



*Estimates for the Cost
of Interpretation Services
for Connecticut Medicaid
Recipients*

August 2006

TABLE OF CONTENTS

Executive Summary	3
The Findings	4
Introduction and Background	5
The Increasing Need for Interpreter Services	5
Legal Supports for Interpreter Services	6
The Availability of Federal Matching Funds	6
Study Goals	7
Research Findings	8
Estimated Size of the Limited English Proficient Population on Medicaid	9
Existing Access to Interpreter Services	9
Volume of Care Received by Persons with LEP	10
The Estimated Cost of Interpreter Services for Limited English Proficient Medicaid Recipients	11
Future Action	12
Appendix A	15
Appendix B	16
Footnotes	22
References	23



EXECUTIVE SUMMARY

Limited English Proficiency (LEP) contributes to racial and ethnic disparities in health.

Changing demographic and immigration patterns in the United States have produced a growing number of people who cannot easily access basic health services because they cannot adequately speak or understand English. Limited English proficiency (LEP) thus contributes to racial and ethnic disparities in health. The use of trained interpreters in health care encounters can significantly improve access to high-quality care by facilitating accurate diagnosis, treatment and follow-up. Because LEP is more predominant among people with low incomes, their need for interpreter services is particularly acute.¹

Recent public hearings reveal that many Connecticut residents not fluent in English usually see health care providers without trained interpreters. The Connecticut Health Foundation's 2005 Policy Panel on Racial and Ethnic Health Disparities recognized this unmet need and recommended that the Connecticut Department of Social Services (DSS) use Medicaid funds, subject to federal match, to reimburse providers for interpreter services. This would reduce the state's financial burden for these services.

Developing this recommendation requires answers to the following questions:

1. How many Connecticut Medicaid recipients have limited proficiency in English?
2. What are the existing levels of access to interpreter services among the state's Medicaid population with LEP?
3. How much would it cost the state to reimburse interpreter services for all health encounters with limited English proficient Medicaid recipients?
4. How could the state implement the federal match to help offset the cost of providing interpreter services to Medicaid enrollees with LEP?

The Findings

This report summarizes analyses that calculate the size of the limited English proficient population within Connecticut's Medicaid program. It also estimates the cost of providing these enrollees with face-to-face interpreters in compliance with federal laws and guidelines.² Using a range of federal, state and local resources as well as qualitative and quantitative research methods, this report estimated that:

1. Connecticut's Medicaid program covers 22,353 people with LEP.
2. Limited English proficient Medicaid recipients use 4.6 percent of Medicaid services.
3. Assuming that the state arranges for matching federal funds, the total expense to the Connecticut Medicaid program would be \$2.35 million . ³
4. The annual cost for providing interpreter services through Connecticut's Medicaid program would be \$4.7 million (the total of \$3.2 million for Medicaid managed care enrollees and \$1.5 million for Medicaid fee-for-service enrollees).
5. Of the three mechanisms available to secure federal matching funds, it appears that the most advantageous mechanism would be for the state to reimburse interpreter services as a "covered expense" that would pay for 50 percent of the cost.

Further, contacts with Connecticut providers revealed that they do not track the number of limited English proficient patients they serve and are not aware of medical interpretation resources for these patients. In order to raise awareness of the need for and availability of interpreters, and create an effective system for implementing an interpretation program across provider types, a work group comprised of key stakeholders should be formed to identify the: (1) obstacles to the provision of services, (2) successful approaches to meeting the needs of the limited English proficient community and (3) possible educational and outreach activities that could increase the use of existing services.



INTRODUCTION AND BACKGROUND

The Increasing Need for Interpreter Services

Changing demographic and immigration patterns in the United States are producing a growing number of people who cannot easily access basic health services because they cannot adequately speak or understand English (Shin and Bruno 2003).⁴ Limited English proficiency thus contributes to racial and ethnic disparities in health. A system in which health care providers are poorly equipped to provide culturally competent care in languages other than English can result in substandard care and poor health outcomes (Leyva et al. 2005; Brach et al. 2005; Carter-Pokras et al. 2004; Derosé and Baker 2000; Preciado and Henry 1997).

The use of trained interpreters in health care encounters can significantly improve access to quality services by facilitating accurate diagnosis, treatment and follow-up (Brach et al. 2005). Interpreter services also can cut health care costs over the long term through reductions in medical errors and unnecessary procedures. The need for interpreter services will only increase as the size of the limited English proficient population grows.

Legal Supports for Interpreter Services

Over the past several decades, the federal government has erected legal supports for linguistically appropriate health care. All federally funded entities providing social services, including health care, must provide language assistance to their clients. This requirement stems from successive interpretations of Title VI of the 1964 Civil Rights Act, which prohibits discrimination on the basis of race, color or national origin under any program or activity receiving federal financial assistance. In 1974, the U.S. Supreme Court ruled that Title VI protections apply to any conduct that disproportionately affects people with LEP because such practices discriminate on the basis of national origin.⁵

The need for interpreter services will only increase as the size of the limited English proficient population grows.

The Availability of Federal Matching Funds

Alongside the requirement to provide “meaningful access,” the federal government offers matching funds to help offset state costs for interpreter services for the Medicaid program. Medicaid recipients may receive interpreter services from face-to-face interpreters on staff, interpreters contracted through agencies or through a telephone service.⁶ States may claim these matching funds in one of three ways:

1. as a Medicaid-covered expense where the costs of interpreter services are reimbursed at the state’s Medicaid federal matching rate the same as any medical service;
2. as an “administrative” expense with reimbursement of half the cost of the interpreter services; or
3. through payments to Disproportionate-Share Hospitals (DSHs) that provide services to large numbers of Medicaid recipients and the uninsured. Currently, only 11 states use these funds and each state structures the benefit differently (National Health Law Program and Access Project 2004).⁷

This report will develop estimates to determine whether it would be cost-effective for Connecticut to join them.

