip mill that enable us to use more of the wood that is harvested, the amount of acreage that is being cut is probably less than in the past."

Jordan says tracts of timber are not bought for chip mill harvest, but that chip mills consume previously unmarketable materials left in a timber cut. However, Jordan says the demand for fiber for pulp has stabilized in recent years while the demand for by-products produced at lumber yards has increased. These trends have caused chip mills to lose markets and reduce production.

Environmentalists, academicians, and forest industry experts alike agree that an important indicator regarding sustainability of forests is the rate of tree removal versus the rate of growth. An analysis of such trends by Scott Burleson and Frederick Cubbage of the North Carolina State University Department of Forestry indicates that while the overall growth rate of trees exceeds re-

John Mannel

A clear-cut in progress in Moore County.

movals in North Carolina, the trend lines point toward a convergence sometime in the next decade.[8] In 1990, volume of trees removed exceeded growth in 11 counties versus only five in 1983.[9] However, researchers cannot say to what degree this is the result of planned timber harvest versus conversion of land for development and other uses.

Indeed, conversion of land to other uses is of greater concern to some forestry officials than rate of tree removal versus growth. "The overall timber growth/drain ratio is only one factor to be considered in sustainability," says Bob Slocum of the North Carolina Forestry Association. "In fact, this ratio has varied over time. A deficit ratio is usually just a signal that we need to look more closely at what is happening in the forest. A far more important factor is what happens to the land after harvest. Does it stay in forest use or is it converted to another use? If the land stays in forest use, it will grow new trees. If it doesn't, then the timber productivity is lost,

"The overall timber growth/drain ratio is only one factor to be considered in sustainability. . . . A far more important factor is what happens to the land after harvest. Does it stay in forest use or is it converted to another use? If the land stays in forest use, it will grow new trees. If it doesn't, then the timber productivity is lost, and that is a more serious concern."

—BOB SLOCUM,

EXECUTIVE VICE PRESIDENT OF THE NORTH CAROLINA FORESTRY ASSOCIATION

and that is a more serious concern."

David Brown of the N.C. Division of Forest Resources says the only state policy that directly applies to sustainability of forests is the Forest Development Program, which provides qualifying landowners with up to 40 percent cost sharing for replanting seedlings after a timber harvest. In order to qualify, landowners must comply with Forest Practice Guidelines during harvest. The recommended Best Management Practices (BMPs) help them do this. Two-thirds of the funding for this program comes from the forest industry by way of a tax on wood consumption. (For a thorough discussion of the North Carolina Forest Development Program, see Howard Muse and Bill Finger, "Small Woodlot Management—a New Challenge for Smokey," *North Carolina Insight,* Vol. 6, No. 1 (June 1983), pp. 32–36.)

"We're seeing massive clear-cutting throughout the Southeast, along with many examples of soil erosion and muddied streams. Something has got to change."

—DANNA SMITH,
EXECUTIVE DIRECTOR OF THE
DOGWOOD ALLIANCE

Along with concerns about unsustainable timber harvests, critics are deeply concerned that chip mills will promote clear-cutting of land where selective cutting predominated before. Clear-cutting, critics say, increases the potential for soil erosion, robs the soil of nutrients needed for plant regeneration, and changes both the species composition and the diversity of flora and fauna. "We're seeing massive clear-cutting throughout the Southeast, along with many examples of soil erosion and muddied streams," says Danna Smith, executive director of the Dogwood Alliance. "Something has got to change."

Faltraco of Concerned Citizens of Rutherford County believes more should be done to inform landowners of options for managing forests other than clear-cutting. "I think that it is important to provide landowners with options on what is available to help them make decisions that that can enhance their forestlands and can benefit the landowner and his family without feeling that they are getting pressure from the timber industry, procurement foresters, or state programs to exercise only one option—that being to clear-cut," says Faltraco. "Some of these options could include information on tax deferment programs, evaluations of forestland plans, selective cutting, rotational cycles, landscape planning/aesthetics, wildlife habitats, economic considerations, logging contracts/operations, recreation, conservation easements, living trusts, and land donations."

There is no question that clear-cutting is the favored harvest method for supplying wood chips. However, clear-cuts are the predominant method of harvesting timber with or without a chip mill. And there is no consensus on whether clear-cutting does more or less damage to the environment than selective cutting. "Research conducted by the U.S. Forest Service at Bent Creek Experimental Forest near Asheville demonstrates that successful regeneration of quality hardwoods usually requires a clear-cut," says Slocum of the North Carolina Forestry Association. "Also, simple economics often turn a selective harvest into a high-grade harvest where all the best trees are taken and only the sick, lame, or infirm are left on site. This adversely impacts timber quality over time and leads to the genetic deterioration of the stand. This can and does have a serious impact on timber productivity."

And many professional foresters argue that clear-cutting *decreases* the potential for soil erosion over selective cutting, because it reduces the number of times heavy equipment needs to be brought on site.

"Selective cutting requires traversing the same tract of woods multiple times in comparison to clear-cutting, because of trees that are left in the way of logging machinery," says Richard C. Ellis, board chairman of the N.C. Society of Consulting Foresters. "Likewise, selective cutting will actually cause an increase in the acres traversed, because less than the total material is removed from the land."

Daniel Richter, professor of forest soils and ecology at Duke University's Nicholas School of the Environment, says that roads on harvest sites are probably the prime contributor to soil erosion in forests. "The road network of a forest usually occupies a small area of the whole forest, yet it is the road network that is likely to be the source of most soil erosion," he says. "Whether we're talking about clear-cutting or selective cutting, we clearly need to do a better job of managing the impacts of roads in this state."

Richter says there also is cause for concern

about how successive planting and harvest of trees on the same plot of land affects the supply of nutrients over time. He directs one of the world's longest studies of soil sustainability at the Calhoun Environmental Forest in South Carolina. "There is no doubt that as an increasing fraction of the biomass is harvested, there is an increasing removal of nutrients from the site," Richter says. "Nutrient supply controls productivity of many forests in the Southeast, which are generally supported by soil with low native fertility. We need to improve how we manage soils to benefit soil fertility, plant growth, water quality, and biological diversity."

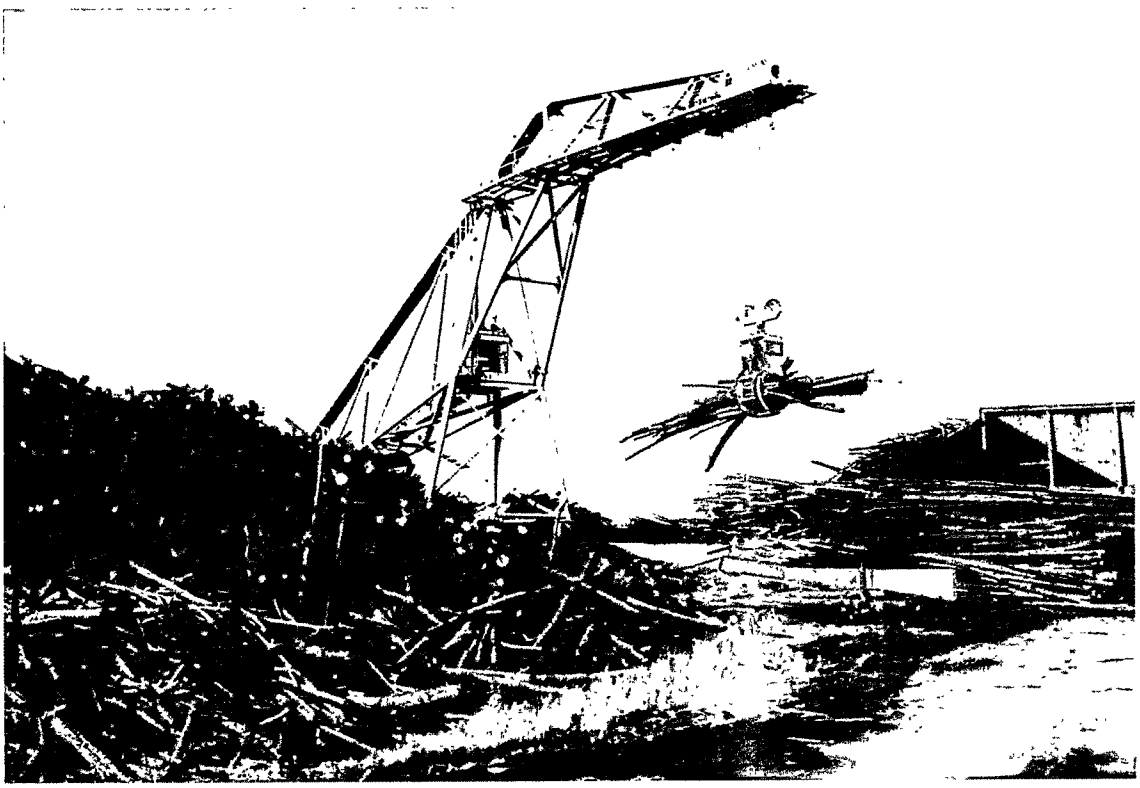
Another issue associated with clear-cutting and, by association, with chip mills, concerns the impacts of increasing timber harvest on wildlife diversity. Clear-cutting increases soil temperatures and dries surface soils out. That would be detrimental to amphibians such as salamanders that favor a cool, moist, shady environment. Large clear-cuts also could harm bird species that require large expanses of unbroken forest to successfully breed and nurture their young.

"Neo-tropical migrants such as the Acadian flycatcher, scarlet tanager, and hooded warbler require a minimum of 40 acres of interior forest per mating pair, and hundreds of acres for a viable population," says Steve Hall, invertebrate zoologist with the North Carolina Natural Heritage Program. "These species are already being stressed by deforestation on both ends of their migration routes. Any increase in cutting mature hardwood forests can only be detrimental to them."

Proponents of clear-cutting, including many hunting groups, counter that clear-cutting actually benefits many species, including deer, wild turkey, grouse, quail, and other birds, which seek out the increased food supply and cover provided by the tender shoots, saplings, and briars produced in early growth forests at certain times of the year. "Our experience with chip mills up here is that they haven't caused any problems—in fact, they are a plus," says Steve Henson, Habitat Chairman of the Southern Chapter of the Roughed Grouse Society and a member of the Wood Chip Production Study Advisory Committee. "Roughed grouse prefer a successional-type forest. You can best achieve that by clear-cutting and allowing a natural regeneration."

In addition, some non-game species may also benefit from clear-cuts. These include some neo-tropical birds such as the golden-winged warbler.

Cotton Creek Chip Company—a chip mill in Moore County.



John Mannel

Quicker than the felling of trees,
a single ringing of the bark
above ground opened a wild grove
the first summer of settlement.
... In five
years the standing trunks looked like stones
and statues in a graveyard as
crops rose and fell with the seasons.
In a decade the woods were gone.

—POET ROBERT MORGAN, "GIRDLING"

George Hess, professor of forestry at NCSU, is in charge of the wildlife component of the North Carolina Chip Mill Study. "We have a pile of studies that show negative impacts from clear-cutting on wildlife, and another pile that shows positive impacts," Hess says. "The environmental community seems to place a higher value on species that favor old growth forests (more than 80 years old), while the hunting community places a higher value on species that favor early successional forests (10- to 20 years old). It's a policy matter as to which one you choose."

