Health Status and Needs Assessment of Latinos in Maine: Final Report

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Background

Throughout the history of data collection by state and federal governments regarding Maine's citizens, Maine's population has been understood to be predominantly white. However, awareness is growing regarding Maine's racial and ethnic minority communities and their unique characteristics, community assets, and service needs. The Maine Bureau of Health established its Health Disparities Initiative in early 2001 out of the Bureau's commitment to thoroughly understand and respond to disparate health outcomes experienced by various populations and/or communities in Maine. Due to the long and well documented history of health disparities experienced by racial and ethnic minorities in the U.S., and the national commitment to eliminate these disparities by 2010, it was decided to focus first on racial and ethnic minority populations in Maine.

Although very homogenous (97% Non-Hispanic white in 2000), Maine's population trend is toward increasing racial and ethnic diversity. Among its fastest growing minority populations are Latinos or Hispanics. Latinos in the U.S. have traditionally tended to settle in urban areas (1), while Maine, as a largely rural state with a primarily agricultural economy, had perceived itself as relatively ethnically homogenous, without great need for multicultural health data surveillance. However, Maine's growing provision of services to its migrant and seasonal farmworker population of thousands per year (2) is another factor in seeking a better understanding of health status and service utilization among migrant Latino workers, and if possible, distinguishing demographic and health characteristics of these Latinos from non-migrant Latinos throughout Maine. The needs assessment that follows was undertaken by the Bureau of Health in an effort to consolidate and disseminate information regarding Maine's diverse Latino communities.

It is hoped that this needs assessment will:

- Identify current health care needs and/or barriers to care;
- Encourage public and private agencies to allocate resources in order to best meet Latino health needs; and
- If appropriate, seek additional resources to meet needs that may not have previously been recognized.

Goals and Methods

The goals of this health needs assessment and analysis of the Latino population of Maine are:

- To provide an overview of the population's health status;
- To identify priority health needs;
- To identify health resources and assets;
- To identify health service/resource gaps; and
- To identify possible areas for action to improve the health of Latino residents of Maine that could be taken by the Maine Bureau of Health.

The assessment and analysis were guided by the epidemiological approach to community needs assessment (3). Specific methods included:

- Review of population data on socioeconomic status, natality, morbidity and mortality data. All data were compared to Maine's non-Latino population for reference purposes.
- Review of Behavioral Risk Factor Surveillance Systems (BRFSS) data gathered by the Maine Bureau of Health.
- Review of Pregnancy Risk Assessment Monitoring System (PRAMS) data gathered by the Maine Bureau of Health.
- Interviews with key informants.

Fortunately, definitions of Latino and Hispanic are uniform across data sources generated by the federal government, which includes census data, BRFSS data, and PRAMS data. "Hispanic" and "Latino" are considered synonymous within federal government data sources (4, 5), and refer to people of Mexican, Mexican American, Chicano, Puerto Rican, or Cuban origin, as well as "other Spanish/ Hispanic/ Latino" with ethnic origins from Spain, Spanish-speaking Central or South America, the Dominican Republic, etc. (4). "Origin" refers to the heritage, nationality group, lineage, or country of birth of the person or the person's parents or ancestors before their arrival in the United States (4). Finally, data presented here from the Pregnancy Risk Assessment Monitoring System (PRAMS) refer to Latino or Hispanic *ancestry,* which the federal government considers synonymous with *ethnicity* (6). To address confusion in earlier years regarding the concept of *race,* the 2000 Census clearly defines Latino or Hispanic *ethnicity* as separate from *race* (4).

Limitations

A number of important potential limitations related to the interpretation of the findings of this assessment and analysis must be noted at the outset. First and foremost, the Latino population in Maine is relatively small—9360 individuals per the 2000 U.S. Census, or 0.7% of the Maine population. As a result, the number of health-related events (births, illnesses, deaths) is relatively few each year and is often statistically unstable. In order to address this problem, natality and mortality data were grouped into five year time periods to enhance their stability and improve the ability to interpret trends. Even so, all underlying numbers are small and should be interpreted with caution. The same caution should be applied to data from two additional studies included in our analysis. The Centers for Disease Control (CDC)-funded Pregnancy Risk Assessment Monitoring System (PRAMS) represents cumulative responses from approximately 300-500 Maine Latinas during the periods of 1988 to 1991, 1992 to 1995, and 1996 to 1999 (7). Similarly, the CDC-funded Behavioral Risk Factor Surveillance System (BRFSS) data represent telephone survey responses from 230 Latino/a residents of Maine between 1996 and 2000 (8). An additional limitation of BRFSS data for assessing this population may be the population sampled for this survey. BRFSS is a telephone survey of Maine residents age 18 and older and is only conducted in English. While it will provide useful data for year-round Latino residents, this methodology will not sample people without telephones, people with limited English proficiency, and/or the large number of migrant Latinos who come to Maine as temporary workers.

A further limitation is the strong possibility that Latino ethnicity from the vital records may be underreported on Maine birth and death certificates. A number of studies (9-11) have documented that in a significant number of death certificates in the U.S., race/ethnicity is improperly recorded. Current work being undertaken by the Maine Bureau of Health in collaboration with Maine's American Indian tribes and bands is establishing the extent of racial coding errors on death certificates in Maine for Indian people. When using mortality data as one measure of health problems in a population, this error may have the effect of underestimating the impact of a disease or health problem on this population in which the deaths are misclassified. The implications for this needs assessment are discussed in the **Recommendations** section of this report.

Additional complexity in data interpretation is due to issues of *residence* and *migration* of Latinos, who have tended during the past decade to be significantly more mobile than other ethnic groups (12). Mobility and migration among Latinos may result in ambiguity regarding completion of census forms as a Maine resident, and/or exclusion from census data of temporary residents that may

ultimately remain in Maine. These issues are discussed further in the **Conclusions** section of this paper.

A further potential limitation regarding this needs assessment is the limited time and resources available for the assessment. While every effort was made to be thorough and comprehensive, the lack of resources did have the effect of limiting the type and extent of data gathering and analysis activities. For example, key informant interviews were largely limited to professionals working with discrete subsets of Maine's Latino population (e.g., migrant farmworkers; Latinos with pressing legal needs; Latinos served by a Portland homeless shelter; etc.). Additional time and resources would have allowed us to more fully explore differences in health status, health behaviors, culture, etc. between various Latino communities in Maine: e.g., migrant versus non-migrant, northern versus southern, permanent versus temporary resident, etc.

As implied above, the Maine Bureau of Health was challenged in assessing Latino health needs by the geographic and sociocultural heterogeneity of Maine's Latino population. Information and data regarding more vulnerable Latino populations such as migrant farmworkers was more readily available than data regarding other less well-defined Latino groups. The authors are hopeful that the following needs assessment will generate further dialogue and shared understanding regarding the demographic characteristics and health needs of various Latino populations within Maine.

Overview of Latinos in Maine

Maine, the largest state in New England, has approximately 1.3 million residents (4). Taken as a whole, Maine residents are relatively poor, as compared to national and regional averages, and live primarily in rural settings. The vast majority (96.9%) of Mainers are Non-Hispanic White, with the largest ethnic and racial minority groups in the population being Hispanic (0.7%) and Asian-Pacific Islander (0.7%), followed by Native American (0.6%) and African-American (0.5%). In 2000, approximately 1.0% of Maine residents identified themselves as belonging to more than one racial group (4).