Study Goals

Recent public hearings reveal that many Connecticut residents with LEP often see health care providers without a trained interpreter (Connecticut Health Foundation 2005). The Foundation's 2005 Policy Panel on Racial and Ethnic Health Disparities recognized this unmet need and recommended that DSS reimburse providers for interpreter services using the federal Medicaid match. This would reduce the state's financial burden for these services (Connecticut Health Foundation 2005). To help inform the Policy Panel's recommendations, the Connecticut Health Foundation (CHF) asked Mathematica Policy Research, Inc., to answer the following questions:

1. How many Connecticut Medicaid recipients have limited proficiency in English?
2. What are the existing levels of access to interpreter services among the state's Medicaid population that has limited proficiency in English?
3. How much would it cost the state to reimburse face-to-face interpreter services for all health care encounters with limited English proficient Medicaid recipients?
4. How could the state implement the federal match to help offset the cost of providing interpreter services to Medicaid enrollees with LEP?

To answer these questions, analyses were performed using information from a range of federal, state and local databases; information from telephone contacts

with Connecticut health care providers and information from officials in states that already participate in the federal match. Appendixes A and B provide a detailed explanation of the sources of data and the process used in calculating the estimates.





RESEARCH FINDINGS

Determining the possible cost of reimbursement for interpreter services in Connecticut requires estimation of four figures: (1) the number of Medicaid recipients with little or no proficiency in English, (2) the share of health services these Medicaid enrollees use, (3) the average time it takes for each provider-patient encounter (where interpreters will be needed), and (4) the cost of using an interpreter for a standard period of time. With this information, it is possible to estimate the cost of paying for interpreter services for Connecticut's Medicaid population not fluent in English.

Estimated Size of the Limited English Proficient Population on Medicaid

Low-income Connecticut residents share at least 79 different languages. People speaking 65 of those languages include low-income persons not fluent in English. While approximately 4.6 percent of Connecticut residents are of limited English proficiency, the proportion varies by language group. About 48.7 percent of low-income Spanish-speaking Connecticut residents have limited English proficiency, while 43 percent of low-income persons speaking “other” languages have difficulties with English.⁸ Applying these statistics, the Connecticut Medicaid program provided services to an estimated 22,353 persons with LEP in 2003. Of these Medicaid recipients with LEP, 16,793 are enrolled in the HUSKY A (Healthcare for Uninsured Kids and Youth) managed care program and 5,560 in the fee-for-service (FFS) or HUSKY B program. Hartford, Bridgeport and Stamford have the highest percentages of people not fluent in English (27.6 percent, 26 percent, and 30.7 percent respectively); Litchfield County has the lowest (2.1 percent of the population).

Low-income Connecticut residents share at least 79 different languages. People speaking 65 of those languages include low-income persons not fluent in English.

Existing Access to Interpreter Services

Some Connecticut Medicaid recipients already are eligible to receive interpreter services. Eligibility depends on the type of Medicaid program. The Connecticut Medicaid program consists of two parts: three-quarters of Medicaid recipients are in managed care plans while the remainder participate in traditional FFS arrangements.

The FFS Medicaid program does not cover interpreter services for FFS recipients; however, Medicaid managed care plans do.⁹ The managed care plans offer interpreter services as an administrative cost under their contracts with DSS. Enrollees who need an interpreter call the member services department to schedule appointments that include interpreter services. The Medicaid Managed Care Organizations (MCOs) generally require 48 hours notice to set up the appointment and provide interpreter coverage through either a telephone language line or face-to-face interpretation from an outside vendor.¹⁰ Unfortunately, the plans do not maintain records on how often enrollees use interpreter services. Calls to several private Medicaid managed care physicians reveal that few are aware the plan provides interpreters for Medicaid patients with LEP, even though this information is in their provider manuals.

Preliminary exploration of the scope of interpreter services indicates that institutional health care providers (for example, hospitals and community health clinics) are better equipped than private physician offices to provide interpretation services through their

bilingual staff or telephone interpreter banks. Private physician offices use their bilingual physicians and staff (if available) for interpretation or rely on family members to translate for the patient but do not use telephone banks as a backup.¹¹

Medicaid recipients not fluent in English heavily used physician services, clinic services and outpatient hospital services. This suggests a strong need for interpreter services in outpatient settings.

Volume of Care Received by Persons with LEP

Medicaid recipients with low English proficiency, like their counterparts who are fluent in English, use a wide variety of health care services. Table 1 shows the types and number of services used by Medicaid recipients, as well as the share used by limited English proficient enrollees. The data indicate that, Medicaid recipients with LEP enrolled in managed care made office visits much more frequently than they used other services. Inpatient services were a distant second, followed closely by behavioral health care visits. The data on FFS Medicaid recipients is broken into greater detail. Here, too, physician services, clinic services and outpatient hospital services are heavily used by Medicaid recipients not fluent in English.¹² This suggests that interpreter services are strongly needed in outpatient settings.

Since costs for interpretation services are calculated on the basis of the time the interpreter spends translating the medical encounter, the cost of such services used by Medicaid recipients not fluent in English depends on the time spent delivering the care. Several studies suggest that people with LEP spend an average of 40.5 minutes per encounter with a provider (Kravitz et al. 2000; Fagan et al. 2003).¹³ One hour of face-to-face interpreter services costs \$50 (based on estimates provided by other states' Medicaid programs, as well as on estimates from interpreter service providers across several market areas in Connecticut).¹⁴ The cost of interpreter services multiplied by the volume of health care services used by Medicaid recipients with LEP (the number of services and the time it took to provide them) gives an estimate of the cost of providing interpreter services to the limited English proficient Medicaid population.