Arguments about clear-cutting aside, many people worry that proliferation of chip mills will lead to increased harvest of smaller trees, which in turn will encourage a much shorter rotation of timber harvests—perhaps every 20 to 30 years instead of 60 to 70 years for hardwoods. A landscape dominated by immature trees could have devastating effects on wildlife. Numerous species of mammals and birds require tree cavities for nesting, and these are only found in older trees. The production of hard mast (acorns) needed by a variety of mammals is also associated with older hardwoods. Fred White is chief forester for the Forestland Group, a Chapel Hill-based organization that purchases and manages forestland for investors. Forestland Group focuses on the conservative management of hardwood forests and owns land from Michigan to Tennessee. White says the practice of shorter rotations is of serious concern but need not be a by-product of chip mills.

"The practice of accelerated harvests is an issue with modern forestry in general, and potentially a very serious problem," White says. "Ironically, the presence of a chip mill could be a beneficial player in that it would allow forest landowners to get periodic income through thinning for wood chip production, while allowing the bulk of the trees to grow to maturity. In any case, we need to come up with some policies that encourage longer rotations."

Forestry experts agree that a policy of encouraging longer rotation of timber would be a good idea, but they say it's hard to envision what such a policy would look like. White suggests that the state increase the percentage of cost-sharing for replanting, with the requirement that landowners retain the majority of trees for 40 to 50 years. But that, he says, would be very tough to enforce. More practical, he says, would be for the state to offer landowners a cash payment every 10 years or so for not removing more than a certain percentage of trees.

One of the biggest triggers of timber harvest on private land is when a landowner dies and the heirs are forced to raise money to pay the estate taxes. Timber harvests provide a ready source of cash. North Carolina has all but eliminated the state inheritance tax, but the federal estate tax is still significant at 50 percent of assets worth more than $1 million. While some sustainable forestry advocates call for reducing the federal estate tax, North Carolina policymakers have little control over this issue.

The N.C. Conservation Tax Credit, however, is a positive incentive for the protection of forestland. A landowner who places a conservation easement on forestland, along with a conservation-based forest management plan, may be eligible for a tax credit against state income taxes.[10]

Economic Concerns with Chip Mills

The economic argument against chip mills has more to do with related issues such as exports and jobs than with the mills themselves. Environmentalists are particularly galled that American forests are being cut down to supply wood chips to foreign countries, mostly Canada and Japan.

"Although only a small percentage of the wood chips produced in the South are exported, exports are unnecessarily increasing the burden on our forest resources and have a negative impact on jobs," says Danna Smith of the Dogwood Alliance. "Sawmills have already had to close

down because of the increase in prices driven by the export market."[11]

Chip exports from North Carolina ports began in 1989 with 36,000 tons and increased to more than 1 million tons projected for the 1998–99 fiscal year.[12] That constitutes roughly 6 percent of the state's total pulpwood harvest. Considerable public monies have gone into promoting the export trade. From 1995 to 1996, the state of North Carolina issued $11.5 million in revenue bonds to build chip-handling facilities at the Wilmington and Morehead City ports. In 1997, a tax credit available to companies that export a broad range of commodities was expanded to include wood chips.[13] The tax credit has a lifetime benefit of $2 million. When a company has received that much benefit, the credit no longer applies. State officials defend the credits as a way to help ensure that business goes to North Carolina ports instead of competing ports in Virginia and South Carolina.

Environmentalists remain opposed to the tax credit, which was originally scheduled to terminate in 1998, but now remains in effect through February 2001. The forest products industry itself is divided on the issue, with domestic manufacturers of finished wood products generally opposed because the credit effectively lowers the cost of manufacturing for foreign competitors. In a letter sent to Governor Hunt in September 1997, John T. Dillon, Chairman of International Paper Company, wrote:

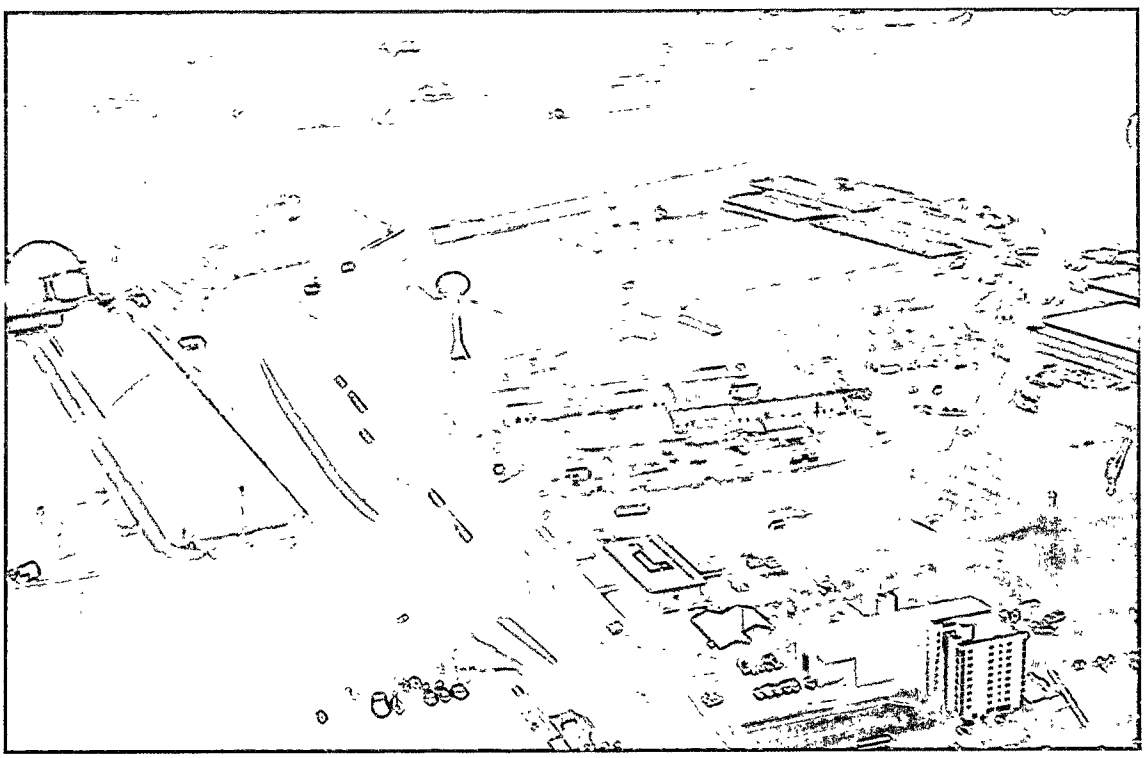
> "As I have stated to you before, International Paper is committed in its opposition to the export of wood chips, roundwood, and whole logs. We firmly believe that it is not in the best interest of our employees . . . of North Carolina taxpayers generally, and shareholders for the state to subsidize our foreign competitors, who ultimately compete with us for the sale of value-added products in the global marketplace."

While not advocating for or against the tax credit, the North Carolina Forestry Association

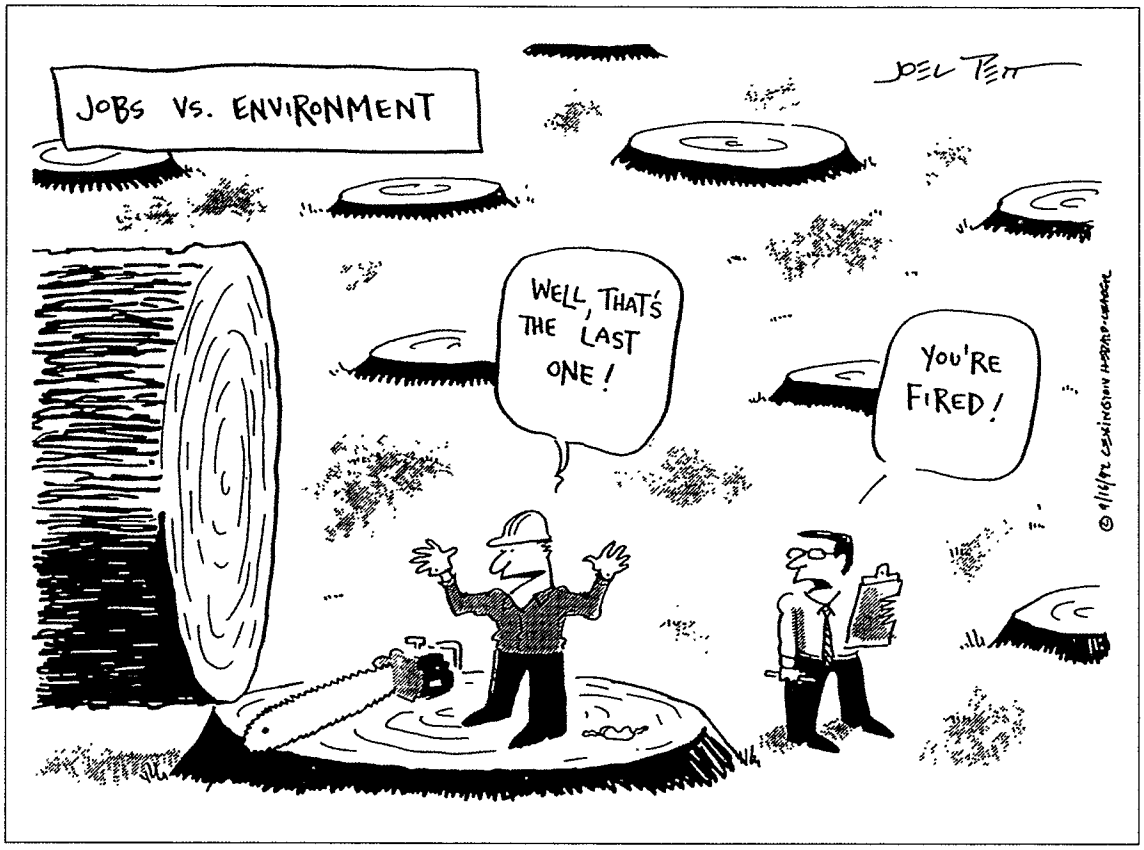
"Whether that tax credit exists or not is not going to affect the production of one wood chip,"

—BOB SLOCUM,
NORTH CAROLINA FORESTRY ASSOCIATION

Aerial view of the State Port in Morehead City, where wood chips represent a formidable portion of bulk cargo.



Courtesy of North Carolina Ports Authority



1992 Joel Pett, Lexington Herald-Leader. Reprinted by permission.

(NCFA) contends the tax credit has no effect on the amount of wood that is chipped in North Carolina for export. "Whether that tax credit exists or not is not going to affect the production of one wood chip," says Bob Slocum, NCFA executive vice president. "If it pays to export wood chips, they will go out somewhere, whether it's Morehead City, Charleston, or Savannah."

Another concern is that the demand for wood chips from the pulp and paper segment of the industry will come at the expense of the solid wood segment. In the early 1990s, a coalition of the hardwood-using businesses joined together in opposing the permitting of three chip mills in the Tennessee Valley because of concerns that the mills would spur the harvest of younger trees that represent the future wood supply of the saw mills. NCFA, whose members include both pulp and paper and hardwood manufacturers, says that is a false dichotomy.