Of the 9,360 Mainers who described themselves as Hispanic or Latino, the greatest number Cumberland (2,562) and York Counties (1,301.) Two Maine's counties (Androscoggin and Cumberland) have the highest reported proportion of Latino residents at 1% of their populations (see Figure 1.) There are concentrations of Latinos in the cities of Lewiston and Portland and the towns of Turner and Orland (13)**.**

While the census reports smaller numbers and percentages of Latinos in Aroostook and Washington Counties (441 and 274 individuals, respectively) (4), it must be remembered that census numbers exclude migrant and seasonal agricultural workers. These seasonal workers number in the thousands in these two counties at times during summer, and the majority of these Maine residents are Latino.

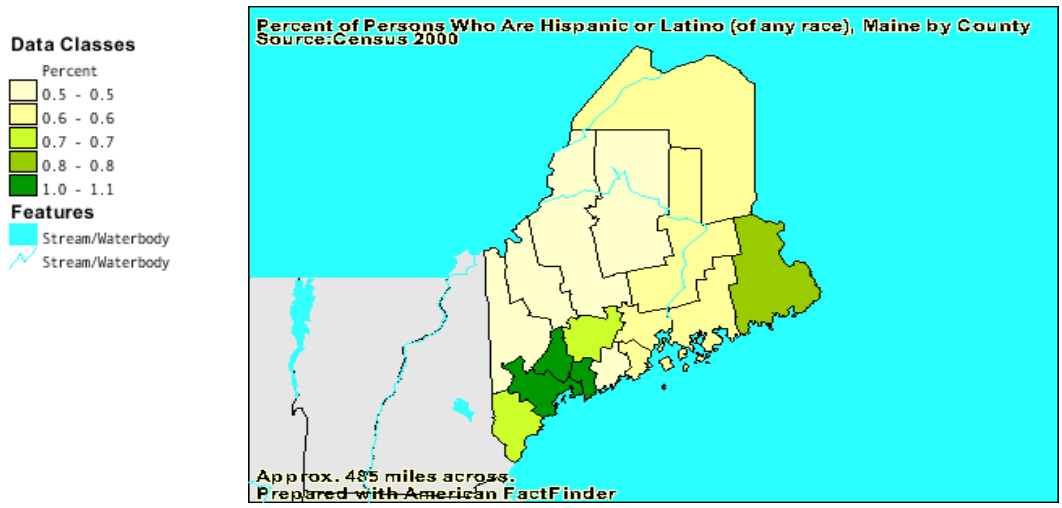
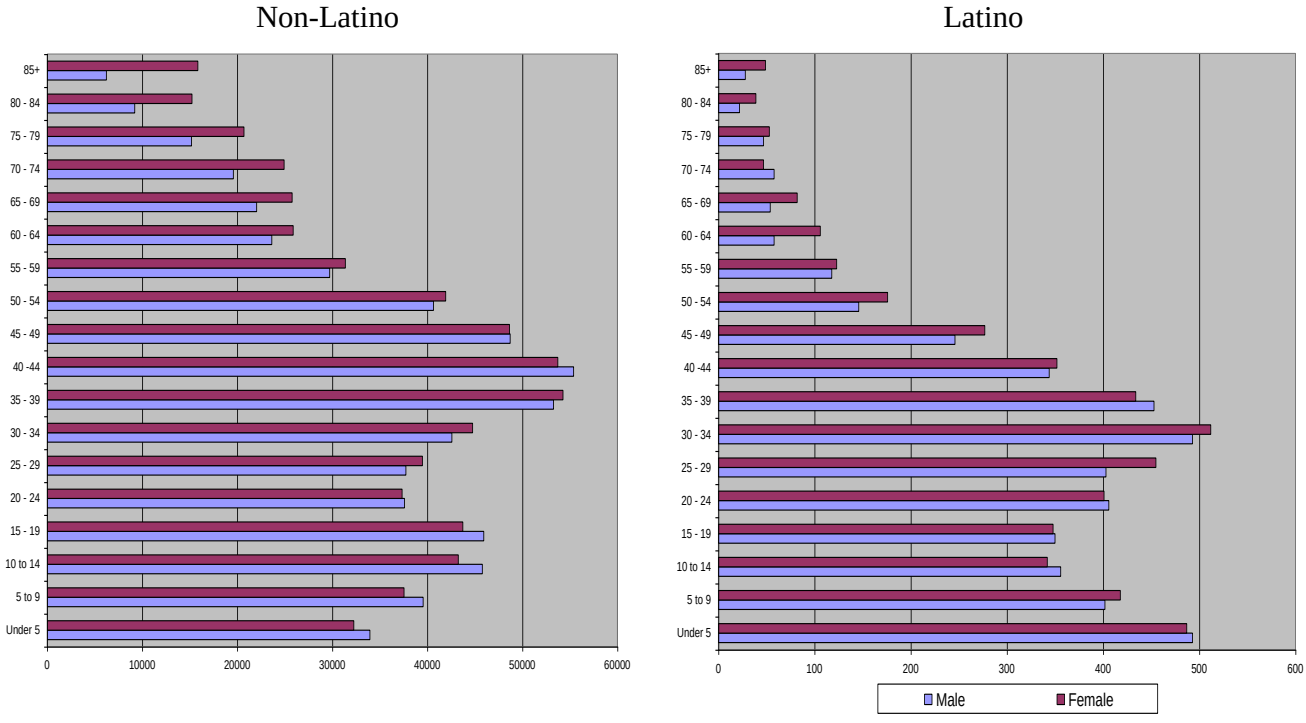


Figure 1: Distribution of Latinos by Maine County

Population Comparisons, 1999

The Latino population in Maine is younger than the general population (see Figure 2, below). The population distribution of Maine Latinos is similar to distributions of developing nations, with higher numbers of children and lower numbers of older adults than in the non-Latino population in Maine.



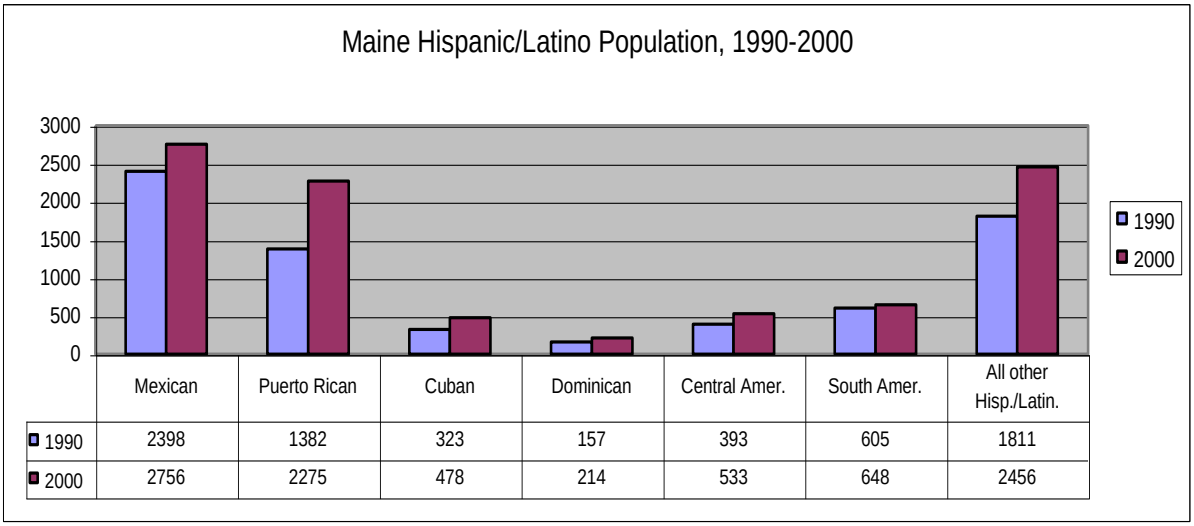
Source: US Census Bureau, 2000 Census of the Population

Figure 2: Latino and Non-Latino Population Distributions, 1999

Nearly half (44%) of Maine Latinos are under 18 years old (4). Interestingly, there is no rural/urban differential in the distribution of Maine Latino children across Maine's counties (4).