The Estimated Cost of Interpreter Services for Limited English Proficient Medicaid Recipients

The cost of providing face-to-face interpreter services for Medicaid recipients not fluent in English would total \$4.7 million annually based on \$3.2 million among managed care enrollees and \$1.5 million for FFS enrollees. If Connecticut begins to participate in the federal match program, it would do so at a rate of 50 percent, the federal government’s Medicaid reimbursement rate for Connecticut. Such participation would reduce the total annual cost to Connecticut’s Medicaid program to about \$2.35 million.¹⁵

TABLE 1
ESTIMATED NUMBER OF SERVICES USED BY ENROLLEES WITH LEP

	Total Number of Services Used	Number of Services Used by Persons with LEP
Panel 1: Managed Care Enrollees		
Well-Child Care Visits	218,855	10,693
Office Visits	808,690	37,532
Behavioral Health Care Visits	294,427	12,126
Emergency Visits	215,201	11,933
Inpatient Days	194,501	13,792
Panel 2: FFS Enrollees		
Clinic Services	35,828	1,637
Dental Services	41,141	1,880
Home Health Services	23,092	1,055
Intermediate Care Facilities for the Mentally Retarded	1,406	64
Inpatient Hospital Services	33,202	1,517
Lab and X-Ray Services	76,238	3,484
Mental Health Facility Services	500	23
Nursing Facility Services	40,681	1,859
Other Care	87,298	3,990
Outpatient Hospital Services	96,349	4,403
Other Practitioner Services	50,667	2,315
Prescribed Drugs	123,704	5,653
Physician Services	99,954	4,568
Personal Support Services	33,844	1,547
Sterilizations	241	11

Sources: Medicaid Statistical Information System (MSIS); Centers for Medicare & Medicaid Services 2005b (CMS); Connecticut Voices for Children, 2003 Enrollment Data.



FUTURE ACTION

Several options exist to structure the program in ways that can reduce the cost to the state.

This cost estimate of providing interpreter services to Medicaid recipients with LEP is the first step in determining how Connecticut's Medicaid program can broaden access to appropriate care for enrollees not fluent in English. Several options exist to structure the program in ways that can reduce the cost to the state. The options include reimbursing interpreter services as a Medicaid-covered expense, as an administrative expense or through payments to providers that care for a disproportionate share of limited English proficient patients. States that already provide Medicaid coverage for interpreters have made different choices. Descriptions of program designs in three New England states help illustrate the options.

Maine

Maine has one of the smallest limited English proficient populations (2 percent) of all the states currently receiving federal matching funds for interpreter services. Maine treats interpreter services as a Medicaid-covered expense and uses state-established billing codes to reimburse health care providers directly for the costs of interpretation by in-person or telephone services. Interpreters receive \$30 (for business hours) or \$40 (for nonbusiness hours) for the first hour of service, with reimbursement rates of \$7.50 per each additional 15-minute increment. The reimbursement includes travel time to and from the location but not waiting time. Hospitals, private nonmedical institutions, nursing facilities, and intermediate-care facilities for the mentally retarded cannot bill separately for interpreter costs, which already are part of the providers' payment rates.

Massachusetts

With 7.7 percent of its total population with LEP, Massachusetts has the largest number of persons with LEP among states currently participating in the federal match. Massachusetts has a long history of providing language services in health encounters through its determination of need process. The state sought and received federal approval for an amendment to its Medicaid program to fund coverage for interpreter services. It also uses federal payments to cover interpreter costs in hospitals that receive DSH payments.

New Hampshire

Despite having an limited English proficient population similar to Maine's in size (2.4 percent of its population), New Hampshire has elected to participate in the federal match by billing interpreter services as an administrative expense. Interpreters enroll as Medicaid providers and bill the state directly for their services, but only for recipients in the state's FFS Medicaid plan. Language interpreters receive \$15 for the first hour of service and \$2.25 for each subsequent 15-minute increment.

Recommendations for Connecticut

Several factors would suggest that reimbursement of interpreter services as a covered expense would be the most appropriate choice for Connecticut. Reimbursement as a covered service overcomes some disadvantages posed by the other two options. First, choosing to fund interpreter services through payments to DSHs presumes that most of the need for interpreter services is for hospital patients. However, limited English proficient patients in Connecticut use a variety of health care providers. Moreover, under this option, funds for interpreter services are paid through the general DSH funds and might not necessarily be allocated for this specific purpose.

The second option, receiving reimbursement as an administrative expense, poses a similar issue. In addition, neither of these options allows for monitoring the cost and trends in interpreter services for the Medicaid program. The third option has the most advantages. Covering interpreter services as a Medicaid-covered expense builds on an existing payment structure that would be easier to implement. Creating a separate billing code for interpreter services, furthermore, would provide an incentive to use these services. It would help provide greater accountability and transparency to the process.

Besides the securing of reimbursement, other policies can help broaden access to linguistically appropriate care. Contacts with Connecticut health care providers revealed that participants in the health care system are not always aware of the limited English proficient population they serve or the medical interpretation resources available. Many managed care private physicians were apparently unaware that the MCOs would arrange and cover the cost of interpreter services in health care encounters with patients not fluent in English. And finally, even

though the Medicaid enrollment applications include a question on preferred language, the data on the size and residential patterns of different language groups are not routinely reported.

A work group comprised of key stakeholders, including individual physicians, personnel from community health clinics and hospitals, representatives of minority outreach organizations, and medical interpreters, should be formed in order to raise awareness of the availability of interpreters and create an effective system for implementing an interpretation program across provider types. The work group could identify additional obstacles to the provision of services, discuss successful approaches to meeting the needs of the limited English proficient community, and recommend educational and outreach activities that could increase the use of interpretation services. Accurate and consistent tracking of language needs and services in health care encounters is an important step in developing policies that eliminate health disparities arising from language barriers.

Accurate and consistent tracking of language needs and services in health care encounters is an important step in developing policies to eliminate health disparities arising from language barriers.