"We've seen no indication that chip mills are encouraging the harvesting of younger timber," Slocum says. "Rather, the trees used for chipping are what is left over on a saw-timber harvest. Chip mills provide a market for the low-grade timber that is unmerchantable as saw timber. I would argue that chip mills will lead to more saw timber in the future, because they offer the landowner more financial incentives to keep the land in timber."

Finally, opponents of chip mills argue that forests have a high non-market value that is lost when they are clear-cut. Few would argue that clear-cuts have a negative visual impact, at least over the short run. Many are concerned that the spread of chip mills will lead to extensive clear-cutting that will compromise the scenic beauty of the state, with resulting harm to the tourism and outdoor recreation industries. In Tennessee, local chambers of commerce, tourism bureaus, and outdoor sports organizations spoke out in opposition to pending applications for three chip mill permits due to the potential impact on recreation and tourism.

Faced with a multiplicity of arguments on both sides of the fence, it is no wonder Governor Hunt asked for a study to sort out the details with respect to the economic and environmental impacts of chip mills. While not all of these issues will be addressed by the study, a considerable number of them will be. Not surprisingly, all sides are carefully following the make-up and methods of this group.

The Wood Chip Study Group

The North Carolina Wood Chip Study is being conducted by the Southern Center for Sustainable Forests, a consortium under the leadership of Frederick Cubbage, professor at NCSU's College of Forest Resources, Daniel Richter, professor at Duke University's Nicholas School of the Environment, and Bill Flournoy, Director of Special Projects for DENR. DENR conducted a year of public meetings and hearings to determine the issues that should be examined before contracting with the center to conduct the study. Shortly after being awarded the study, SCSF in turn contracted with the Natural Resources Leadership Institute (NRLI) at North Carolina State University to develop and lead a public participation program enabling stakeholders in the chip mill issue to have input into the study process. With the concurrence of DENR, the contract researchers assembled a Wood Chip Production Study Advisory Committee consisting of 19 members representing environmental groups, timber products industries, foresters, and forest landowners. In addition, representatives of 11 state and federal agencies with responsibilities in the area of forestry, wildlife, and air, land, and water quality have been given seats at the table. They serve as technical consultants to the advisory committee.

The advisory committee is charged with providing guidance to the study team in the development of the wood chip production study and assistance in planning for broader public information and feedback as the study progresses. To achieve this end, the advisory committee has been directed to carry out the following tasks: (1) suggest to researchers issues to be addressed in the study that are consistent with the overall study plan or assist in establishing priorities of selected issues; (2) identify issues for possible future study; (3) recommend methods to collect and analyze data; (4) provide early feedback on study procedures and findings; and (5) provide suggestions, support, and assistance for general public meetings.[14]

One of the first tasks the study team undertook was to refine the scope of the study. The Governor had directed that the study determine the impact of chip mills on North Carolina, but the team quickly acknowledged that wood chips are only part of a larger continuum of forest products and that chip mills themselves are simply one component of that production system.

The Southern Center for Sustainable Forests has determined that the research project will be developed as an integrated study of economic and ecological impacts of wood chip production in North Carolina. The economic component will examine direct financial impacts and broad economic issues of wood chip production. It will employ large-scale economic and timber supply models to examine: the impacts of wood chip production on timber supply; the effect of wood chip production on wood-based manufacturing firms; and the effects of improved timber markets for forest owners. It also will consider how market forces may change the way trees are harvested and processed and how those changes will affect forest management practices and the non-market value (such as scenic beauty) placed on those forests. Finally, the

The hundred-year oak curves aside
in its suppliant gesture, though others
that shadowed its growing have rotted
to stump holes. So history twists in
my psyche. Amputated limbs and thwarted
wills walk fields of the mind; rubble
of cotton gins and tin barns follows
footsteps through woodland: these farmed
rows and erosions with trees reclaiming
them buried in memory. . . .

—JAMES APPLEWHITE
"WHAT YOU DON'T SEE IS THERE"

John Mannel

Members of the North Carolina Wood Chip Study Group traverse a site in Moore County where best management practices were not followed in harvesting timber.

economic component will examine impacts of wood chip production on local economies, infrastructures, and communities.

The ecological component will evaluate the effects of expanded wood chip production on individual forest stands and regional landscapes by using literature reviews, field surveys, and models. The study will examine how wood chip production alters ecology of forest management practices in North Carolina, as well as direct, indirect, and cumulative effects of wood chip production on forest structure, plant and animal communities, soil erosion and fertility, and water quality. In addition, the ecological component will look at the impacts of wood chip mills on stormwater and waste water runoff from processing facilities; and forest management options for assuring sustainability of forest resources as harvest pressures continue to mount, and as forest values continue to increase.

Through February 1999, the advisory committee had met five times. The early meetings were dominated by procedural discussions, including confidentiality of data, qualifications and allegiances of the research team, and the need for public forums. Various staff members made presentations on the types of models and data sources they will be using to assess economic and ecological impacts. Some advisory committee members questioned the limitations of the models, but all were in favor of pursuing the studies as outlined. The fifth meeting involved a field visit to a chip mill, a saw mill, and a closed out and an active harvest site.

Policy Implications

Dressed in hard hats and hiking boots, two dozen members of the Chip Mill Study Group and its advisory committee stood beside a stream in the middle of a clear-cut in Moore County. The logging had been completed several years earlier and the stream was running clear. But bisecting the stream and disappearing up a hill was a 15-foot wide logging road laid bare of topsoil. Don Watson, water quality forester with the N.C. Division of Forest Resources, explained how he came upon the site and ordered the loggers to lay branches across the track to try and minimize erosion. His explanation of how a state agency responded to the situation did not satisfy Lark Hayes, senior attorney with the Southern Environmental

Law Center (SELC) and a member of the advisory committee. Hayes questioned whether the forester should have acted more aggressively by reporting the loggers to the Division of Land Resources, the state agency with broad ranging enforcement authority under the Sedimentation Control Act. The Division of Land Resources has the authority under the Sedimentation Control Act to issue civil and criminal penalties. The agency can stop work, issue fines, and require payment for reparation.[15]

"Why weren't these people reported to the Division of Land Resources?" Hayes asked. "I've heard that out of 158 logging sites that have been cited for violations [of the Sedimentation Control Act], only two were referred to Land Resources."

"That's because I'm focused on keeping the sediment out of the stream rather than gigging the logger," Watson says. "I need their cooperation, I don't need to alienate them."

"We look at it as a cooperative program," says David Brown, referring to the Division of Forest Resources' water quality inspection program. "We don't want landowners to consider us a burden. We've seen a whole lot of improvement since the Forest Practice Guidelines were implemented."

While it is not the Wood Chip Study Group's mandate to come up with policy recommendations, its findings are expected to be policy relevant, and the group could put forth policy options. Certain members of the advisory committee are clearly hoping that some significant policy changes will arise from this study. Put on alert by the outcry against the Rutherford and Stokes county chip mills, the public will be looking for some initiatives that will put their fears of widespread deforestation to rest. As the 1996 Report on the Governor's Task Force on Forest Sustainability states, "North Carolina's present citizenry has come to regard mature forests as part of its heritage, one of the many features that make them love this state. Thus, it is not hard to understand why certain forest management activities are seen as destructive of this heritage and a threat to the state's environment."[16]

At the same time, growing trees for harvest is a long-standing practice in North Carolina and will continue to be a vital part of the state's economy. Of the top 10 timber producing counties in North Carolina, almost all are located in eastern North Carolina. (See Table 3, p. 84.) But timber production occurs throughout the state and is very important in rural areas where the economy is less robust and diversified. Commercial foresters consider trees to be a renewable resource. They do not consider timber harvest to be deforestation, whether through clear-cutting or selective cuts. To the commercial forester, deforestation occurs when forests are cleared and the land put to another use, such as the site for a housing development or shopping center.

The forest products industry employs 143,367 North Carolinians and produces an annual payroll of more than $3.8 billion—second only to textiles in the state in terms of employment. (See Table 4, p. 85.) As worldwide demand for wood products grows and as the timber companies continue to concentrate in the South, increased levels of harvest are anticipated. So how can the state satisfy public concerns to preserve forests without unduly limiting the rights of private citizens and businesses or restricting the supply of timber needed to sustain the forest products industry?

As a first matter, it seems unlikely that the state would recommend or the General Assembly would approve a ban on chip mills. The production of wood chips is simply a step in the process of converting trees into a form that can be used to create a variety of products in high public demand. The mills themselves do not present an environmental hazard, and banning them would not solve the larger issues surrounding forest management that seem to be the public's real concern. However, it could be possible that the state will require a special permit that allows for consideration of secondary impacts and that gives the public a chance to comment on the proposed actions. The only permit required for chip mills is a general stormwater permit. These permits are routinely issued by the N.C. Division of Water Quality with little site-

After you have exhausted what there is in business, politics, conviviality, and so on—have found that none of these finally satisfy, or permanently wear—what remains? Nature remains.

—WALT WHITMAN

"NEW THEMES ENTERED UPON"

SPECIMEN DAYS AND COLLECT, 1882

specific scrutiny of potential environmental impacts and with no public notice or opportunity for public comment.

In April 1998, the Department of Environment and Natural Resources changed its policy to exclude new and expanded chip mills from the general stormwater permit and instead require individual permits. This action was promptly challenged administratively by the North Carolina Forestry Association.

"The state acted arbitrarily in excluding coverage for chip mills under the general permit," Slocum says. "They had no evidence to state that stormwater discharges are any different from any other facility for which they grant general permits. They said they needed more time to study the off-site impacts of chip mills. We said you don't have the authority to look at off-site impacts."

On March 19, 1999, Administrative Law Judge Robert Reilly ruled that the state had erred in its decision to exclude chip mills from the general stormwater permit. The ruling constitutes a recommendation to the Environmental Management Commission.

The Dogwood Alliance and the Sierra Club intervened on behalf of the state, with the Southern Environmental Law Center serving as legal counsel. "Part of what has fueled the anger toward chip

Table 3. Top Ten Timber-Producing N.C. Counties by Stumpage* Values, 1995

County	Softwood Stumpage* Values ($)	Percentage of Total Softwood (%)	Hardwood Stumpage* Values ($)	Percentage of Total Hardwood (%)	Combined Stumpage* Values (Softwood + Hardwood) ($)	Percentage of Combined (%)
Columbus	18,317,312	4.0	1,331,711	1.0	19,649,023	3.4
Beaufort	17,497,600	3.8	2,090,224	1.6	19,587,824	3.3
Bladen	16,517,376	3.6	1,901,053	1.5	18,418,429	3.1
Moore	13,994,718	3.1	1,992,414	1.5	15,987,132	2.7
Bertie	12,192,075	2.7	2,608,199	2.0	14,800,274	2.5
Craven	13,576,436	3.0	1,135,869	0.9	14,712,305	2.5
Johnston	11,228,383	2.5	3,368,702	2.6	14,597,085	2.5
Anson	13,591,235	3.0	844,393	0.6	14,435,628	2.5
Pender	13,170,594	2.9	1,330,223	1.0	14,500,817	2.5
Robeson	12,474,821	2.7	1,710,946	1.3	14,185,767	2.4
Total All N.C. Counties	**456,556,763**		**129,256,541**		**585,813,304**	

* *Stumpage values are the payments to forest owners for trees as they stand in the woods, that is, prior to processing or transportation.*

Source: P.B. Aruna, Frederick Cubbage, Rick A. Hamilton, "Table 1. 1995 Timber Harvest Stumpage Values by County in North Carolina," *Economic Impacts of Forestry on North Carolina*, North Carolina State University, Dept. of Forestry, College of Forest Resources, Raleigh, N.C., April 1998, pp. 10–11.

mills is that their permitting has been put on a fast-track basis with no opportunity for public input," says Lark Hayes of the SELC. "We would like to see individual permits that involve public notice and comment. That is the current situation and the current law [although it is under legal challenge]. We'd like to see the Environmental Management Commission uphold the individual permitting process that is currently in place for new and expanding chip mills. We're focusing on expansion and trying to give it close scrutiny." Hayes notes that the issue before the Environmental Management Commission represents "the big policy question going forward. How will the department [DENR] handle decisions about new and expanding mills?"