The national origin of Latinos in Maine is highly diverse. As illustrated in Figure 3, the largest numbers of Maine Latinos report Mexican and Puerto Rican national origin. While the 2000 Census reports that Puerto Ricans represent the greatest rate of growth at 39.3% (4), several key informants dispute this report, believing that Central Americans are the most rapidly growing group in Maine (14) and that non-Mexican Central Americans comprise much of the current Latino population (15-17). Unfortunately, national origins of the large "all other Hispanic/Latino" category of census respondents are unknown. Among all of Maine's foreign-born residents, 2197 report having been born in Latin America (4).

In 2000, almost 10% of Maine Latinos (n=916) identified themselves as belonging to two or more races (4).



	Mexican	Puerto Rican	Cuban	Dominican	Central Amer.	South Amer.	All other Hisp./Latin.
1990	2398	1382	323	157	393	605	1811
2000	2756	2275	478	214	533	648	2456

Source: US Census Bureau, Census of the Population, 1990 and 2000

Figure 3: National Origins of Maine Latinos

Socioeconomic Comparisons

Since year 2000 census data were not available by race and ethnicity at the time of this report, we present socioeconomic data on Maine Latinos from a number of different sources including: the 1990 census, Behavioral Risk Factor Surveillance System (BRFSS) and the Pregnancy Risk Assessment Monitoring System (PRAMS), and utilization data from the Maine Migrant Health Program.. Table 1 below summarizes the 1990 US Census data regarding income, education, and employment of Latinos and non-Latinos in Maine (18).

Regarding income, these data sources present different pictures of the Maine Latino population, some complementary and some not. From the US Census we note that, while per capita incomes were lower in 1990 among Latinos than among Mainers as a whole, a smaller percentage of

Latino-headed households earned less than $15,000 than Maine households overall[1] (18) Household income are similar (p=0.86) among Maine Latinos and non-Latinos, with 21.8% and 23.6% of households reporting incomes of $50,000 or more, respectively (8.) In contrast, 91% of migrant farmworkers served by the Maine Migrant Health Program in 2000, approximately 70% of whom are Latino, reported incomes below 100% of poverty; less than 1% reported living above 200% of poverty (1, 20).

Maine PRAMS survey data from 1996-1999 (represents 603 Latina women) indicated that 92.7% of Latinas received income from a job or business (CI 86.0-99.5) compared to 92.1% of non-Latinas (CI 89.1-91.1) (7). Data also showed that statistically similar proportions of Maine Latinas (25.5%, CI 13.0-38.0) and non-Latinas (20%, CI 18.7-21.3)received some form of public assistance such as Temporary Assistance to Needy Families (TANF). Data were also statistically similar for Latinas (7.3%, CI 0.0-14.8) and non-Latinas (6.8%, CI 6.0-7.6) receiving unemployment benefits (7).

Census data in 1990 reflected lower education levels among Maine Latinos than among other Mainers, with fewer Latinos having completed both high school and college than Mainers overall (18). Recent national census data suggest that Central Americans complete fewer years of education than all other foreign-born groups, with 62.7% not having completed high school (4). However, while lower education levels are generally associated with unemployment, 1990 data show a dramatically lower rate of unemployment among Latinos than among other Mainers.

Table I: Social Characteristics Comparison, 1990		
	Maine Non-Latino	Maine Latino
Education, age 25+		
High School or higher	78.8%	66.5%
BA or higher	18.8%	15.6%
Income		
Per capita	$12,957	$9,946
Percentage of households with income < $15,000	24.9%	22.4%
Employment, age 16+		
In labor force	65.6%	72.0%
Unemployed	6.5%	0.83%

Source: US Census Bureau, Tables QT-P1,PO72, PO83, PO59, DP-2, DP-4, P116A. 1990 Summary Tape File 3.

Year 2000 US Census housing data were released by race and ethnicity at this writing. As shown in Table II, the 2000 US Census reports that Latino households and families in Maine are generally larger than those of Mainers overall, with greater numbers of children present. Data regarding household composition should generally be interpreted with caution given probable undercounts of Latinos by the US Census due to non-response by Latino individuals and families within multi-family households (14).

Although some informants believe that southern Maine's Latino population is fairly fixed (15), others believe it to be very mobile (16). Staff of Portland's Preble Street Resource Center note that an increasing number of Portland's Latino men live alone at the Oxford Street homeless shelter

[1] This may reflect a number of male workers residing without their families, as observed in Portland (15).

while employed full-time—sometimes using false residence documents—and send income to families in their home countries, leaving them in abject poverty, yet ineligible for public assistance (15).

Table II: Household and Family Composition, 2000		
	All Maine	Maine Latino
Total households	518,200	2,475
Average pop. per household	2.4	2.7
Average pop. per family	2.9	3.2
Family households	65.7%	67.6%
With own children < 18 yrs.	30.4%	44.6%
Female householder	9.5%	15.3%
65+, living alone	10.7%	4.9%

Source: 2000 US Census, Table GCT-P7: Households and Families.

The 2000 US Census reports that 9,611 Maine residents speak Spanish at home, and that an estimated 17% of these have limited English proficiency (4). In 1997-98, 10% of non-native English-speaking children in Maine spoke Spanish (n=348) (18). Highest concentrations of Spanish-speaking students were in Caribou (n=83) and Turner (n=71) (19). In 1998-99, 289 children in public schools, or 11% of non-native English speaker, spoke Spanish; in 1999-2000, 343 children in public and private schools, or 12% of non-native English speakers, spoke Spanish (19). Data from the City of Portland's school-based clinic program show that 2065 Hispanic children, or about five percent of all children, were served at Portland schools during the 2000-2001 school year (20).

Migrant and seasonal farmworkers (MSFW), probably the Maine Latino population about which most is known, reside in Maine for one or more seasons in order to plant, harvest, and/or produce agricultural products. According to the Rural Health Centers of Maine's Migrant Health Program (MMHP), which provides federally-funded health services to these workers, 63% of MSFW were of Hispanic origin in 2000 (1). Furthermore, because 16% of workers did not report their ethnicity (ibid.), the actual number of Hispanic MSFWs may be significantly higher. In Androscoggin County, approximately 700 MSFWs harvest apples each year from August to October, and 300 seasonal workers harvest eggs; in Aroostook County from May to November, 400 to 600 MSFWs harvest broccoli; and in Washington County, approximately 10,000 MSFW harvest blueberries in July and August (ibid.). (It should be remembered that a small number of these workers are non-Hispanic.) Many of Maine's MSFW are believed to travel to Maine from Florida, Texas, and Mexico (20). Under the H2A visa program, MSFWs are contracted as individuals to work a specific harvest; most are men traveling without their families (ibid.).

In keeping with census data reflecting a younger Latino population than that of Maine overall, the MMHP reports that only 1% of migrants served in 2000 were over the age of 65, and that 23% of those using their services were under 15 years old (1). Migrant workers are predominantly poor, with 91% of those using MMHP services living at or below 100% of poverty (ibid). Among migrant seasonal farmworkers nationwide, most of whom are Latino, almost 50% have fewer than nine years of education (21).

The Maine Migrant Health Program provides fixed, mobile, and contracted health care to workers and their families in all regions listed above (discussed further in the **Resources** section of

this paper). A discussion of major health issues affecting migrant workers in Maine, as well as a discussion of barriers to health care among migrants, is presented later in this paper.