APPENDIX A

Details of the Data Sources

As noted earlier, Connecticut Medicaid recipients receive care either through managed care plans or through traditional fee-for-service (FFS) arrangements. Given this division of services, several data sources were used to collect information and derive the cost estimates. Connecticut Voices for Children (hereafter referred to as “CT Voices”) and CMS’ Medicaid Statistical Information System (MSIS) offered quantitative data on the numbers of Medicaid enrollees and levels of health care utilization for the managed care and FFS populations, respectively. CT Voices provided MPR with quantitative data from Medicaid’s managed care program, Healthcare for Uninsured Kids and Youth (HUSKY). The specific files were for the HUSKY A program, which covers children and their families with incomes below 185 percent of the federal poverty level (FPL).¹⁶ The data included information on levels of service use across health care settings and were broken down by language groups.¹⁷ Data from MSIS provided information on sites of care and health care use for Connecticut’s FFS enrollees.

Several limitations in both sources influenced the methodological approach taken. First, because neither the CT Voices data nor the MSIS files include information on English proficiency, it was necessary to supplement these data with information from the Census Bureau’s 5 Percent Public Use Microdata Sample (PUMS) files to estimate the number of people with LEP in Connecticut’s Medicaid program (U.S. Census Bureau 2003a and 2003b). The PUMS files include information from non-native English speakers on how well they speak English (with possible responses of “very well,” “well,” “not very well,” and “not at all”). All persons who responded less than “very well” were counted as having LEP. Estimates of the size of Connecticut’s limited English proficient population were also limited by income level because lower-income households are more representative of the population eligible for Medicaid benefits.

Second, CT Voices organizes its data differently from the MSIS data, so the information from the two sources was not directly comparable. For example, CT Voices organizes its data by language group, while the MSIS data present information by racial/ethnic group. However, because they are representative of the state’s population, the PUMS files are useful to create valid and reliable estimates of the number of people with LEP across a wide variety of variables, including geographic area, language group, age, racial/ethnic group, and disability status. The PUMS files were used to check the reliability of the assumptions about the comparability of estimates from these two data sources.

Another organizational difference between the two files was that the CT Voices data present five categories of service, while the MSIS data include 15 different treatment or service categories. Because there was no easy way to overcome this limitation, the analysis relied on separate estimates for volume and types of services used, and interpreter costs for managed care and FFS populations. The two separate cost estimates were combined to arrive at a total estimated cost to the Medicaid program for interpreter services.

The data from CT Voices have two additional limitations that deserve mention. First, as described above, they are limited to health care visits for HUSKY A enrollees only. However, because most HUSKY enrollees are in the part A program, the data represent actual health care encounters for the bulk of Connecticut’s Medicaid managed care recipients. Second, because the language data represent the language spoken by the applicant, the language identifier may not apply to the individual receiving care. However, because the HUSKY program covers mostly children, who in most cases are accompanied to health care visits by a parent for whom the language indicator is relevant, the language information in the CT Voices data is still useful for identifying health care encounters with limited English proficient persons.

Qualitative data collection included an in-depth literature review of academic papers and governmental and policy reports, as well as e-mail exchanges and telephone calls with a number of knowledgeable informants. They included the director of Connecticut's Medicaid program, representatives of other states' Medicaid programs who have been directly involved with designing or implementing reimbursement for interpreter services, businesses offering interpreter services, the Connecticut Medicaid managed care providers,¹⁸ administrators of Connecticut hospital and provider associations, and personnel from individual health care facilities (hospitals and community health clinics) and private physician offices.

APPENDIX B

Derivation of Estimates on the Cost of Interpreter Services

Estimated Size of the Connecticut's Limited English Proficient Population

As noted above, because the quantitative Medicaid data files do not include information on English proficiency, the PUMS files were used to estimate the number of Medicaid beneficiaries with LEP. Limiting these estimates to households with incomes at or below 100 percent of the FPL, nearly 15 percent of Connecticut's population (50,031 persons) rates their English-speaking ability as less than "very well" (Table B.1). However, the percentage of limited English proficient people varies somewhat by language group. Among Spanish-speaking persons living at or below the poverty line, 48.7 percent report limited English proficiency, while the estimate for all other languages combined is 43 percent.

TABLE B.1
ESTIMATES OF CONNECTICUT'S POPULATION WITH LEP AMONG THOSE LIVING IN POVERTY

	Total Population	Population With LEP	Percent With LEP
Connecticut Language	340,633	50,031	14.7
Spanish	69,675	33,909	48.7
Other	37,531	16,122	43.0

Sources: 2000 U.S. Census Bureau 5 Percent Public Use Microdata Sample (PUMS) files.

Persons with LEP Enrolled in Connecticut Medicaid

Total Medicaid enrollment in 2003 was 487,989. Because the data from CT Voices include language groups for HUSKY A enrollees, the U.S. Census Bureau-derived percentage of people with LEP persons by language group was used to estimate the total number of limited English proficient people receiving services through the HUSKY A program.¹⁹ In 2003, 366,601 people were enrolled in HUSKY A, among whom 29,113 (8 percent) were from households whose primary language was Spanish and another 6,081 (1.7 percent) were from households speaking all other non-English languages (Table B.2). Applying these data and the U.S. Census Bureau estimates reported above, HUSKY A enrolled 16,793 persons with LEP in 2003. Overall, people with LEP accounted for less than 5 percent of all HUSKY A managed care program participants. Subtracting the 366,601 enrolled in HUSKY A leaves an estimated 121,388 FFS and other managed care Medicaid enrollees. Assuming that a similar percentage of these enrollees (4.6 percent) are of limited English proficiency,²⁰ this suggests that Connecticut Medicaid enrolled 5,560 additional persons with LEP in 2003, bringing the total number of persons with LEP to 22,353.