Individual permits for wood chip mills also are supported by the North Carolina Environmental Defense Fund, the state chapter of the national, New York-based nonprofit EDF, a 300,000 member organization with extensive involvement in policy and legal debates over private forest management. "EDF does support individual permitting for chip mills so that 1) the state can evaluate secondary and cumulative impacts, and 2) the public has an opportunity to participate and provide input into permitting decisions," says Dan Whittle, attorney at N.C. EDF.

Officials in the Department of Environment and Natural Resources note that there is no other industry in North Carolina where a special permit is required that does not relate to pollution generated directly by the industry. A separate permit was required for a slaughterhouse on the Cape Fear River, for example, but it had its own wastewater treatment plant. Still, environmentalists say secondary impacts were considered in the permitting process. "DENR included several conditions in that permit aimed at mitigating secondary and cumulative impacts," says Whittle. Two conditions that seemed to consider off-site impacts were a cap on the number of hogs that could be slaughtered to address concerns about proliferation of hog farms to feed the slaughterhouse and restrictions on buying pigs for slaughter from farms that are not in compliance with environmental laws. Chip mills create little pollution in and of themselves. The damage—if it occurs, occurs at timber harvests off site. Environmentalists say the conditions put on the slaughterhouse wastewater permit are parallel to regulating off-site impact of chip mills through a separate permitting process.

Hayes lauds the current DENR policy of requiring a separate permit for new and expanding chip mills as a progressive, open government type

Table 4. Number of Employees in Wood Products Industries—North Carolina, with Southeastern and National Rank, 1997

Industry	Number of N.C. Employees 1981	1989	1996	1997	% Change '81 to '97	% of Total N.C. Employment 1997	Rank in U.S. 1997	Rank in U.S. 1981
Lumber and Wood Products	35,000	35,502	41,973	42,806	+ 22%	1.2	4	5
Furniture and Fixtures	84,300	86,273	76,775	75,757	- 10%	2.1	1	1
Paper and Allied Products	21,400	22,874	24,651	24,804	+ 16%	0.7	10	12
Total Above Categories	140,700	144,649	143,399	143,367	+ 2%	3.9		
Total N.C. Work Force		**3,022,028**	**3,522,192**	**3,637,417**				

Sources: North Carolina figures: *Statewide Insured Employment and Wages in North Carolina by 2-Digit SIC Industry for Year 1997,* Employment Security Commission of North Carolina. U.S. figures: *Current Employment Statistics Program, 1998.* U.S. Bureau of Labor Statistics.

"It has come to this—that the lover of art is one, and nature another, though true art is but an expression of our love of nature. It is monstrous when one cares but little about trees and much about Corinthian columns, and yet this is exceedingly common."

—FROM THE JOURNAL OF HENRY DAVID THOREAU
OCTOBER 1854

of action because it allows for public input in the permitting process. She describes the broader general stormwater permit as an expedited, rubber-stamp type of permit that can catch the public off guard.

Federal permitting of chip mills may be required under special circumstances. If any filling of wetlands, crossing of streams, or stream alteration is required, the mill owner must apply for a permit from the U.S. Army Corps of Engineers under Section 404 of the federal Clean Water Act.[17] If the Corps determines that construction of a chip mill constitutes a "major federal action significantly affecting the quality of the human environment," the applicants are required to prepare an Environmental Impact Statement (EIS) as mandated by the National Environmental Policy Act (NEPA). An EIS requires the applicants to look not only at those impacts associated with the actual mill site, but also those cumulative and secondary impacts associated with that action, such as clear-cutting of forests to supply wood to the mill. To date, an EIS has only been required on one chip mill project. In 1993, the Corps required the Tennessee Valley Authority to conduct an EIS on three chip mills and their attendant barge terminals planned for a 12-mile stretch of the Tennessee River.[18] Based largely upon the secondary impacts associated with clear-cutting projected by the EIS, the TVA did not approve the proposed permits to build the mills.

Environmentalists have held out the hope that the Army Corps will consider every chip mill a "major federal action" because of their secondary impacts, but the Corps gives no indication of doing so. "We don't regulate chip mills as such," says Brooke Lamson, assistant district counsel for the Wilmington District of the Corps of Engineers. "If they [the mill owner] need to cross a stream or fill in a wetland to construct the mill, they might need to get a permit from us. Even then, we might not look at off-site impacts. Those are going to occur regardless of whether they bridge a stream or fill a wetland."

Federal agencies might get involved in the permitting of a chip mill if it directly affected an endangered species. The Endangered Species Act prohibits the taking (i.e. killing or harming) of any species of animal listed as endangered or threatened by the federal government.[19] But again, the construction of a chip mill per se will not trigger this act, even if logging within the source area is likely to affect an endangered species. The act would apply only to the landowner whose actions posed a threat to endangered species.

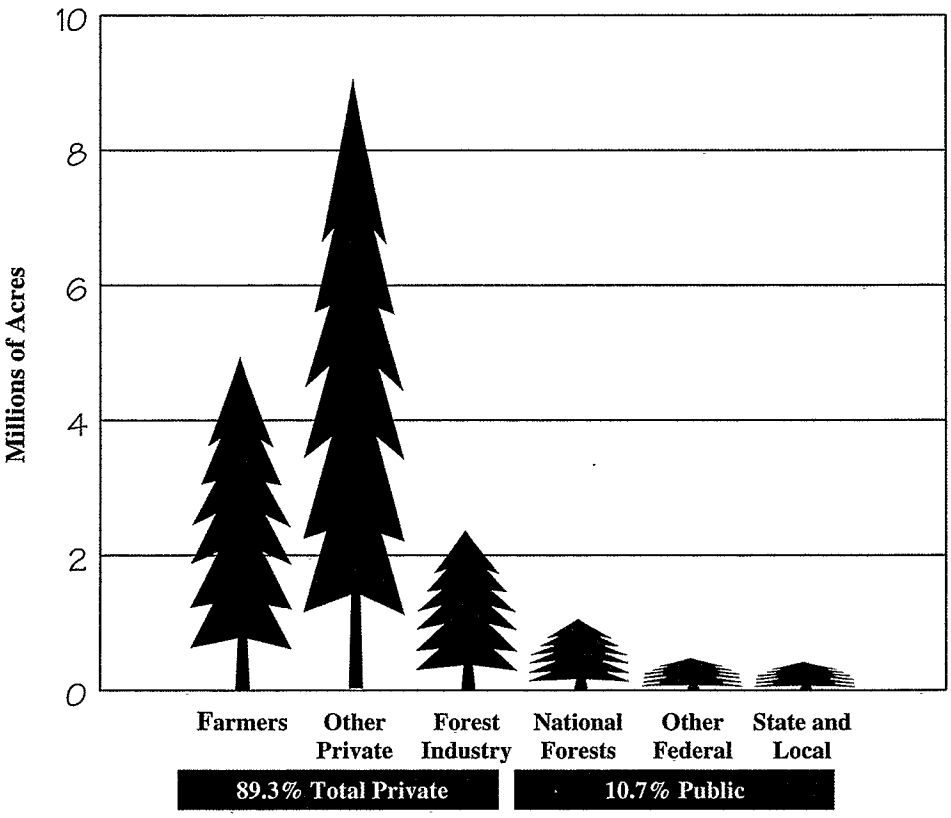
Because the public's major concern is with the secondary off-site impacts of chip mill construction—namely the harvesting of timber—that is where policymakers will most likely concentrate their attentions. Very little of what is harvested for chip production comes from state or national forests in North Carolina or throughout the South. Instead, the vast majority comes from private land, most of it from non-industrial private forests (NIPFs) of ten acres or more. There are more than 700,000 owners of non-industrial private forests in North Carolina, according to the U.S.D.A Forest Service. And 89.3 percent of the state's commercial forestland is privately held. To the degree that it is needed, effecting change on so numerous and diverse a group of people presents a significant challenge. Indeed, it is next to impossible to ensure that forestlands are managed in sustainable fashion when the state lacks good information about those lands and has few policies in place to promote or require sustainable forest practices.

Beason, the retired industrial forester, notes that the U.S. Department of Agriculture Forest Service currently is running a year behind on its 2000 inventory and that groups studying forest sustainability currently are working with decade-old data. He says there is a strong need for an up-to-date forest inventory that is never more than five years old. "Neither the environmental groups nor industry know the effect we are having on the forest resource since we have no up-to-date data," says Beason.

The concern over forest management on both public and private land is closely intertwined with the interest in preserving water quality in this state, and that is where regulation is currently focused. Forests are indisputably the source of the state's highest quality water. While other land uses, such as agriculture, industry, and urban development may contribute most pollutants to the state's waters, sedimentation in even a small, forested creek is of concern because of the value of such streams for water supply and recreation. In addition, it is difficult to know just how much silviculture contributes to sediment and nutrient pollution due to a lack of good monitoring data.

Historically, both the agriculture and forestry sectors of North Carolina have been exempted from regulations such as the Sedimentation Pollution Control Act that apply to other sectors of the economy. (For example, developers disturbing more than one acre must develop a sedimentation and erosion control plan, among other mandatory practices.) In 1974, a Forest Practices Act study committee concluded that forestry was not a major contributor of sediment, and recommended that voluntary Best Management Practices (BMPs) be

Figure 1. Who Owns Commercial Forestland in North Carolina (1990)*



* Per the N.C. Forest Service, 1990 data are the most recent data available.

Source: Johnson 1991. SE-120, Table 2. N.C. Forest Service.

developed and used during forestry activities. These BMPs are outlined in the state's *Forest Practices Guidelines Related to Water Quality*,[20] and include such practices as maintaining streamside buffers, prohibitions against leaving debris in streams that would obstruct flow, and keeping access roads and skid trails away from streams or laying down culverts or portable bridges where crossings are necessary.

In 1989, the legislature amended the Sedimentation Pollution Control Act, maintaining the forestry exemption, but only on the condition that site-disturbing forestry activities be conducted in accordance with the *Forest Practices Guidelines*. Some environmental groups say that BMPs should be mandatory on all commercial timber harvests. The forest industry responds that, in effect, they are mandatory.