Natality Comparisons

Table III: Natality Comparison		
	Maine Non-Latino	Maine Latino
Live Births per 1,000 population:		
1979-1983	14.6	12.5
1984-1988	14.3	15.3
1989-1993	13.4	15.7
1994-1998	11.2	14.2
Births < 2500 grams % of all births		
1979-1983	5.3%	4.9%
1984-1988	5.1%	6.1%
1989-1993	5.2%	4.9%
1994-1998	5.9%	6.3%

Source: Office of Data Research and Vital Statistics, Maine Bureau of Health, 2002

The birth rate in Maine has been consistently higher among Latinas than among non-Latinas since 1984. While it appears that the rate of low birth weight infants has fluctuated much more among births to Latina women than to non-Latinas since 1979, this apparent instability may simply be the result of a very small number of low birthweight babies born to Latinas—a total of 108 births under 2500 grams during the entire 20-year study period, compared to 16,913 births under 2500 grams to non-Latinas (22). Infant mortality rates are likely to be similar to the non-Latino population (see Table IV.), although the absolute number of infant deaths are so small (four deaths among 1,921 live births in the twenty year study period) that no inferences can be clearly made.

Table IV: Infant Mortality Comparison		
	Maine Non-Latino	Maine Latino
Infant deaths per 1,000 live births:		
1979-1983	9.5	0.0
1984-1988	8.4	0.0
1989-1993	6.3	7.3
1994-1998	5.7	0.0

Source: Maine Bureau of Health, Office of Data Research and Vital Statistics, 2002

Table V: Teen Birth Comparison		
	Maine Non-Latina	Maine Latina
Birth rate per 1,000 females 15 to 19 years old:		
1979-1983	45.5	35.5
1984-1988	41.8	35.5
1989-1993	41.5	38.5
1994-1998	32.6	46.7
Mean age of teen mothers:		
1979-1983	17.9	18.1
1984-1988	17.9	17.8
1989-1993	17.9	17.8
1994-1998	17.9	17.7

Source: Office of Data Research and Vital Statistics, Maine Bureau of Health, 2002

While the birth rate to Latina teen mothers was lower than that of non-Latina mothers initially, it increased over the past five year period while births to non-Latina teens fell sharply. Again, these data may or may not reflect a change, as there are a small absolute number of births to teen Latinas (n=240 over the twenty year period.) The mean age of teen mothers is similar in both groups.

Perinatal Health: Maine Pregnancy Risk Assessment Monitoring System

The Maine Pregnancy Risk Assessment Monitoring System (PRAMS) survey revealed information about timing and frequency of prenatal and infant care (7). As detailed in Table VI below, the percentage of Latinas receiving prenatal care in the first trimester is statistically similar to that of non-Latinas. However, the percentages remain fairly stagnant for Latinas while the percentage of non-Latina women receiving prenatal care in the first semester appears to be increasing over the twelve year period, indicating that there may be a gap developing between the two groups.

Similarly, the percentages of Latinas and non-Latinas reporting four or more well child visits for their infants are not statistically different. The percentages of all women reporting four or more well-child visits declined sharply after 1995, with the rate of Latinas receiving four or more visits declining by almost 65%, compared to 58% among non-Latinas.

All of these data must be interpreted with caution due to small number of Latina respondents each year.

Table VI: Access to Prenatal and Well-baby Care (PRAMS)		
	Non-Latina Percent 95% Confidence Interval	**Latina** Percent 95% Confidence Interval
Percent of women accessing prenatal care during the first trimester of pregnancy:		
1988-1991	70.9 (CI 69.2- 72.5)	69.5 (CI 50.1- 89.0)
1992-1995	77.2 (CI 75.6- 78.8)	65.6 (CI 50.2- 81.0)
1996-1999	83.1 (CI 81.9- 84.3)	71.1 (CI 57.6- 84.6)
Percent of Infants receiving four or more well-child visits:		
1988-1991	24.8 (CI 23.2- 26.4)	37.5 (CI 16.8- 58.3)
1992-1995	35.1 (CI 33.2- 37.0)	39.3 (CI 23.2- 55.3)
1996-1999	14.6 (CI 13.4-15.7)	13.9 (CI 4.0- 23.8)

Source: Office of Data Research and Vital Statistics, Maine Bureau of Health PRAMS data, 2002

During years 1996-1999, non-Latina and Latina respondents who received care after their first trimester of pregnancy cited several reasons for obtaining later care. Numbers of women stating that they *could not get an earlier appointment* were similar (34.1% of non-Latinas, CI 30.0-38.2, and 35.9% of Latinas, CI 13.7-58.0), as were the number of respondents who reported *financial or insurance barriers* (non-Latinas 15.1%, CI 11.9-18.2, Latinas 6.4%, CI 0.0-18.2). Other barriers, including: *late awareness of pregnancy* (Non-Latinas , 35.1%, CI 31.0-39.3, vs. Latinas, 29.5%, CI 8.7-50.3); *lack of transportation to care* (6.4%, CI 0.0-18.2 of Latinas reporting this barrier, vs. 3.8% of non-Latinas; CI 2.1-5.5); and *lack of child care* (5.6%, CI 0.0-15.8 of Latinas, vs. 2.7% of non-Latinas, CI 1.1-4.2) were all identified by statistically similar proportions of Latina and non-Latina women. No questions were asked and, hence, no specific data were available on cultural or language barriers to early care .

PRAMS data from 1996-1999 also revealed information regarding prenatal care financing. **The most striking and statistically significant difference in financing data concerned *insurance status.*** While 62.6% of non-Latinas paid for care with private health insurance (CI 61.0-64.2), only 39.3% of Latinas were privately insured (CI 25.6-53.1). Other major sources of prenatal care financing among Latinas included Medicaid (39.6%; CI 32.4-35.5) and military coverage (17.1%; CI 6.4-27.8). (The US Census indicated that in 1990, 9.8% of Maine Latinos were serving in the Armed Forces). (4). Personal income was used by 7.1% of Latinas to pay for prenatal care (CI 0.0-14.4).

Sites at which Latinas received care for their ill infants, as reported in the 1996-1999 PRAMS surveys were statistically similar to non-Latinas. These included *private physician offices* (65.9%, CI 47.1-84.6, vs. 76.3% of non-Latinas, CI 74.2-78.4); *rural health centers* (13.9%, CI 0.0-28.0, vs. 6.7% of non-Latinas, CI 5.5-7.9); *hospital emergency rooms* (11.8%, CI 0.0-24.6, vs. 20.1% of non-Latinas, CI 18.1-22.0), *health department clinics* (8.9%, CI 0.0-20.3, vs. 0.9% of non-Latinas, CI 0.4-1.3), and *hospital clinics* (5.3%, CI 0.0-14.1, vs. 8.3% of non-Latinas, CI 7.0-9.7).

Table VII below details risk factors for poor maternal and child health outcomes as reported by the respondents on 1988-1999 PRAMS surveys. Rates of smoking tobacco and drinking alcohol

during the last three months of a pregnancy are statistically similar between Latinas and Non-Latinas, as is physical abuse during the pregnancy.