TABLE B.2
ESTIMATED NUMBER OF PERSONS WITH LEP ENROLLED IN CONNECTICUT MEDICAID

	Total Enrollees	Enrollees With LEP	Percent With LEP
HUSKY A Enrollees	366,601	16,793	4.6
English	331,407	N/A	N/A
Spanish	29,113	14,178	48.7
Other	6,081	2,615	43.0
FFS and Other Managed Care Enrollees	121,388	5,560	4.6
Total	487,989	22,353	4.6

Sources: Medicaid Statistical Information System; Centers for Medicare & Medicaid Services 2005b; CT Voices for Children, 2003 Enrollment Data. N/A = not applicable.

Geographic Distribution of Persons with LEP

Table B.3 presents estimates of the size of the limited English proficient population within Public Use Microdata Areas (PUMAs)²¹ across Connecticut. The U.S. Census Bureau does not provide names for the PUMAs, but the table includes the names of principal cities in each PUMA, as well as the Census' PUMA reference numbers.

TABLE B.3

ESTIMATES OF THE LIMITED ENGLISH PROFICIENT POPULATION ACROSS CONNECTICUT'S PUMAS AND AMONG PERSONS LIVING IN POVERTY

PUMA Descriptor and Number	Total Population	Population With LEP	Percent With LEP
Litchfield County (00100)	10,448	215	2.1
Windsor (00200)	10,979	930	8.5
East Hartford/Manchester (00300)	9,498	1,169	12.3
West Hartford (00400)	11,856	823	6.9
Bristol (00500)	6,415	747	11.6
New Britain (00600)	13,612	2,647	19.5
Newington/Wethersfield/Glastonbury (00700)	5,395	573	10.6
Hartford (00800)	36,703	10,114	27.6
Vernon/Storrs (00900)	17,520	955	5.5
Willimantic/Killingly (01000)	11,837	1,265	10.7
Norwich (01100)	9,554	674	7.1
New London (01200)	16,796	968	5.8
Middletown (01300)	12,085	541	4.5
Naugatuck/Cheshire (01400)	8,892	653	7.3
Meriden (01500)	10,099	1,981	19.6
Hamden (01600)	11,505	799	6.9
West Haven/Milford (01700)	8,626	830	9.6
Branford (01800)	4,226	413	9.8
Waterbury (01900)	17,117	3,579	20.9
New Haven (02000)	35,401	4,540	12.8
Danbury (02100)	12,910	3,101	24.0
Fairfield (02200)	12,527	616	4.9
Norwalk/Greenwich (02300)	11,492	2,292	19.9
Bridgeport (02400)	24,790	6,433	26.0
Stamford (02500)	10,350	3,173	30.7

Source: The 2000 U.S. Census Bureau 5 Percent Public Use Microdata Sample (PUMS) files.

Languages Spoken by Persons with LEP in Connecticut

Table B.4 presents the list of languages spoken among impoverished Connecticut residents, as well as the number and percentage of persons with LEP.

TABLE B.4

LANGUAGES SPOKEN AND ESTIMATED POPULATION WITH LEP AMONG THOSE LIVING IN POVERTY

	Number of Speakers	Number of Persons With LEP	Percent With LEP		Number of Speakers	Number of Persons With LEP	Percent With LEP
Albanian	1,132	921	81.4	Mandarin	235	50	21.3
Algonquian	24	0	0.0	Miao, Hmong	95	25	26.3
Amharic	111	92	82.9	Mon-Khmer, Cambodian	117	69	59.0
Arabic	621	266	42.8	Navajo	54	21	38.9
Armenian	156	67	42.9	Nepali	56	43	76.8
Bantu	248	60	24.2	Norwegian	108	0	0.0
Bengali	137	9	6.6	Other Asian	20	0	0.0
Bulgarian	180	114	63.3	Other Indic	89	45	50.6
Cantonese	136	17	12.5	Other languages	106	22	20.8
Chinese	1,740	946	54.4	Other Native American languages	36	21	58.3
Choctaw	40	0	0.0	Other Philippine	33	0	0.0
Croatian	122	105	86.1	Other Slavic	22	22	100.0
Cushite	132	132	100.0	Other specified African	18	0	0.0
Czech	89	89	100.0	Pakistan, not elsewhere classified	70	70	100.0
Danish	66	36	54.5	Panjabi	20	20	100.0
Dutch	42	11	26.2	Patois	161	50	31.1
Finnish	15	0	0.0	Persian	76	0	0.0
Formosan	140	49	35.0	Polish	4,158	1,398	33.6
French	4,009	880	22.0	Portuguese	3,959	2,851	72.0
French Creole	1,345	609	45.3	Romanian	121	75	62.0
German	1,787	395	22.1	Russian	1,178	656	55.7
Greek	691	194	28.1	Samoan	104	17	16.3
Gujarathi	259	83	32.0	Serbocroatian	603	502	83.3
Hebrew	312	91	29.2	Sinhalese	17	0	0.0
Hindi	591	197	33.3	Slovak	85	20	23.5
Hungarian	351	135	38.5	South/Central American Indian	53	0	0.0
India, not elsewhere classified	242	185	76.4	Spanish	69,675	33,909	48.7
Indonesian	113	90	79.6	Swahili	18	0	0.0
Irish Gaelic	65	45	69.2	Swedish	197	22	11.2
Italian	4,993	1,485	29.7	Tagalog	267	39	14.6
Jamaican Creole	268	75	28.0	Tamil	154	27	17.5
Japanese	632	370	58.5	Telugu	57	0	0.0
Kannada	41	41	100.0	Thai	201	108	53.7
Korean	975	671	68.8	Turkish	529	178	33.6
Kru, Ibo, Yoruba	231	33	14.3	Ukrainian	345	291	84.3
Kurdish	208	149	71.6	Urdu	345	289	83.8
Laotian	183	77	42.1	Vietnamese	365	220	60.3
Lettish	57	0	0.0	Yiddish	606	86	14.2
Lithuanian	304	149	49.0				
Malay	45	17	37.8	Total	107,206	50,031	46.7
Malayalam	20	0	0.0				

Source: The 2000 U.S. Census Bureau 5 Percent Public Use Microdata Sample (PUMS) files.