"The regulations as they apply to forestry are performance-oriented, rather than prescriptive," Slocum says. "The law says you have to have a streamside management zone wide enough to prevent visible sediment from entering the stream. You can be fined if that is violated. In the flat coastal plain, that might be 20 feet wide. In the mountains where it's steep, you might need to go 100 feet. It makes much more sense to have a performance standard in this instance than a prescriptive one."

Asked to clarify whether BMPs are mandatory, Moreland Gueth, watershed protection forester in the Division of Forest Resources, answers, "With a qualification, no. Adherence to or compliance with Forest Practices Guidelines is required, and the means of compliance is through BMPs or other equally effective measures."

Mandatory or not, the key is to what degree loggers in North Carolina are complying with the standards. The N.C. Division of Forest Resources is responsible for evaluating BMP compliance, and the integrity of a performance-based program is dependent upon careful monitoring and strong state oversight. Currently, inspections are only done on sites on which the Division receives complaints, sites where the landowner is seeking state cost-sharing for reforestation, and sites which they come across "in our daily activities." In 1997–98, the Division inspected more than 3,700 sites statewide. Since notification of harvest is not required, Division officials do not know what percentage of harvests these 3,700 inspections represent. The Division now employs six water quality foresters statewide and is adding a seventh, although Division officers in each of the state's 100 counties assist with site inspections.

Aside from these routine inspections, the Division has conducted sampling surveys over the past few years specifically to determine the degree of compliance with BMPs. For 1996, overall compliance of the 200 sites inspected was rated at 95

Doug Richardson, Manager of Cotton Creek Chip Company in Moore County.

percent.[21] That is a figure widely touted by the Division of Forest Resources and the logging industry. However, Mickey Henson, former hydrologist with the Division of Forest Resources and the person who conducted the surveys, says the sites he inspected were not representative of the situation as a whole. "My surveys were skewed in that they took place after the jobs were complete and did not include many sites where water ran through the property," Henson says. "I would guess that total compliance with BMPs is probably 30–40 percent during on-going operations.

"The average Streamside Management Zone of all the sites I looked at was about 30–35 feet—nowhere near what they should be," Henson says. "I also saw major problems with violations of standards regarding stream crossings."

Henson says he strongly believes that BMPs should be mandatory for all commercial timber harvests in North Carolina. "There is no physical difference between a logging job and a development," Henson says. "Forestry and agriculture ought to be required to meet the same standards."

However, Brown says Henson was given the responsibility to develop, design, and implement the survey. "He developed criteria and selected sites." Brown disagrees that there is no physical difference between timber harvest and a real estate development. "There is a tremendous difference," he says.

In the past few years, several other Southern states have begun imposing tougher standards either on chip mills directly or on timber harvests. Missouri Governor Mel Carnahan has directed his state to undertake a study of chip mills and associated forest harvesting practices. In addition, he has directed the Missouri Department of Natural Resources to condition future permits for chip mills to require training in water quality protection for all timber suppliers to the mill, to require chip mills to provide the location of harvest areas so that professional foresters can offer assistance in developing forest management plans, to include "re-open clauses" that would allow reopening permits in order to address adverse impacts resulting from industry operations, and to limit the duration of permits related to chip mill operations to no more than one year. The former two conditions are being challenged by landowner and industry groups.

As part of its Silvicultural Water Quality Law,[22] Virginia in 1998 began requiring loggers to notify the Virginia Department of Forestry of any timber harvest of more than 10 acres. Notification must be made within three days of beginning the work, and can be done simply by calling a toll-free number. The Department of Forestry can require loggers to take actions deemed necessary to avoid sedimentation of streams. The department can issue civil penalties and/or stop work if their recommendations are not being followed.

"Where state agencies are held responsible for education and enforcement of laws related to water quality, they need to be informed of where timber harvests are taking place," says Mike Foreman, program manager for water quality in the Virginia Department of Forestry. "We tried a system of voluntary reporting and were only getting about 50 percent compliance, so we felt we needed to make it mandatory." Sen. Ellie Kinnaird (D-Orange), introduced a bill (SB 932) in the 1999 session of the North Carolina General Assembly modeled after the Virginia law, though the bill called for notification 30 days in advance of harvest, rather than the three days required in Virginia. The bill failed to pass in one house by the legislature's April 30 deadline in order to be considered during the 1999–2000 session. It can be reintroduced in 2001.

In 1996, Kentucky passed a Forest Conservation Act which mandates that by July 15, 2000, a master logger be on-site and in charge of every commercial timber harvest.[23] Loggers must take a three-day course to receive state certification. The law also requires Best Management Practices to be enforced on all commercial timber harvests, including preservation of 25-foot-wide streamside buffers on all slopes of less than 15 percent, and 55-foot-wide buffers on all slopes 15 percent or greater. The state must conduct an annual inventory of timber. The law also creates a program of incentives for forest stewardship, although that program has not been funded.

North Carolina currently sponsors various incentive programs that could help steer landowners toward responsible timber management. The N.C. Division of Forest Resources offers landowners the

I apologize to the cut-down tree
for the table's four legs.
I apologize to big questions for
small answers.

—WISLAWA W. SZYMBORSKA
"UNDER A CERTAIN LITTLE STAR"

consultative services of state foresters on any timber harvests. The state also offers a cost-sharing program to replant harvested sites. However, officials estimate that consulting foresters are only brought in on about 15 to 20 percent of timber harvests, and forest management plans are only prepared on about 5 percent of these jobs.

"The typical landowner involved in a timber harvest is over 40 years old, his daddy sold timber, and his daddy before," says Don Watson, water quality forester with the Hillsborough District of the N.C. Division of Forest Resources. "They know a logger who they want to do the work, and they don't feel they need any outside advice."

As an educator, Richter sees this as one of the most vexing issues. "In a time when the economic and environmental value of forests is increasing, we ought to be able to afford the involvement of a greater number of forest and environmental professionals to help landowners better plan management of their forest plans," he says.

Environmentalists would like to see the state educate woodland owners about environmental health and wildlife concerns on an equal footing with timber management. That kind of service is available through the Forest Stewardship Program,[24] a voluntary program that involves the N.C. Forest Service, the N.C. Wildlife Commission, and the N.C. Soil and Water Conservation Service in preparing a management plan for the property.[25] Since the program's inception in 1990, 1,490 plans have been prepared covering 240,294 acres. However, participation has been declining since the state ran out of federal cost share dollars in February 1999. "At this point, the people who request the service are generally the wildlife purists," says Mark Megalos, program coordinator for the N.C. Division of Forest Resources.

"There ought to be room for common ground between environmentalists and forest landowners. We both have the same objective of keeping as much land in forests as possible."

—RON BOST, EXECUTIVE DIRECTOR OF THE N.C. FOREST LANDOWNERS ASSOCIATION

Low participation in voluntary forest management programs and resistance to mandatory regulations might normally be considered a prescription for trouble. However, as Fred White of the Forestland Group says, the diversity of forest ownership in North Carolina argues against any drastic changes. "There are [700,000 plus] forest landowners out there with as many different mindsets as you can imagine," White says. "They may not agree to increased regulation of their land, but they're also not about to timber their land en masse just because a chip mill moves in."

Similarly, should the Wood Chip Study Group find that chip mills are not the threat to the environment that they initially appeared to be, this would not mean the group's efforts are in vain. "The significance of the chip mill debate is that it serves as a crowbar to pry open the issue of private forest management in North Carolina," says Lark Hayes. "For the first time, citizens are beginning to ask whether our laws and subsidies are shaping the behavior of private forestry in a responsible manner with respect to the environment."

While it is unlikely that those at opposite ends of the debate will ever be in agreement on how best to manage a forest, the study ought to be able to illuminate whether threats exist and what practices must be followed to ensure both environmental quality and ecological diversity. "There ought to be room for common ground between environmentalists and forest landowners," says Ron Bost, executive director of the N.C. Forest Landowners Association. "We both have the same objective of keeping as much land in forests as possible."

FOOTNOTES

[1] Average annual capacity for chip mills is taken from David Brown, *Roundwood Pulpwood from North Carolina Processed at Satellite Chip Mills in 1997*, N.C. Division of Forest Resources, p. 1. Calculations of the number of acres of trees that can be consumed per acre are based on the average number of cords per acre taken in a thinning operation.

[2] Robert Hagler, "Global Forest," *Papermaker*, Maclean Hunter Publishers, Vol. 56, No. 5 (1993), p. 5.

[3] Washington Administrative Code 222-30-010 through 22-30-110.

[4] Washington Administrative Code 222-30-010 through 22-30-110.

[5] Unpublished summary of an annual series of reports on Southern Pulpwood Production issued by the Forest Service, U.S. Department of Agriculture. Prepared by Rex Schaberg, Southern Center for Sustainable Forests, for the Advisory Committee of the North Carolina Wood Chip Study, January 26, 1999, p. 5. See also Howard Muse and Bill Finger, "Small

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Recommendations on Sustainable Forestry and Wood Chip Mills

North Carolina's economy has long been dependent on the forest products industry for both jobs and consumer goods. Indeed, some suggest that the origin of its Tar Heel State moniker was the tar that got stuck on the feet of workers in the piney woods, producing tar, pitch, and turpentine for naval stores. And the hard truth is that this same forest products industry relies heavily on a ready supply of wood chips to produce a broad range of consumer goods. But the proliferation of satellite wood chip mills in recent years (from two to 18 since 1980) should give state policymakers pause.

While they are rarely operated at full capacity, the 18 chip mills in North Carolina have the potential to consume vast numbers of trees. Yet the state may not face the sort of moonscape destruction that some environmentalists suggest. That's because the majority of the state's forest lands are held in private ownership. The sheer number of individual property owners (some 700,000) argues against the likelihood of wholesale clear-cutting to feed chip mills. But there are reasons beyond the prospect of a mountains-to-sea denuded landscape that the state should be cautious about any policy that encourages the chipping of more trees than is necessary to sustain both the state's forest products industry and its forests.

Here are a few of them: additional chip mills may encourage additional timber harvest, including clear-cutting. Poorly managed sites —whether clear cuts or selective cuts—create sedimentation and erosion as well as visual blight. Clear-cutting alters the diversity of and perhaps the number of plant and animal species on a harvested site, perhaps to the detriment of rare or endangered species. While clear-cutting may have its place in a continuum of forest management practices, most people would agree that too much clear-cutting is not a good thing.

But it is important to place clear-cutting in the context of overall forestry management. Poorly managed sites where selective cutting takes place can also create soil erosion, loss of wildlife habitat, and visual blight that hurts the recreational value of forests. There also is danger in taking too much timber without reseeding and without allowing enough trees to grow to maturity. What is most important to the state is to adopt policies that encourage sustainable forestry so that the state's forest resources are not depleted. *The goal should be to replenish trees as fast as they are cut.* In addition, state policy should encourage longer rotations between harvests to preserve the state's stock of saw timber. To these ends, the Center offers the following recommendations:

1. The legislature should repeal the tax credit for exporting wood chips or at least allow it to expire when it sunsets in 2001. The Center acknowledges that wood chips are primary to the forest products industry and that a ready supply is necessary to keep the industry healthy. Yet a state policy that encourages the chipping of more wood than is necessary to sustain the forest products industry flies in the face of efforts to sustain the state's forests. Providing a tax credit for wood chips and other commodities exported through the North Carolina ports distorts market pricing and may encourage additional chipping. This is not to suggest there should be no export market for forest products. If the state's forests can sustain exports while adequately supplying the domestic market, there is no reason not to have them. However, the state should not provide an *incentive* to export, as this could tip the balance. An inducement to export could lead to depletion of the state's forest resources, damage to the environment, and inadequate supplies of both chips and saw timber for domestic industry. This is too high a price to pay just to prop up the state's ports. If state ports need help, that should be considered on its own merits and not in a way that could exact a second environmental price.