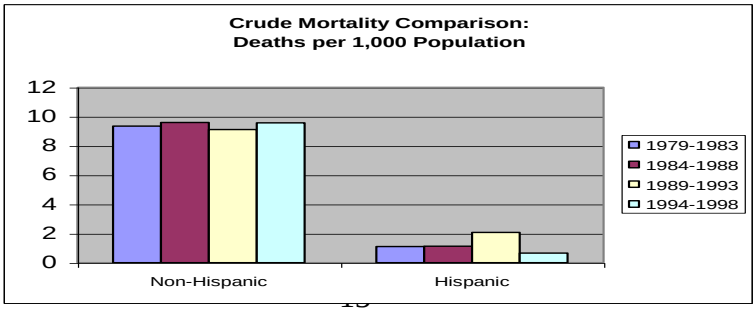
Table VII: Maternal Risk Factor Prevalence (PRAMS)		
	Non-Latina	Latina
Smoking during last 3 months of pregnancy		
1988-1991	25.6% (CI 24.0-27.2)	27.0% (CI 8.6- 45.4)
1992-1995	20.7% (CI 18.8- 22.6)	13.9% (CI 0.8- 27.1)
1996-1999	19.5% (CI 18.2- 20.7)	13.6% (CI 3.8- 23.5)
Drinking during last 3 months of pregnancy		
1988-1991	11.5% (CI 10.4- 12.7)	20.3% (CI 2.8- 37.8)
1992-1995	7.4% (CI 6.2- 8.6)	3.9% (CI 0.0- 10.1)
1996-1999	5.2% (CI 4.5- 5.9)	5.2% (CI 0.0- 11.9)
Physical abuse during last pregnancy by husband/partner		
1996-1999	2.5% (CI 2.0-3.0)	4.6% (CI 0.0- 10.6)
By someone other than husband/partner		
1996-1999	0.9% (CI 0.6- 1.3)	3.0% (CI 0.0- 7.8)

Source: Office of Data Research and Vital Statistics, Maine Bureau of Health, 2002

It is important to note that PRAMS is a mailed, written survey. Literacy is a central element determining the completion and accuracy of mailed surveys. While the PRAMS survey is available in Spanish, completion of forms requires literacy in Spanish. These factors may result in exclusion of Latinas that cannot read and/or understand either English or Spanish from the PRAMS survey. Furthermore, migrant Latinas who lack mailing addresses in Maine are likely to have been excluded from the PRAMS survey.

Mortality Comparison

Figure 4 presents crude death rates per 1,000 population among Maine Latinos (Hispanics) and non-Latinos. Consistent with a younger population, crude death rates among Maine Latinos (Hispanics) over the twenty-year reporting period are much lower than those of non-Latinos, averaging 1.24 deaths versus 9.40 deaths among non-Latinos per 1,000. (22)



Source: Office of Data Research and Vital Statistics, Maine Bureau of Health, 2002

Figure 4: Crude Mortality Comparison

Life expectancy among Maine Latinos appears to be shorter than that of non-Latino Mainers. Mean and median ages at death are compared for the two groups for each five-year period in Table VIII. While non-Latino mortality data indicate a steady trend toward longer life expectancy with each subsequent five-year period, no such trend exists in Maine Latinos. Analysis periods reflecting mortality from 1989-1998 actually show shorter life expectancy for Latinos than in earlier years. However, caution should be exercised in interpreting the data below given the very small numbers of Latino deaths in Maine (162 deaths between 1979 and 1998) and the possibility of ethnic miscoding of death certificates, as discussed further in **Conclusions**.

Table VIII: Age at Death Comparison

	Maine Non-Latino		Maine Latino	
Mean and median age of all decedents, all causes:	Mean	Median	Mean	Median
1979-1983	70.8	74.0	65.5	69.0
1984-1988	72.3	76.0	56.7	55.5
1989-1993	73.1	77.0	62.4	68.0
1994-1998	74.3	78.0	60.4	65.0

Source: Maine Bureau of Health, Office of Data Research and Vital Statistics, 2002

Crude numbers of deaths to Maine Latinos by 32-Cause Grouping are detailed in Table IX. Leading causes of death for Maine Latinos have been converted to age-adjusted rates and compared to age-adjusted rates for Maine non-Latinos in Table X.

Table IX: Deaths to Maine Latinos by 32-cause grouping 1979-1998				
CAUSE	1979-1983	1984-1988	1989-1993	1994-1998
INFECTIOUS & PARASITIC DISEASES (001-139)			3	3
MALIGNANT NEOPLASMS (140-208)	5	8	20	8
BENIGN NEOPLASMS (210-239)				
DIABETES MELLITUS (250)			3	
NUTRITIONAL DEFICIENCIES (260-269)				
ANEMIAS (280-285)				
MENINGITIS (320-322)				
HEART DISEASE (390-398,402,404-429)	11	5	22	5
HYPERTENSION (401, 403)				
CEREBROVASCULAR DISEASE (430-438)	4	2	3	2
ATHEROSCLEROSIS (440)				1
OTHER DIS ARTERIES & CAPIL (441-448)	1			
ACUTE BRONCHITIS & BRONCHIOLITIS (466)			1	
PNEUMONIA AND INFLUENZA (480-487)	2		1	
CHRONIC OBSTR PULMONARY DIS (490-496)	1	1	1	
ULCER OF STOMACH & DUODENUM (531-533)				
APPENDICITIS (540-543)				
ABDOM HERNIA & INTEST OBS (550-553,560)			1	
CHRONIC LIVER DIS & CIRRHOSIS (571)	1	2	1	
CHOLELITHIASIS & GALLBLADDER DIS (574-575)				
NEPHRITIS,NEPH SYND & NEPHROSIS(580-589)				
KIDNEY INFECTIONS (590)				
HYPERPLASIA OF PROSTATE (600)				
COMPL OF PREG, CHILDBIRTH & PUIR (630-676)				
CONGENITAL ANOMALIES (740-759)			1	
PERINATAL CONDITIONS (760-779)				
SYMPTOMS, SIGNS & ILL-DEF COND (780-799)		1	1	
ALL OTHER DISEASES (RESIDUAL)		4	4	5
ACCIDENTS & ADV EFF (E800-E949)	1	6	8	3
SUICIDE (E950-E959)	3	3	2	
HOMICIDE & LEGAL INTERV (E960-E978)		2		
ALL OTHER EXTERNAL CAUSES (E980-E999)				
ALL CAUSES	** 29	** 34	** 72	** 27

Note: 1979 data were unavailable, so data for 1980 were substituted.
Source: Maine Bureau of Health, Office of Data Research and Vital Statistics, 2002

By far the most prevalent causes of death among Maine Latinos during the 20-year period are malignant neoplasms (41 deaths) and heart disease (43 deaths). Together, these two causes of death alone comprised 52% of deaths among Maine Latinos between 1979-1998.

Age-adjusted rates from *all major causes* listed above are strikingly lower among Latinos in Maine than among non-Latinos. As Table X shows, cardiovascular disease and heart disease were the two major causes of death for both groups during 1994 to 1998, but rates among Latinos were

89% and 91% lower, respectively, than those of Mainers overall. Reasons for this wide discrepancy in age-adjusted death rates are unknown, but certainly warrant further investigation, and may be due to consistent underclassification of deaths as occurring among Latinos (see **Conclusions**, below).