Volume of Services Used

As discussed earlier, because the data on health care utilization came from two separate sources, separate estimates of the volume of care for managed care Medicaid recipients and those on FFS were calculated.

Service Utilization in Managed Care

U.S. Census Bureau estimates were applied to the data on service utilization for HUSKY A enrollees to determine the number of LEP persons using each of five types of services: (1) well-child care, (2) office visits, (3) behavioral health care, (4) emergency visits, and (5) inpatient care (Table B.5). For Spanish-speaking people, the 48.7 percentage estimate of limited English proficient persons was used to determine the share of total visits accounted for by persons with LEP. For visits by people speaking other languages, the 43 percent estimate was used.

Therefore, while the total number of visits is a direct summation of the numbers in the first and third data columns (for example, for well-child care visits, 18,620 visits among Spanish-speaking people plus 3,780 visits for other language groups equals 22,400 total well-child visits), the number of visits restricted to persons with LEP is a weighted summation of the numbers in the first and third data columns ($18,620 \times 0.487 + 3,780 \times 0.43 = 10,693$ or, equivalently, 9,068 visits for Spanish-speaking persons with LEP plus 1,625 visits for limited English proficient persons speaking other languages).

The data indicate that among the total 22,400 well-child care visits by non-English-speaking people, 10,693 were for persons with LEP. For the other categories of service, persons with LEP accounted for 37,532 office visits, 12,126 behavioral health care visits, 11,933 emergency visits, and 2,440 inpatient care stays of an average of 5.7 days.

TABLE B.5

ESTIMATED NUMBER OF SERVICES USED BY HUSKY A ENROLLEES WITH LEP

	Spanish		Other Languages		Total Volume	
	Total	LEP Only	Total	LEP Only	Total	LEP Only
Well-Child Care	18,620	9,068	3,780	1,625	22,400	10,693
Office Visits	68,230	33,228	10,010	4,304	78,240	37,532
Behavioral Health Care	18,912	9,210	6,782	2,916	25,694	12,126
Emergency Visits	22,426	10,921	2,354	1,012	24,780	11,933
Inpatient Care	3,471	1,690	1,744	750	5,215	2,440
Total Days	20,202	9,838	9,195	3,954	29,397	13,792
Average Length of Stay	5.8	5.8	5.3	5.3	5.6	5.7

Source: CT Voices for Children, 2003 HUSKY A Service Use Data.

Service Utilization for Fee-for-Service Recipients

The data on FFS utilization came from the MSIS files and included detailed categories of service. However, because service use data are not broken down by language groups, estimates derived earlier for the overall managed care population (4.6 percent) were applied to estimate the volume of services used by FFS Medicaid recipients with LEP (Table B-6).

TABLE B.6

ESTIMATED MEDICAID SERVICE UTILIZATION BY MEDICAID RECIPIENTS WITH LEP IN FEE-FOR-SERVICE

	Total Number of Services Used	Service Used by Enrollees With LEP
Clinic Services	35,828	1,637
Dental Services	41,141	1,880
Home Health Services	23,092	1,055
ICF/MR	1,406	64
Inpatient Hospital Services	33,202	1,517
Lab and X-Ray Services	76,238	3,484
Mental Health Facility Services	500	23
Nursing Facility Services	40,681	1,859
Other Care	87,298	3,990
Outpatient Hospital Services	96,349	4,403
Other Practitioner Services	50,667	2,315
Prescribed Drugs	123,704	5,653
Physician Services	99,954	4,568
Personal Support Services	33,844	1,547
Sterilizations	241	11

Source: Medicaid Statistical Information System; Centers for Medicare & Medicaid Services 2005b. ICF/MR = intermediate care facilities for the mentally retarded.

Estimated Cost of Providing Face-to-Face Interpreters

One of the most important factors influencing the cost of interpreter services is the average length of the patient-provider interaction. Estimates of the interaction time for various types of services came from three sources: (1) a federal Office of Management and Budget (OMB) report that generated a model for estimating the costs of interpreter services in health care settings (OMB 2002), (2) a literature review of studies on limited English proficient patient interaction time with providers and (3) data that Minnesota's Medicaid program provided on the use and costs of interpreter services for its FFS Medicaid recipients. The OMB report assumes patient-provider interaction times of 10 minutes for emergency room and office-based visits and one hour per day for hospital inpatient stays. Research suggests, however, that the OMB estimates for

office visits are conservative and that people with LEP actually spend between 34 and 47 minutes in examination rooms with providers, for an average of 40.5 minutes (Kravitz et al. 2000; Fagan et al. 2003). Data provided by representatives of Minnesota's Medicaid program offered additional insights into the length of patient-provider interactions. These data are restricted to FFS Minnesota Medicaid recipients²² and include many of the same types of services reported in the MSIS data described above. The data include the unduplicated number of LEP enrollees who received interpreter services the total number of payments made for each service, and the number of units paid (where units were defined as 15-minute increments of interpreter time). These data were used to calculate the average number of hours per claim for use in the cost estimates. For services included in both the Minnesota data and the MSIS files (for example, inpatient hospital services), time estimates from the

Minnesota data files were used because they were the most directly comparable. In other cases, the analysis used the average time for all services as reported in the Minnesota data, the inpatient times from the OMB report, or an average for provider time based on the literature review, depending on the equivalency of the data sources.