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Mike McLaughlin is editor of North Carolina Insight.

Woodlot Management—a New Challenge for Smokey," *North Carolina Insight*, Vol. 6, No. 1, (June 1983), pp. 24–51 for a thorough review of the state of forestry in North Carolina in the early 1980s.

[6] David Brown, *Roundwood Pulpwood from North Carolina Processed at Satellite Chip Mills in 1997.* Available from N.C. Division of Forest Resources, Raleigh, N.C, p. 1.

[7] Unpublished summary by Rex Schaberg to the Advisory Committee of the North Carolina Wood Chip Study, January 26, 1999, p. 22.

[8] W. Scott Burleson and Frederick W. Cubbage, *North Carolina's Forests 1938 to 1990,* Tables and Figures. Available from the Department of Forestry, North Carolina State University, Raleigh, N.C., January 1999, Figure 48.

[9] *Ibid.,* Figure 53.

[10] Under N.C.G.S. 105-151.12 and N.C.G.S. 105-130.34.

[11] Danna Smith, *Chipping Forests and Jobs: A Report on the Economic and Environmental Impacts of Chip Mills in the Southeast,* available from the Dogwood Alliance, P.O. Box 4193, Chattanooga, TN, 37405, p. 30.

[12] Brown, *Ibid.,* p. 3. The 1998-99 projected figure was provided by the North Carolina Ports Authority in a telephone interview with the Center.

[13] N.C.G.S 105-151.22(b).

[14] Group Charter, North Carolina Wood Chip Production Study Advisory Committee, as amended 11/19/98, available

2. The legislature should amend the Sedimentation Pollution and Control Act to make Best Management Practices mandatory on all commercial timber harvests. Best Management Practices are intended to preserve water quality during forestry activities through such practices as maintaining streamside buffers, prohibitions against leaving debris in streams that would obstruct flow, and keeping access roads and skid trails away from streams or using culverts or portable bridges where crossings are necessary. Thus far, the forestry industry has been exempted from the state's Sedimentation Pollution Control Act on the condition that Best Management Practices are followed, as outlined in the state's *Forest Practices Guidelines.* Industry officials say that Best Management Practices are thus already mandatory. If that is true, they shouldn't mind this being clarified in state statutes and regulations.

Official accounts from the N.C. Division of Forest Resources boast of sample surveys, the latest in 1996, showing a compliance rate of up to 95 percent. Unofficial accounts beg to differ. Mickey Henson, who conducted the surveys in his role as hydrologist with the Division of Forest Resources but has since resigned, says the survey sites were not representative. "My surveys were skewed in that they took place after the jobs were complete and did not include many sites where water ran through the property," says Henson. "I would guess that total compliance with BMPs is probably 30 to 40 percent during on-going operations."

If Best Management Practices are implicitly mandatory, the industry should not mind if observance of Best Management Practices is mandated explicitly in the Sedimentation Pollution Control Act. This will aid both in compliance with and enforcement of these guidelines. Increased sedimentation of the state's streams and rivers is one of the greatest environmental threats posed by the increased clear-cutting brought on by stand-alone chip mills. Increased observance of Best Management Practices can mitigate the risk and thus should be made mandatory.

An inducement to export could lead to depletion of the state's forest resources, damage to the environment, and inadequate supplies of both chips and saw timber for domestic industry.

3. The General Assembly's amendments to the Sedimentation Pollution Control Act should include a requirement that commercial timber harvesters notify the Division of Forest Resources of intent to harvest to aid the task of water quality inspectors. Mandatory notification is imposed by Virginia as part of its Silvicultural Water Quality Act and provides a good model for North Carolina to follow. As long as state agencies are assigned the task of education, inspection, and enforcement of water quality laws, they need to know where and when timber harvesting is taking place. Currently, the Division of Forest Resources employs six water quality foresters and is hiring a seventh. Division officers at the county level also conduct site inspections. More than 3,700

from Natural Resources Leadership Institute, Raleigh, N.C.

[15] N.C.G.S. 113A-50.

[16] Report of the Governor's Task Force on Forest Sustainability, June, 1996, p. 7. Available from N.C. Division of Forest Resources, Raleigh, N.C.

[17] 33 U.S. Code Section 1311 et seq.

[18] *Final Environmental Impact Statement, Chip Mill Terminals on the Tennessee River,* Tennessee Valley Authority, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service, TVA/RG/EQS-93/92.

[19] 16 U.S. Code 1531-1543.

[20] 15 N.C. Administrative Code 11.0101- .0209.

[21] Mickey Henson, *Best Management Practices Implementation and Effectiveness Survey on Timber Operations in North Carolina,* N.C. Division of Forest Resources, Raleigh, N.C., 1996, p. 17. Available from N.C. Division of Forest Resources, Raleigh, N.C.

[22] 1999 Va. Acts 10.1-1181.2.

[23] *Kentucky Forest Conservation Act* (Ky. Rev. Stat. Ann. sec. 149. 330-355), fact sheet available from Kentucky Division of Forestry, 627 Comanche Trail, Frankfort, KY 40601.

[24] 16 U.S. Code Section 2103a.

[25] *Woodland Owner Notes No. 23: Enrolling in North Carolina's Forest Stewardship Program,* available from the N.C. Cooperative Extension Service, N.C. State University, College of Agriculture and Life Sciences, Raleigh, N.C.

sites were inspected in 1997–98. Division officials do not know what percentage of actual harvests these inspections represented since notification of harvest is not required. As few water quality inspectors as North Carolina has in the field, their job should be made as easy as possible. Notification of harvest would give the Division of Forest Resources the opportunity to contact the landowner about desirable forest management practices and it would allow for timely inspection of the harvest site.

Virginia law requires loggers to report the location of any harvest of more than 10 acres within three days of beginning work. The state has set up a toll-free number where loggers can call in and leave a message. The number receives about 140 calls per month. Informing the Division of Forest Resources of intent to harvest in order to protect water quality seems a prudent step that would not impede harvests in any appreciable way.

4. The N.C. Division of Forest Resources should develop a plan for enhancing its reforestation program to further the goal of sustainable forestry. The Division should seek funding for the plan, and the governor should include this in the budget proposed for 2001. The only state policy that directly applies to sustainability and reforestation is the Forest Development Program, which provides qualifying private landowners with up to 40 percent cost-sharing for replanting seedlings after a timber harvest. In order to qualify, landowners must comply with Forest Practices Guidelines after a timber harvest. As a first step, the Division of Forest Resources should develop a strategy for assuring that all landowners know about the reseeding program, perhaps by requiring that before commencing a cut, loggers notify landowners in writing of the program's existence.

But it may be that more is needed to sustain the state's forest resource for future generations. Among the possibilities is encouraging longer timber rotations by increasing the percentage of cost-share for replanting for those landowners who are willing to retain the majority of trees on a tract for 40 to 50 years. Such a program would allow some cutting during this time period so the landowner could maintain a stream of income. Yet another idea might be similar to the old federal land bank for farmers—provide qualifying timber owners a cash payment every decade or so for not removing more than a certain percentage of trees. This is not to suggest an age limit for harvesting trees—merely incentives to encourage longer rotations.

These four recommendations will not make chip mills palatable to everyone. They will, however, guard against the threat of wholesale decimation of the state's forests. Ending the tax credit for exporting will insure against the unintended consequence of depleting a precious resource to help the state's ports. Bringing logging operations under the Sedimentation Pollution and Control Act will guard against the worst environmental degradation from poorly managed logging sites. And enhancing the state's reforestation program will assure a ready supply of timber for future generations. Meanwhile, the state must continue to monitor and evaluate stand-alone chip mills to assure that the visual blight created by clear-cutting remains contained and the harvest of timber does not begin to outstrip supply. Should timber harvests exceed a sustainable level, the state will need to revisit the issue of additional regulation of wood chip mills.

—Mike McLaughlin

Special Provisions in Budget Bills: Pandora's Box Is Open Again

by Ran Coble

North Carolina's budget bill for state government has grown so lengthy that some lawmakers don't have time to read it. Yet it is increasingly used to change laws that have nothing to do with the budget. Research by the N.C. Center for Public Policy Research shows that the 1997 and 1998 budget bills contained a record 274 special provisions that are unrelated to the budget. Such late-stage insertions deal with issues as volatile as welfare reform and criminal laws but get little or no public scrutiny. The use of special provisions in the 1999 budget bill plummeted in the wake of the Center's February 1999 report, but the Center recommends that the legislature enact special legislation banning the use of special provisions in its budget bills to prevent a return to old bad habits.

Special Provisions Are Used To Amend Statutes Unrelated to the Budget

In 1998, the 348-page budget bill—longer than Ernest Hemingway's novel, *A Farewell to Arms*—contained 152 special provisions. The Center's research shows this bill included 17 pages of amendments to the Smart Start child care program, 16 pages of new Crime Victims' Rights amendments, 12 pages of amendments concerning governance of the UNC Hospital and health care system, 12 pages of welfare law changes, charter schools amendments, abolition of execution of prisoners by lethal gas, and six pages of changes in criminal law, including a ban on greyhound racing.

In 1997, the 468-page budget bill—longer than William Faulkner's *The Sound and the Fury*—contained 122 special provisions. This bill included 36 pages of welfare reform initiatives, 16 pages of changes in criminal penalties, 15 pages of laws on safe schools, eight pages of Smart Start program amendments, six pages of new laws on childhood lead safety exposure control, and 105 pages reorganizing, transferring, and renaming functions in the Department of Health and Human Services and the Department of Environment and Natural Resources. All of these examples involved substantive changes in the state's laws that should have been debated on their own merits in separate bills.

This is the fourth report the Center has issued on the use of special provisions in budget bills. Earlier reports and public pressure in the 1980s brought a decline in the practice, so that by 1988, there were only 12 special provisions. However, split party control of the House and Senate in 1995–98 caused the practice to increase once again.

"Like an alcoholic who's fallen off the wagon, the legislative budget leaders have gotten drunk on special provisions again," says Center director Ran Coble. "Legislators swore off the use of the tactic in the late 1980s, but the 1997 and 1998 budget bills once again were loaded up with special provisions."

Editors note: Much of this article is excerpted from the executive summary of *Special Provisions in Budget Bills: Pandora's Box Is Open Again*, a special follow-up report by Ran Coble, executive director of the North Carolina Center for Public Policy Research. The report was published by the Center in February 1999.

Definition of Special Provisions

Originally, special provisions were paragraphs added to budget bills to give instructions on how funds were to be spent. Thus, the Center is careful to point out that special provisions could be used in the following *appropriate* ways:

(1) to explain the purpose of an appropriation or express the intent of the General Assembly;

(2) to put limitations or restrictions on the use of funds;

(3) to amend the Executive Budget Act;

(4) to create reserves for funding contingencies that may occur between sessions;

(5) to increase or decrease salaries;

(6) to make funding transfers or revisions; or

(7) to require reporting on expenditures back to the Appropriations Committee.