Table X: Mortality Comparison
(Age-Adjusted Deaths by Cause per 100, 000 Population)

Cause	1979-1983		1984-1988		1989-1993		1994-1998	
	Non-Hispanic	Hispanic	Non-Hispanic	Hispanic	Non-Hispanic	Hispanic	Non-Hispanic	Hispanic
Lung cancer	54.8	7.0	59.1	12.9	65.7	39	66	11.6
Breast cancer	33.2	12.8	32.2	32.6	31.7	12.8	29.1	7.5
Diabetes	15.3	0.0	18.1	0.0	22.4	21.6	23.8	0.0
Cardiovascular disease	504.1	149.6	465.8	57.3	378.8	198.0	350.0	38.5
Heart disease	384.8	105.0	363.6	39.8	294.5	173.9	269.6	25.4
Cerebrovascular disease	81.2	34.6	68.3	17.5	57.9	24.2	57.0	7.4
Motor vehicle accidents	19.1	3.3	18.0	19.7	15.5	7.6	14.6	3.5
Suicide	13.7	12.1	13.3	21.7	13.2	9.0	13.0	0.0

Note: 1979 data were unavailable, so data for 1980 were substituted.
Source: Maine Bureau of Health, Office of Data Research and Vital Statistics, 2002

Morbidity and Other Health Concerns

Unfortunately, both ambulatory care data and hospital discharge data regarding Latino ethnicity are largely unavailable in Maine. This problem is discussed at length in **Conclusions**, below. Only Maine Migrant Health Program ambulatory care data could be obtained for this report.

In 1999, the most frequent medical diagnoses among ***migrant and seasonal farmworkers*** served by the Maine Migrant Health Program were: eye conditions, otitis media, back pain, dermatitis, and herpes. (23). The MMHP specifically identifies dental care as an urgent current service need within the migrant community, for while funding for services is adequate, the number of dentists is not (24). Nationally, central health concerns for MSFW include severe dental problems, infant mortality, exposure to pesticides, occupational injury, mental health and substance abuse issues, TB, STDs/HIV, malnutrition, diabetes, and hypertension (22), and these too are cited as prevalent among Maine migrants (24). While the Maine Migrant Health Program finds it especially challenging to provide ongoing care for chronic disease given brief harvest seasons and associated mobility, the April-October broccoli season in Aroostook County has facilitated some success in this area (24).

One key informant recognized cardiovascular disease, diabetes, occupational injury, and mental health as major areas of health need among ***non-migrant Latinos*** throughout Maine (14). This informant also felt that mental health services were especially needed by Mexicans and Central Americans residing in the US following years of violent conflict in their home nations—e.g., Chiapas, Mexico—and denounces the distinction between "refugees" and others where provision of

mental health services are concerned (14)[2]. Informants serving low-income Latinos in Southern Maine recognize another mental health concern: a "PTSD"-like syndrome among southern Maine Latinos due to cumulative stresses of poverty, illegal residence, separation from family members, and marked social and linguistic isolation (15). Southern Maine informants also cite substance abuse as a major health problem for which counseling and treatment services in Spanish are unavailable (ibid.).

Various data sources cite infectious disease as a central health issue for non-migrant Latinos (13, 15). While TB screening and case management services are available in the Portland area, this work is challenging due to Latinos' reported belief that a TB diagnosis can result in their deportation on public health grounds (15). HIV/AIDS also disproportionately affects Latinos in Maine; approximately 4% of individuals diagnosed with HIV in Maine are Latino, though Latinos comprise only 0.7% of the Maine population. (13).

Readers must bear in mind that key informants generally provided morbidity information about non-migrant Latinos based on their unique experiences in meeting pressing legal, financial, and/or health needs. *These at-risk populations do not represent all non-migrant Latinos in Maine.*

Behavioral Risk Factor Survey Data

Survey data from 1996-2000 indicate that there are no differences between Maine Latinos and non-Latinos in the prevalence of a number of behavioral risk factor and medical conditions including: smoking, high cholesterol, obesity or overweight, physical activity, hypertension, and diabetes.

Table XI: Maine Behavioral Risk Factor Survey Data, 1996-2000*

	Non-Latino % 95% CI	Latino % 95% CI	Chi-sqare p-value
Body Mass Index (BMI)			
Overweight (BMI 25-29)	36.5 (35.5- 37.6)	34.5 (26.8-42.2)	0.34
Obese (BMI 30+)	16.8 (16.1- 17.6)	21.6 (15.3-28.0)	
Exercise			
Inactive/irregular	59.8 (58.4- 61.1)	65.0 (55.3-74.8)	0.29
Current smoking	23.7 (22.8- 24.7)	22.8 (15.8- 29.7)	0.78
Hypertension diagnosed	24.8 (23.7-25.9)	25.7 (17.6- 33.8)	0.83
High cholesterol diagnosed	31.7 (30.0- 33.3)	28.6 (17.3- 40.0)	0.60
Diabetes diagnosed	4.8 (4.3- 5.2)	6.9 (2.9- 10.9)	0.29

Source: Office of Health Data and Program Management, Maine Bureau of Health, BRFSS data, 2002

Maine BRFSS survey data also show a similar level of health insurance coverage among non-Latinos and Latinos (86.1% and 84.2, respectively, p=0.5). Cost of health services may be more of a

[2] The only Latinos currently designated by the United Nations as "refugees" are Cuban, and are generally resettled in Florida; therefore, refugee programs in Maine serve only non-Latinos (Ward, 6/24/02).

barrier to care for Latinos than for others; 16.2% reported that they had foregone a health visit when ill last year due to cost, compared to 10.3% of non-Latinos (p=0.07).

Survey data showed a fairly high levels of access to women's preventive care among Latinas. While differences regarding clinical breast exams are not statistically significant (84.4% vs. 83.5%, p=0.8), data showed that more Latinas receive more mammograms (62.1% vs. 49.0%, p=0.05). Rates for Pap tests among women over age 18 were similar, with 87.1% of non-Latinas and 85.4% of Latinas reporting recent tests (p=0.72).

Interestingly, Latino respondents to the BRFSS telephone survey were generally men (59.0% of respondents, compared to 47.6% of non-Latino respondents; significant at p=0.01). This pattern may reflect either a number of male Latino workers (migrant or non-migrant) living apart from their families, or a sociocultural recognition of men as heads of households.

Readers should bear in mind that because the BRFSS survey is conducted via telephone, several groups of Latinas who may not have home telephones (e.g., migrants; the very poor) or who are residing legally or illegally in relatives' or friends' homes are likely to have been excluded from survey results. Also noted in earlier in **Limitations**, English proficiency is needed to complete the survey.

Health Resources

Migrant and Seasonal Farmworker Resources

Some of the most visibly Latino-oriented health services in Maine are provided by the MMHP in Washington County during the July-August blueberry harvest season each year. Services provided here by the MMHP include direct and contracted primary and preventive medical and dental services offered for a $3 maximum copay; outreach services via mobile health van; health education; transportation; translation; advocacy; etc. (1). The MMHP also addresses critical nonhealth concerns among MSFWs by maintaining linkages with organizations providing such services as child education and Head Start, Social Security, food stamps, a food pantry, emergency assistance, post-harvest job referrals, case management, etc. (23). In addition to Rakers' Center services, the MMHP offers contracted primary care, dental, and preventive health services throughout the state within various regions according to harvest seasons. The Program has used strategies such as migrant worker focus group sessions, agriculture site mapping, and various community-based outreach strategies as a means of tailoring its services to existing MSFW needs (1). The MMHP was praised highly by several key informants for its efficacy and dedication in delivering health services to migrants and seasonal farmworkers.

The State of Maine also provides public health nursing (PHN) services for MSFWs including perinatal home visits, preschool health assessments, TB testing for MMHP staff, TB contact investigation, communicable disease surveillance, interventions for TB, shigella, Hepatitis A, etc., and training for staff who provide health care to migrants (21).

Finally, a few important resources exist to help Maine MSFW Latinos meet nonhealth needs. The Maine Department of Labor, Division of Migrant and Immigrant Services provides information and advocacy for Latinos regarding wages, occupational safety, housing, and discrimination (21). Legal consultation and assistance regarding immigration status, housing, wages, occupational safety

and injury, etc. is available to MSFWs via the Farmworker Unit of Pine Tree Legal Assistance in Bangor (ibid.).