The costs of interpreter services for managed care and FFS enrollees were calculated separately. Based on calls to interpreter service providers and figures reported for other states' Medicaid programs, the analysis assumed face-to-face interpreter charges of \$50 an hour. Interpreter costs for each type of service were calculated by multiplying the number

of limited English proficient visits by average interaction time (expressed as portion of an hour) and costs per hour of interpretation time. For managed care enrollees, the analysis assumed 42 minutes of interaction time for outpatient and emergency room visits and one hour for inpatient stays, based on the estimates provided through OMB and a literature review. For FFS recipients, where the types of services were comparable, the time estimates were based on the calculations from the Minnesota FFS data. The analysis used 42 minutes as the standard for outpatient visits in the FFS program when there was nothing comparable from Minnesota's data (see resulting estimates in Table B.7).

TABLE B.7
ESTIMATED COSTS FOR INTERPRETER SERVICES FOR THE CONNECTICUT MEDICAID PROGRAM

	Number of Services Used by Persons With LEP	Interaction Time in Hours	Cost in Dollars Assuming \$50/Hour
Panel 1: Managed Care Enrollees			
Well-Child Care	10,693	0.70	\$374,255
Office Visits	37,532	0.70	1,313,620
Behavioral Health Care	12,126	0.70	424,410
Emergency Visits	11,933	0.70	417,655
Inpatient Days	13,792	1.00	689,600
Total Managed Care Costs			\$3,219,540
Panel 2: Fee-For-Service (FFS) Enrollees			
Clinic Services	1,637	0.70	\$57,307
Dental Services	1,880	0.52	48,884
Home Health Services	1,055	1.01	53,293
Intermediate Care Facilities for the Mentally Retarded	64	1.79	5,751
Inpatient Hospital Services	1,517	0.65	49,313
Lab and X-Ray Services	3,484	1.03	179,430
Mental Health Facility Services	23	1.14	1,302
Nursing Facility Services	1,859	0.88	81,801
Other Care	3,990	1.03	205,460
Outpatient Hospital Services	4,403	0.70	154,110
Other Practitioner Services	2,315	0.70	81,042
Prescribed Drugs	5,653	1.03	291,144
Physician Services	4,568	0.81	185,000
Personal Support Services	1,547	0.89	68,827
Sterilizations	11	2.66	1,465
Total Fee-For-Service Costs			\$1,464,129

Sources: Medicaid Statistical Information System; Centers for Medicare & Medicaid Services 2005b; CT Voices for Children, 2003 Enrollment Data.

FOOTNOTES

- 1 Estimates derived from U.S. Census Bureau data indicate that, in Connecticut, while almost 15 percent of people with incomes at or below 100 percent federal poverty level are limited English proficient, the percentage of people with LEP is only 4.5 percent among individuals with incomes at 300 percent or greater of the federal poverty level.
- 2 The analysis focused specifically on the cost of face-to-face interpretation because this represents the “gold standard” for patient care. Face-to-face interpreters can read body language and expressions that are inaccessible to telephone interpreters. However, telephone interpretation is the only viable means of providing interpretation services in some cases, for example, when health care providers encounter an infrequently spoken language.
- 3 This figure includes the cost of interpreter services that Medicaid managed care plans are already in the practice of delivering and are already being paid for by the state.
- 4 The number of U.S. residents with LEP grew from 14 million in 1990 to more than 21 million in 2000 (Shin and Bruno 2003; U.S. Census Bureau 2006).
- 5 Lau v. Nichols, 414 U.S. 563.
- 6 The federal guidelines for culturally and linguistically appropriate services (known as CLAS standards) recommend the use of face-to-face interpreters because these service providers can read body language and expressions that are inaccessible to telephone interpreters. However, the CLAS standards recognize that telephone interpretation may be necessary in cases where patients speak languages infrequently encountered in the United States.
- 7 These states are Idaho, Hawaii, Maine, Minnesota, Montana, New Hampshire, Utah, Washington, Kansas, Massachusetts, and Virginia (National Health Law Program and The Access Project 2004).
- 8 The estimates were limited to limited English proficient people with low incomes, because low-income individuals and families are more representative of the population eligible for Medicaid benefits.
- 9 Personal communication with David Parella of DSS.
- 10 It appears that only the Community Health Network of Connecticut (CHNCT) provides face-to-face interpreters, and that telephone interpretation is rarely, if ever, used for medical encounters. In general, CHNCT appears to represent a best-practice approach because they provide for face-to-face interpretation and information on how to make appointments is prominently displayed in their handbook (on the first page, before the Table of Contents).
- 11 Translation by family members or friends is discouraged by the CLAS standards because these individuals generally lack proper training in medical interpretation.
- 12 Comparable across the two Medicaid programs.
- 13 Comparable data for English-speaking patients were not available.
- 14 The cost estimates were based solely on face-to-face interpretation since in-person interpretation represents the “gold standard” for service delivery. Telephone interpretation is a less expensive means of providing interpreter services. Estimates incorporating costs for telephone interpretation would, therefore, presumably be lower.
- 15 This figure includes the cost of interpreter services that Medicaid managed care plans might already be delivering in practice and are already being paid for by the state.
- 16 HUSKY B, another managed care program, covers the state’s somewhat-higher income State Children’s Health Insurance Program (SCHIP) enrollees. HUSKY Plus, the third program, provides coverage for children with special health and behavioral health care needs who are also eligible for HUSKY B.
- 17 Both the managed care and FFS Medicaid applications ask the potential enrollee to identify the “language [they] speak best.” Indicators for this response were included in the managed care files received from CT Voices but were not available for FFS enrollees.
- 18 The Connecticut Medicaid program works with only four managed care providers: (1) Anthem Blue Care from Blue Cross Blue Shield (with Medicaid enrollment of 126,981 in FY 2004), (2) Community Health Network (enrollment of 54,388), (3) First Choice Health Plan Preferred One (enrollment of 25,650), and (4) Health Net Healthy Options (serving only HUSKY A with Medicaid enrollment of 96,385 in FY 2004). Enrollment data provided by the Centers for Medicare & Medicaid Services 2005c.
- 19 Language was reported as Spanish or “other.” The data also included a category for “unknown” languages; to be conservative, these people were assumed to be non-English speakers and were grouped with people speaking “other” languages.
- 20 Analyses from the U.S. Census Bureau’s PUMS files suggest that this estimate may be somewhat conservative and that the percentage of persons with LEP among FFS and other Medicaid beneficiaries actually may be lower. The FFS Medicaid population in Connecticut comprises primarily elderly and disabled people. PUMS estimates of the elderly and disabled populations with LEP indicate that among people living in poverty, only 1.6 percent of elderly Connecticut residents are of limited English proficiency, and that among people with any sensory, physical, mental, self-care, or other disabilities, this figure is about 4.6 percent.
- 21 PUMAs are a “decennial census area for which the U.S. Census Bureau provides specially selected extracts of raw data from a small sample of long-term census records” (U.S. Census Bureau 2003a, A-19). Each PUMA contains a minimum population of 100,000 residents and cannot cross state lines.
- 22 The data, therefore, exclude the two-thirds of Minnesota’s Medicaid recipients in managed care. Minnesota pays a health plan to administer interpreter benefits in its managed care program.