However, in the last decade, special provisions have lost their link to appropriations and have been used for other purposes. Special provisions are defined in the Center's report as *portions of budget bills* that are used in any of the following *inappropriate* ways:

(1) to amend, repeal, or otherwise change any existing law other than the Executive Budget Act;

(2) to establish new agency programs or to alter the powers and duties of existing programs;

(3) to establish new boards, commissions, or councils or to alter the powers of existing boards;

(4) to grant special tax breaks or otherwise change the tax laws; or

(5) to authorize new interim studies by the General Assembly, executive agencies, or other groups within the budget bill rather than in the normal omnibus bill authorizing interim studies.

The Center's research notes that both the size of budget bills and the use of special provisions have increased rapidly in the last six years. In the 1992 session, the two budget bills were only 62 pages long and contained only 19 special provisions. By 1994, there were 80 special provisions in 190 pages of appropriations bills, and in 1996, there were 101 special provisions in the 213-page budget bill. The 1998 budget contained a record-high 152 provisions in the 348-page bill.

"Like an alcoholic who's fallen off the wagon, the legislative budget leaders have gotten drunk on special provisions again. Legislators swore off the use of the tactic in the late 1980s, but the 1997 and 1998 budget bills once again were loaded up with special provisions."

—RAN COBLE, DIRECTOR
N.C. CENTER FOR PUBLIC POLICY RESEARCH

Problems Caused by Special Provisions

The Center's report says that special provisions undermine the legislative process and the General Assembly as an institution when they are used to amend laws unrelated to the budget. The Center identifies three additional problems. They include:

(A) *Special provisions are used to create new government programs without a separate debate on their merits.* In 1997, the budget bill included a Work First welfare program, a new inspector general's office in the Department of Justice, an internal auditor's office in the Department of Health and Human Services, a new multi-campus community college to serve Anson and Union counties, a fire protection grant program, and a new planning program for safe schools in all local school districts.

In 1998, the budget bill included a new review team on child fatalities, a pilot program for healthy mothers/healthy children, and a pilot program on settlement procedures for alimony and other family disputes. The bill also transferred programs within the executive branch. The Charitable Solicitation Licensing Program was transferred from the Department of Health and Human Services to the Secretary of State, and the State Boxing Commission was transferred from the Secretary of State to the Department of Crime Control and Public Safety. All these new programs may be worthy initiatives, but they should be debated—and approved or rejected—on their own merits.

Table 1. Trends in the Number of Special Provisions in N.C. Budget Bills, 1981–98

In Long Regular Sessions in Odd-Numbered Years			In "Short" Sessions in Even-Numbered Years		
Year	# of Special Provisions	Length of Budget Bill(s) in Pages	Year	# of Special Provisions	Length of Budget Bill(s) in Pages
1981	29	90	**1982**	30	74
1983	65 in 3 budget bills	191	**1984**	87 in 3 budget bills (HB 80, HB 1376, and HB 1496)	119 in 3 bills
1985	108 in 3 budget bills (SB 1, SB 182, and SB 489)	199 in 3 bills	**1986**	57	173
1987	58 in 4 budget bills (HB 1514, HB 1515, HB 1516, and HB 2)	297 in 4 bills	**1988**	12 in 4 budget bills (HB 2641, HB 1859, HB 859, and SB 257)	137 in 4 bills
1989	57 in 5 budget bills (SB 43, SB 44, SB 1042, SB 1124, and SB 1309)	244 in 5 bills	**1990**	29 in 2 budget bills (SB 1426 and SB 1427)	120 in 2 bills
1991	81	230	**1992**	19 in 2 budget bills (HB 1245 and SB 1205)	62 in 2 bills
1993	94 in 2 budget bills (SB 27 and SB 1505)	250 in 2 bills	**1994**	80 in 2 budget bills (SB 1505 and SB 1504)	190 in 2 bills
1995	125 in 2 budget bills (HB 229 and HB 230)	294 in 2 budget bills	**1996**	101	213
1997	122	468	**1998**	152	348

(B) *Special provisions are used to create new state boards, commissions, and councils.* In 1997, the budget bill was used to create a new N.C. Osteoporosis Task Force, a Joint Legislative Health Care Oversight Committee, an Information Resources Management Commission, and an N.C. Postal History Commission. In 1998, legislators used special provisions to create a new Board of Directors for the UNC Health Care System and an N.C. Government Competition Commission. Again, these boards and commissions may be appropriate and needed, but insufficient attention was given to the process of creating boards through special provisions.

(C) *Special provisions are used to create new study commissions outside of the normal decision-*

making process. Some citizens are under the impression that all studies authorized between sessions are in a bill which is usually labeled "An Act Authorizing Studies by the Legislative Research Commission." The 1985 version of this bill authorized 44 such studies, and the 1997 version authorized 50 interim studies.

However, in 1997, the budget bill also included authorizations for studies of state psychiatric hospitals, job training programs, Oregon Inlet stabilization, the allocation of judicial resources, monitoring of adult care homes, and cooperative (agricultural) extension services. In 1998, the budget bill included authorizations for studies on community college tuition, the need for facilities in the university system, whether to increase the pay rate for physicians under the Medicaid program, public defender programs, legal counsel to indigent defendants, special education obligations of the Department of Correction, nursing home beds for veterans, and transportation finance.

Few Other States Allow Special Provisions

Former Lieutenant Governor Robert B. Jordan III tried to curb the use of inappropriate special provisions in 1985 and set up a legislative study commission to examine the practice. At the time, legislators were told by their staff attorneys that 31 other states entirely prohibit substantive legislation in special provisions from being included in appropriations bills. Most states do this through prohibitions in their state constitutions. Nine additional states have at least partial restrictions on special provisions. Thus, the North Carolina legislature is one of only 10 states that allow special provisions unrelated to the budget. In 1986, the state Senate adopted a rule against special provisions in budget bills, but the House of Representatives did not follow suit.

In the last few years, new developments in the political scene—split-party control and a governor with veto power—have led to an increase in the use of special provisions. First, with the Senate being controlled by the Democrats and the House controlled by Republicans in 1995–1998, each house used special provisions to force the other's hand. That is, by inserting controversial changes in law into the budget, each chamber got the other chamber (and party) to consider and enact bills that probably would not have passed on their own. Second, by loading up the budget with special provisions, the legislature probably got some laws enacted that might have been vetoed, had Governor James B. Hunt Jr. been able to consider them on their own. For example, it is doubtful that the welfare law changes allowing county-level welfare experiments—which were inserted into the 1997 budget bill by the Republican House—would have escaped a gubernatorial veto if they had somehow made it through the Senate.

Finally, with so many controversial legislative proposals in budget bills, special provisions probably have lengthened the session and delayed adjournment. In order to adjourn within a reasonable time, the legislature has to spread out its work and tough decisions over the months that it is in session. By postponing many of these tough decisions until the final budget negotiations and making these changes in statutory law part of the budget battle, the legislature is keeping itself in town longer than it has to. It is no accident that the latest adjournment dates in the last decade coincided with the budget bills with record numbers of special provisions.

Legislators should not get all the blame for the increase in special provisions, however. Interviews with legislators and other legislative observers also revealed two other sources of special provisions—lobbyists and the executive branch. Lobbyists sometimes like to use special provisions because they are more easily hidden within a lengthy budget bill. Legislative observers note that executive agencies also send over special provisions as a way to secure last-minute changes in law.

Center Recommendations

To curb this undesirable practice of using special provisions to supplant the regular legislative process, the Center recommends that each house of the General Assembly adopt rules barring the use of special provisions to establish, amend, or repeal statutory law. It also recommends a statutory ban and that the legislature amend the Executive Budget Act to empower citizens to petition the N.C. Attorney General to challenge any special provision establishing, amending, or repealing the law. If the Attorney General declined to pursue the case, the individual citizen would then have the right to sue in Superior Court.

The Center commends the 1999 state Senate leadership for adopting a rule (Rule 42.4) at the start of the session that will curb special provisions if it is enforced by Senate budget leaders. The Center also commends House Speaker Jim Black (D-Mecklenburg) and the three co-chairs of the

Table 2. Prohibitions Against Substantive Legislation (Special Provisions) Being Included in Budget Bills, By State

	Forbid Special Provisions	Regulate Special Provisions	Sources of Prohibition or Regulating Measure
1. Alabama	Yes	N/A	Constitution
2. Alaska	Yes	N/A	Constitution
3. Arizona	Yes	N/A	Constitution
4. Arkansas	Yes	N/A	Constitution
5. California	Yes	N/A	Constitution
6. Colorado	Yes	N/A	Constitution
7. Connecticut	Yes	N/A	Statute and rule
8. Delaware	No	No	N/A
9. Florida	Yes	N/A	Constitution
10. Georgia	Yes	N/A	Constitution
11. Hawaii	Yes	N/A	Constitution
12. Idaho	No	Yes	Constitution
13. Illinois	Yes	N/A	Constitution
14. Indiana	Yes	N/A	Constitution
15. Iowa	No	Yes	Constitution
16. Kansas	Yes	N/A	Constitution
17. Kentucky	?	N/A	Constitution, with court case pending at the time
18. Louisiana	Yes	N/A	Constitution
19. Maine	No	No	N/A
20. Maryland	Yes	N/A	Constitution
21. Massachusetts	Yes	N/A	Statute
22. Michigan	—	—	No response to survey
23. Minnesota	No	No	N/A
24. Mississippi	Yes	N/A	Constitution and House rule
25. Missouri	Yes	N/A	Constitution
26. Montana	Yes	N/A	Constitution and joint rule
27. Nebraska	Yes	N/A	Constitution
28. Nevada	No	Yes	Constitution
29. New Hampshire	Yes	N/A	Constitution

Table 2, *continued*

	Forbid Special Provisions	Regulate Special Provisions	Sources of Prohibition or Regulating Measure
30. New Jersey	Yes	N/A	Constitution
31. New Mexico	Yes	N/A	Constitution
32. New York	No	Yes	Constitution
33. North Carolina	**No**	**No**	**N/A**
34. North Dakota	?	Yes	Senate rule, though state does not use a general appropriation bill
35. Ohio	No	Yes	Constitution
36. Oklahoma	Yes	N/A	Constitution
37. Oregon	Yes	N/A	Constitution
38. Pennsylvania	Yes	N/A	Constitution
39. Rhode Island	No	No	N/A
40. South Carolina	?	Yes	Constitution, court case pending at the time
41. South Dakota	Yes	N/A	Constitution
42. Tennessee	Yes	N/A	Constitution
43. Texas	Yes	N/A	Constitution
44. Utah	Yes	N/A	Constitution
45. Vermont	No	N/A	N/A
46. Virginia	No	Yes	Constitution
47. Washington	No	Yes	Constitution
48. West Virginia	Yes	N/A	Constitution
49. Wisconsin	No	No	N/A
50. Wyoming	No	No	N/A

Source: Gerry F. Cohen, "Survey of Other States Concerning Appropriations Process," Memorandum to the N.C. Senate Select Committee on the Appropriations Process (October 31, 1985), pp. 5–6.