Non-migrant Health Resources

In areas of the state not served by the MMHP, access to outpatient care for Latinos, and particularly linguistically and culturally appropriate care, may be quite limited. Maine Medical Center's International Clinic primarily serves non-Latino refugees (17); however, MMC's Family Practice department serves many Latinos (15, 17). Unfortunately, no central source of Maine ambulatory care data exists regarding Latinos. Of course, Maine Medical Center as a whole, and all of Maine's 42 hospitals, provides emergent and inpatient care services to all individuals without regard for immigration status, insurance status, or ability to pay. Unfortunately, the Maine Health Data Organization does not include ethnicity in its hospital discharge data set, resulting in a lack of any inpatient data specific to Maine Latinos.

The City of Portland's Homeless Health Program (HHP), located at the Preble Street Resource Center (PSRC), provides primary health care, TB testing and care, and referrals to a local Spanish-speaking psychiatrist who treats without regard for ability to pay (15). The PSRC also provides comprehensive social services including meals, shelter, employment and education referrals, etc.; staff with Spanish skills have been increasingly in demand, and PSRC is now hiring a full-time bilingual caseworker (15). Data indicated that Portland's Homeless Health program served 1556 Latino adults in 2001 (20).

In southern Maine, the Portland-based Immigrant Legal Advocacy Project (ILAP) also provides free legal services in Spanish regarding immigration and labor issues (16). The Cumberland-based Maine branch of the League of United Latin American Citizens (LULAC) also provides a forum in which Latinos can address political concerns such as immigration concerns, racial profiling by the police and INS, and election of officials sensitive to minority concerns (14).

Barriers to Health

The authors asked key informants (community-based organizations, public agencies, and service providers) to identify barriers to health and health services experienced by migrant and seasonal farmworkers and by other Latinos in Maine. While the Maine Migrant Health Program (MMHP) has increasingly identified and addressed many of the barriers discussed below, others remain more difficult to resolve. Barriers to health among non-migrant Latinos remain less well understood.

Migrant and Seasonal Farmworkers

After 10 years of service to migratory agricultural workers in Maine, the MMHP has learned many lessons that currently contribute to its efficacy in serving this community. These lessons include a knowledge that "trust [of MMHP providers by migrant workers] is key"; that it is critical to employ service providers who share linguistic and cultural backgrounds with migrants; that care should be provided outside the 8 am- 5 pm period whenever possible to accommodate child care and work demands; and that health care is more effectively addressed if providers are willing to address nonhealth [socioeconomic, legal] needs as well (21,23).

MMHP staff and other key informants identified the following key barriers to health among migrant and seasonal farm workers (MSFW), the majority of whom in Maine are Latino:

- *Employment-related barriers.* Barriers to care identified by providers serving MSFWs include inability to take time off from work for care, child care concerns, and unavailable transportation away from agricultural work sites (1).

- *Poverty and insurance status.* Latino migrants have poor access to employer-sponsored health insurance; only 10% of MSFW are estimated to have any form of public or private health insurance (20). Even the copay of $3 per visit from the MMHP is believed to be a hardship for many workers (23).

- *Fear of disclosure of undocumented resident status*. Undocumented residence is recognized by the MMHP as a major obstacle to MSFWs seeking health care from community providers when ill, although for the MMHP, legal residence is not a prerequisite for care (22, 23). A Portland-based informant reports that some MSFWs are wary of seeking care at the Washington County Rakers' Center during harvest season due to US Immigration and Naturalization Services (INS) officials' increasing presence in the area; about 300 people are believed to have been detained by the INS in 2001 (14).

- *Linguistic and cultural barriers.* The MMHP recognizes that despite availability of Spanish-speaking providers and interpreters, language remains a barrier to care. Cultural expectations of "medicine" with respect to self-diagnosis and self-medication may also conflict with US norms (1).

<u>*Non-migrant and seasonal farmworkers:*</u>

- *Poor access to services based on non-classification within a "safety-net" population.* Classification as a "migrant", "refugee", etc. is linked in Maine with access to health services, but may not be congruent with Latinos' self-perceptions and/or actual needs. Some Maine Latinos not recognized as migrants appear to confront many of the same barriers to care as those identified by migrants (14, 16) for reasons described below.

- *Fear of disclosure of immigration status.* Importantly, fear of presenting for health needs due to undocumented status is also believed to prevent non-migrant Latinos in Southern Maine from seeking care. Some of these Latinos may be migrants who seek temporary employment in another area of Maine at the close of the agricultural season for which they have obtained visas, and are thus undocumented in winter as wreath-makers in Washington County; seafood workers in southern coastal areas; etc. (14, 16).

- *Lack of health insurance*. The fact that many "non-Migrant" Maine Latinos are employed irregularly or temporarily in the service sector, seafood or logging industries, etc. (14, 16, 17) also suggests health insurance is not available to these workers. In southern Maine, the fact that many Latinos work for multiple employers is also believed to result in a lack of benefits including health insurance (14). This belief among key informants strongly conflicts with BRFSS survey data stating that 84% of Maine Latinos have "some kind of health plan" (8).

- *Employment-related barriers.* Key informants suggest that non-migrant Latino workers employed temporarily, irregularly, and/or illegally in seafood, logging, wreath-making,

service, or other industries confront a similar inability to take time off from work for care, and to arrange child care, in order to seek health care (14, 16).

- *Linguistic barriers.* Unfortunately, the authors were unable to locate statewide data regarding numbers of Spanish-speaking providers and translators at Maine hospitals and ambulatory care facilities. However, we believe that significant linguistic barriers to care exist for Latinos with limited English skills. Among 61 physicians who obtained J-1 visas to practice in Maine between 1997 and 2002, only one came from a Spanish-speaking country (Peru). (25). Illiteracy in Spanish may also pose difficulty regarding comprehension of written health education materials and completion of health forms (15). Further linguistic barriers in Southern Maine could be mitigated by availability of health and social services forms in Spanish, as well as by better training of Spanish translators, which informants recognize as a specialized linguistic and professional skill (15).

- *Cultural barriers.* One Maine preventive health organization identified Latino cultural norms including *machismo* (an expression of masculinity in males), *familismo* (importance of the family), *simpatia* (importance of polite social norms), and *personalismo* (familiarity in personal relationships) (13)—all of which affect knowledge, attitudes, and practices surrounding health and health care. One informant even felt that use of Spanish interpreters for telephone-based health services is ineffective given the Latino preference for *personalismo* and face-to-face interaction (14). This may specifically affect areas in which trust may be required for discussion of intimate issues such as sexuality, mental health, etc.