House Appropriations Committee—Representatives David Redwine (D-Brunswick), Ruth Easterling (D-Mecklenburg), and Thomas Hardaway (D-Halifax)—for significantly reducing the number of special provisions in the budget passed by the House in early June. Still, the Center recommends that both houses of the General Assembly amend state statutes to prevent the practice from occurring in future sessions. A bill (Senate Bill 135) filed by Sen. Virginia Foxx (R-Watauga) in the 1999 session would amend state statutes to prohibit use of special provisions in the budget bill for non-budgetary purposes. The Appropriations Committee on Base Budget did not act on her proposal before adjournment.

"The General Assembly has the opportunity

"This report shines a spotlight on special provisions. It tells everybody in North Carolina what they are and why they are dangerous for representative government. . . . [T]he Center for Public Policy Research cast a bright light on the process in a detailed and damning report that is getting attention from legislators and others who follow government."

—D.G. MARTIN
INTERIM VICE CHANCELLOR OF UNC-PEMBROKE AND FORMER LEGISLATIVE LIAISON FOR THE UNC SYSTEM

to halt the use of special provisions in budget bills and restore confidence in the legislature's ability to draw up biennial budgets without piggybacking these special provisions," says Coble. "This could be accomplished by amending state statutes to allow only those items which pertain directly to the budget to be placed in budget bills."

While the House did not change its rules to prohibit special provisions that don't pertain to spending, Jane Gray, legal counsel to Speaker Jim Black, says the 1999 House budget was compiled as though the rules had been changed. "There were no criminal law changes, no welfare reform law changes—none of those things in there that held us up last year." Yet despite the admirable effort on the part of House leadership to limit special provisions in the budget bill, the Center believes the ultimate remedy to prevent a relapse of over-reliance on special provisions is to amend state statutes to prohibit their use.

Reaction to the Center's Report

Media reaction to the Center's report and its recommendations to prohibit non-budgetary special provisions from the state budget was swift and favorable. A total of 42 newspapers published 52 articles and 34 editorials or columns on the subject. In addition, 91 radio stations across North Carolina and at least four television stations covered the report. Among the advocates of reform of the use of special provisions in budget bills was D.G. Martin, interim vice chancellor of the University of North Carolina at Pembroke and former legislative liaison for the University of North Carolina system. "This report shines a spotlight on special provisions," wrote Martin in a column published in more than 20 North Carolina newspapers.[1] "It tells everybody in North Carolina what they are and why they are dangerous for representative government. . . . [T]he Center for Public Policy Research cast a bright light on the process in a detailed and damning report that is getting attention from legislators and others who follow government."

In an editorial titled, "Budget flimflammery," *The News & Observer* of Raleigh, N.C., had this to say: "The provisions—outright laws that legislators slip into the massive budget—are an insult to open government. The practice ought to be stopped, with the provisions going through the normal legislative process of full review."[2] Similar editorials appeared in the *News & Record* of Greensboro,[3] the *Charlotte Observer*,[4] the *Observer-Times* of Fayetteville,[5] and eight other newspapers. As the *News & Record* put it, "Too often, lawmakers craft their bills behind closed doors, then slip them quietly into the thick and densely worded state budget. . . . That's bad government. It subverts the democratic process. And it's happening more and more, as a recent report from the N.C. Center for Public Policy Research reveals. . . . The practice has to stop. Legislators must ban it. Budget bills should deal with the budget, and nothing else."

Copies of the Center's report on *Special Provisions in Budget Bills: Pandora's Box Is Open Again* are available for $15, plus tax, postage, and handling. To order, write the Center at P.O. Box 430, Raleigh, N.C. 27602, call (919) 832-2839, fax (919) 832-2847, or order through the Center's Website at *www.ncinsider.com/nccppr*.

FOOTNOTES

[1] D.G. Martin, "Special provision legislators' shibboleth," *Elkin Tribune*, March 3, 1999, p. 4A

[2] "Budget flimflammery," unsigned editorial, *The News & Observer*, Raleigh, N.C., February 24, 1999, p. 14A.

[3] "Back-room politics subvert democracy," unsigned editorial, *News & Record*, Greensboro, N.C., p. 12A.

[4] "Bloated budget—1998 lawmakers went on another special provisions binge," unsigned editorial, *The Charlotte Observer*, Charlotte, N.C., Feb. 22, 1999, p. 10A.

[5] "A Poisonous Delicacy—Special provisions escape scrutiny," unsigned editorial, the *Observer-Times*, Fayetteville, N.C., Feb. 22, 1999, p. 6A.

Legislative Battle in 1971 Forecasts Key University Issues in 1999 and Beyond

by Carolyn Waller

North Carolina's public university system faces many of the same issues today that it did when it was founded. These issues include how to handle booming enrollment, provide equity in funding among the 16 campuses, improve access to higher education for minorities, prevent independent lobbying by campuses, and keep tuition affordable.

In the 1960s and the 1970s, the state faced a record surge in enrollment from the Baby Boom, which led state legislators to add 10 campuses to the existing six-university system. Similarly, the 1999 General Assembly appropriated $19.5 million this year for enrollment increases as an estimated 48,000 additional students—the children and grandchildren of the Baby Boomers—are expected by 2008. The UNC Board of Governors also sought approval from the legislature for $2.7 billion in state-issued, limited obligation bonds to begin a multi-year building plan, but the bond legislation failed.

Issues Facing University System

It's been said that the only real crystal ball is a rearview mirror, and the 1971 legislation that restructured the university system reveals a lot about higher education's future. The enrollment boom is one of five issues facing the university system now that the Center says are strikingly similar to the issues confronted in 1971. The other four are as follows:

(1) ***How to achieve equity in funding among the 16 campuses***—The university system includes schools as large as N.C. State University with 27,960 students and as small as the N.C. School for the Arts in Winston-Salem with 1,031 students. Funding equity is a long-term issue for the system, and it means different things to different schools. For fast-growing schools such as UNC-Charlotte, it may mean funds to meet enrollment demands, whereas for historically black schools such as N.C. A&T State University in Greensboro, it may mean catch-up funds for decades of racial segregation. The legislature has ordered several studies of equity in funding in the last four years alone.

(2) ***How to improve access to higher education for minorities, especially at the state's five historically black universities*** and the University of North Carolina at Pembroke, a school with roots in providing higher education for Native Americans—One of the first issues faced by the original UNC Board of Governors was racial desegregation. In 1973, a federal district court ordered the system to increase enrollment of black students, upgrade academic programs, and increase funding at the historically black universities. This year, the state budget contains $20 million to meet repair and renovation needs at the five historically black universities, as well as UNC-Pembroke. The budget also grants almost $2 million over two years in additional funding for the Biomedical/ Biotechnology Research Institute at N.C. Central University in Durham.

(3) ***How to prevent each campus from running independently to the legislature for funds*** **or** ***changes in law***—Part of the impetus for the 1971 legislation that restructured university governance was that individual campuses were adding programs and making budget requests without regard to what the other colleges and universities were doing, said the late Kenneth Royall, Jr., a powerful legislator for decades. Royall, who was head of the House Appropriations Committee in 1971, told the Center, "Listening to all 16 institutions and their requests—well, you wanted to be fair. But money was limited. What it came down to back then was who had the best lobbyist."

(Editors note: This article is based on the report *Reorganizing Higher Education in North Carolina: What History Tells Us About Our Future,* published by the N.C. Center for Public Policy Research in June 1999. The report is the first of a four-part study on public university governance funded by a grant from the W.K. Kellogg Foundation of Battle Creek, Mich.)

Recently, the university system was tested when the Kenan-Flagler Business School at UNC-Chapel Hill approached the 1997 General Assembly for a tuition increase without approval by the UNC Board of Governors. Then, in a special provision in the 1998 budget, the legislature transferred key control of the UNC hospital systems from the Board of Governors to a more autonomous board at UNC-Chapel Hill. Later that year, UNC President Molly Broad directed chancellors to submit legislative proposals to a new Public Affairs Committee of the UNC Board of Governors.

(4) ***How to meet the state constitution's mandate for affordable university education while maintaining academic excellence***—The Center says a key piece of the university's heritage is the provision of the state constitution which reads, "The General Assembly shall provide that the benefits of the University of North Carolina and other public institutions of higher education, as far as practicable, be extended to the people of the State free of expense." Thus, even today, North Carolina's average tuition levels are the third lowest in the nation, behind only Nevada and Florida. But for the first time in a decade, the UNC Board of Governors requested that the legislature enact a tuition increase for in-state students, and the legislature agreed.

Restructuring of Higher Education in North Carolina and Other States

The restructuring of the university system took place in a special legislative session in October 1971. Then-Gov. Robert W. Scott proposed the measure, which was opposed by then-UNC President William C. Friday and the 100-member Board of Trustees governing the old Consolidated University system of six campuses. Under the 1971 legislation, 10 campuses were added to the system, local campus Boards of Trustees were retained, and a new 32-member UNC Board of Governors was created to govern the system. This Board has the power to submit a unified budget for all 16 campuses, approve academic programs, and elect the system President and the 16 campus Chancellors.

Since that legislation was enacted, "everyone wants to 'do a North Carolina,'" says Aims McGuinness of the National Council for Higher Education Management Systems. In his book on sources of change in higher education, McGuinness lists eight factors that have led to states' efforts to restructure higher education. The six factors that were present in North Carolina in 1971 were: (1) perceived duplication of high-cost graduate and professional programs; (2) conflict between the aspirations of institutions; (3) legislative reaction to lobbying by individual campuses; (4) proposals to close, merge, or change the missions of particular colleges or universities; (5) concerns about an existing state board's effectiveness; and (6) a proposal for a "superboard" to bring all of public higher education under one roof. Between 1950 and 1970, 47 states established either coordinating or governing boards for public higher education.

Changes in State's Politics and Economy That Affect University Governance

The Center's research shows that North Carolina is one of only two states where the members of the university governing board are elected by the legislature. In addition, the Center says changes in the legislature have led to changes in the debate about higher education. For example, when the university was restructured in 1971, there were only 31 Republicans and two African-Americans among the 170 legislators. Today, there are 69 Republicans and 24 African-Americans. Political observers also note that some partisan cleavages in the legislature are carrying over into UNC Board of Governors elections and meetings and that the Legislative Black Caucus frequently seeks to reorder the Board's priorities and obtain additional funding for the historically black campuses. And, as economic growth speeds up in such cities as Charlotte, Wilmington, and Greenville, the pressure on the UNC Board of Governors for campus funding in these and other areas also rises. Finally, in 1971, 26 percent of state legislators received their undergraduate degrees from UNC-Chapel Hill. In 1999, that figure has declined to 15 percent.

Still, the university system has maintained its share of General Fund appropriations. In 1965–66, the university received 13 percent of General Fund appropriations, and in 1997–98, it received 13.3 percent. This commitment of funding levels for the university system has been maintained despite renewed legislative interest in and funding for public school reform and the community college system in recent years.

Copies of *Reorganizing Higher Education: What History Tells Us About Our Future* are available for $20.00, including sales tax, postage and handling. To order, write the Center at P.O. Box 430, Raleigh, NC 27602, call (919) 832-2839, fax (919) 832-2847, or order on the Center's website at: *www.ncinsider.com/nccppr*.

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