Discussion and Conclusions

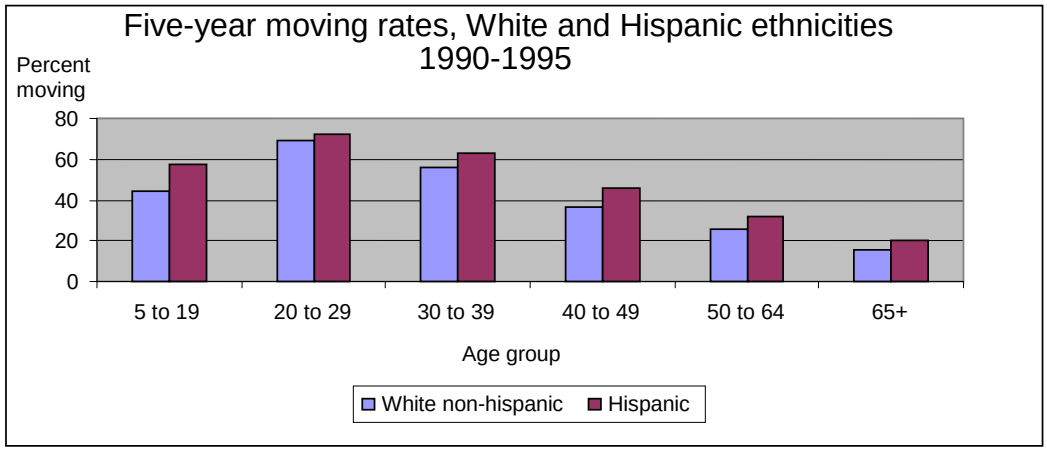
This brief assessment provided an overview of the demographic characteristics, health status and health needs of a substantive and growing minority community in Maine. In many respects, however, the picture it paints is far from complete. As noted, there are significant limitations to all of the data we analyzed. These limitations are most significant as regards the health status and health needs of Maine's *non-migrant* Latino individuals, families, and communities. Because health research and service provision for Maine Latinos prior to this assessment has focused a fair amount of attention on the needs of migrant seasonal farmworkers in Washington, Aroostook, and Androscoggin counties, the majority of whom are Latino, this particular segment of the Latino population in Maine is better described and its health service needs are better known.

Data from the Maine Migrant Health Program, gathered for almost 10 years, clearly indicate that migrant and/or seasonal Latino farmworkers are socioeconomically and medically disadvantaged. As outlined in detail throughout our study, migrants have long been recognized as having lower incomes, lower levels of education, less health insurance, and greater risk of poor health outcomes than have Mainers as a whole. Health risks for migrants include multiple barriers to primary and preventive health care (cost of care; hourly work demands; child care demands; lack of transportation to care; linguistic and cultural barriers; etc.), risk of infectious disease (TB; STDs; skin, eye and ear infections; etc.), back injuries and other occupational injuries, and other health concerns. Over time, the MMHP has been increasingly able to identify and address many barriers to care and to improve its prevention strategies.

With respect to Maine's non-migrant Latinos, however, our study was less successful in clearly identifying health risks and conditions prevalent within this population. This study has raised

significant questions about the existence, validity, and meaning of data sources on Latino health in Maine. Although data sources such as the U.S. census, state natality and mortality data, and surveys such as PRAMS and BRFSS provide information about Latinos, data are often unreliable due to small sample sizes and/or are discordant. *For each of the five data sources cited above, it is important to consider which Latino subpopulations are likely to have been represented or excluded from analysis.* For example, while certain data indicate that non-migrant Maine Latinos are socioeconomically disadvantaged (e.g., census data on per capita income and education; PRAMS data identifying child care, transportation, and lack of insurance as barriers to care), other data suggest that Maine Latinos are demographically similar to other Mainers (e.g., census data showing low unemployment; BRFSS data showing similar levels of income and health insurance). It may ultimately be critical to remember that, as one informant explained, non-migrant Latinos in Maine are a very heterogeneous group—some of whom are as socioeconomically and medically vulnerable as migrants, and others who are of high socioeconomic status and less vulnerable than many other Maine populations (14).

Because most socioeconomic data on Maine Latinos are derived from the U.S. census, the probability that Latino individuals and families may be undercounted is important to consider. This undercounting may be due to reluctance to acknowledge illegal presence in Maine, despite assurances of nondisclosure to INS by the Census Bureau; to non-return of census forms by families living within multiple-family households (14); or simply to lack of perceived benefit in returning forms (26). Furthermore, as mentioned earlier, mobility rates of Latinos tend to be higher than those of Non-Hispanic Whites—a phenomenon that may be associated with frequent shifts in employment or immigration status—and may also compromise accuracy of census data. The perception of mobility among Maine Latinos was expressed by several key informants (15,16), and is also illustrated in Figure 5 below regarding national migration patterns among Latinos. Undercounts of Latinos may result in misrepresentation of the demographic characteristics of communities in various counties and in Maine overall, which may severely limit understanding of this population's health needs.



Source: Schachter, J.P. Geographical Mobility, 1990-1995: Special studies. Current Population Reports, P23-200, US Bureau of the Census. Sept. 2000. Washington, DC.

Figure 5: Migration Comparison, White and Latino Ethnicities, 1990-1995

As with population and socioeconomic data, it is difficult to estimate the health status and health needs of non-migrant Latinos. While some data suggest that Maine Latinos have poor health

status or high health risks (e.g., higher rates of domestic violence during pregnancy; shorter life expectancy; anecdotal information about cardiovascular disease, diabetes, and mental health issues), other data suggest similar or better health access and/or status (low birth weight and infant mortality data; lower rates of prenatal smoking and drinking; high rates of mammogram screening; lower age-adjusted mortality data). To assess validity of available quantitative data, each data source must be considered with respect to a variety of characteristics of the sources of the data and methods of data collection, all which may result in the possible exclusion of specific subsets of Maine's overall population of Latinos.

An apparent paradox exists regarding survey and key informant evidence of higher rates of physical inactivity, obesity, and hypertension among Maine Latinos than among other Mainers, but dramatically lower age-adjusted death rates for Maine Latinos from chronic disease. This paradox raises important questions about the validity of ethnicity classification in Maine death certificates. Numerous authors have identified systemic patterns of under- or mis-classification of certain minorities (Latinos, Native Americans) in state data repositories (9-11), with accuracy of ethnicity on death certificates being particularly questionable. Currently, ethnicity is recorded on Maine death certificates by either the decedent's family or by funeral directors themselves, with the latter method leaving significant room for error in classification.

Finally, our understanding of Latinos in Maine remains poor not only due to problems with the validity and reliability of some existing data sets, but to the absolute dearth of available health utilization data gathered in Maine which includes racial and ethnic classifications. The absence of such data limits the ability of the Bureau of Health and others to fully understand and appropriately respond to the health needs of Maine's growing Latino population.

Recommendations

The following four action steps be taken by the Maine Bureau of Health and other agencies and organizations concerned about health and health disparities in Maine:

1. *Adopt uniform terminology and definitions for classifying ethnicity across all health data sets.* It seems evident that the first step in understanding the health needs of Maine's broad Latino population is to ensure accuracy of the demographic, morbidity, and mortality data that public agencies and providers currently collect by ethnicity. Consistency of ethnicity classification across multiple data sources would also eliminate inaccuracy of data, which can result in absence of data.
2. *Implement uniform terminology and definitions for classifying ethnicity across all health data sets by providing training and support.* In order to implement the adopted terms and definitions, comprehensive and ongoing training of health and social service personnel will be needed. These efforts will need to be sustained and supported by the Bureau of Health over time.
3. *Disseminate existing data regarding Maine Latino health status and health needs to state agencies, health care providers, and Latino community leaders.* This dissemination would enable views to be exchanged regarding the validity and meaning of the data, improve understanding of this important population and its health needs, and could lead to the development of strategies to improve the health status of Maine Latinos.
4. *Investigate the extent to which Latinos perceive illegal immigration status as an obstacle to health care.* While ambulatory care and acute care providers do not maintain reporting relationships with the INS, many key informants discussed fear of seeking care among

undocumented Latinos from providers that might share this information. It is likely that "word of mouth" reports from Latinos who have received care without violation of confidentiality would enhance Latino communities' trust in Maine's health service providers, but a significant number of Latinos must be "safely" served in multiple counties before this could occur. Creative outreach efforts could be effective in enhancing Latinos' trust in confidential access to health services.

By taking these steps, the Maine Bureau of Health and other members of the Maine health care community will signal its commitment to improving its ability to assess the health of racial and ethnic minority populations and act to prevent or eliminate health disparities.

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