REFERENCES

- Access Project, The, and The Cultural Imperative. 2004. *Assessing Language Interpretation Capacity Among New Hampshire Health Care Providers*. Funded by the Endowment for Health.
- Brach, Cindy, Irene Fraser, and Kathy Paez. "Crossing the Language Chasm." *Health Affairs*, vol. 24, no. 2, 2005, pp. 424–434.
- Carter-Pokras, Olivia, M.J. O'Neill, V. Cheanvechai, M. Menis, T. Fan, and A. Solera. "Providing Linguistically Appropriate Services to Persons with Limited English Proficiency: A Needs and Resources Investigation." *American Journal of Managed Care*, vol. 10 (special issue), 2004, pp. SP29–SP36.
- Centers for Medicare & Medicaid Services. "Table 07: FY 2002 Medicaid Eligibles by Race/Ethnicity." Available at [www.cms.hhs.gov/medicaid/msis/02_table07.pdf]. 2005a.
- Centers for Medicare & Medicaid Services. "Table 10: FY 2002 Medicaid Beneficiaries by Service Category." Available at [www.cms.hhs.gov/medicaid/msis/02_table07.pdf]. 2005b.
- Centers for Medicare & Medicaid Services. "Medicaid Managed Care Program Summary, June 30, 2004." Available at [www.cms.hhs.gov/medicaid/managedcare/er04net.pdf]. 2005c.
- Children's Health Council. *Health and Health Care Disparities Associated with Race/Ethnicity: A Persistent Problem in HUSKY A*. Hartford, Conn.: CHC, 2003.
- Citizens' Research Education Network. *Access to Healthcare for Spanish Speakers*. Final report to the Connecticut Health Foundation, 2005.
- Connecticut Health Foundation. *Pathways to Equal Health: Eliminating Racial and Ethnic Health Disparities in Connecticut*. New Britain, Conn.: CHF, 2005.
- Cossio-Molina, Tania, Elizabeth G. Bayne, Susan Nappi, and Tara Rizzo. "Qualitative Assessment of the Need for Medical Interpreter Services for Spanish Speaking Residents of the Naugatuck Valley." Presented at the 133rd Annual Meeting and Exposition of the American Public Health Association, December 10–14, 2005, in Philadelphia, Pa.
- Derose, K.P., and D.W. Baker. "Limited English Proficiency and Latinos' Use of Physician Services." *Medical Care Research and Review*, vol. 57, no. 1, 2000, pp. 76–91.
- Fagan, Mark J., Joseph A. Diaz, Steven E. Reinert, Christopher N. Sciamanna, and Dylan M. Fagan. 2003. "Impact of Interpretation Method on Clinic Visit Length." *Journal of General Internal Medicine*, vol. 18, pp. 634–638.
- Guzman-Dyrseth, Nora. Program Manager, Washington State Department of Social and Health Services. Personal communication. November 3, 2005.
- Health Resources and Services Administration. *Bureau of Primary Health Care Section 330 Grantees Uniform Data System (UDS) Calendar Year 2004 Data: Connecticut Rollup Report*. Washington, D.C.: Bureau of Primary Health Care, 2005.
- Henry J. Kaiser Family Foundation. *Connecticut Individual State Profile: Medicaid and SCHIP*. Available at [www.statehealthfacts.kff.org/cgi-bin/healthfacts.cgi?action=profile&area=Connecticut&category=Medicaid+%26+SCHIP]. Accessed August 29, 2005.
- Institute of Medicine. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*. Washington, D.C.: National Academies Press, 2002.
- Kravitz, Richard L., L. Jay Helms, Rahman Azari, Deirdre Antonius, and Joy Melnikow. "Comparing the Use of Physician Time and Health Care Resources Among Patients Speaking English, Spanish, and Russian." *Medical Care*, vol. 38, no. 7, 2000, pp. 728–738.
- Ku, Leighton, and Glenn Flores. "Pay Now or Pay Later: Providing Interpreter Services in Health Care." *Health Affairs*, vol. 24, no. 2, 2005, pp. 435–451.
- Leyva, M., I. Sharif, and P.O. Ozuah. "Health Literacy among Spanish-Speaking Latino Parents with Limited English Proficiency." *Ambulatory Pediatrics*, vol. 5, no. 1, 2005, pp. 56–59.
- Minnesota Population Center. *Connecticut PUMAs and Super-PUMAs in 2000*. Available at [www.ipums.umn.edu/usa/vol11/PUMA_composition_CT.html]. 2005.
- National Health Law Program. *Medicaid/SCHIP Reimbursement Models for Language Services*. Available at [www.healthlaw.org/library.cfm?fa=download&resourceID=63134&appView=folder&print]. Accessed August 29, 2005.
- National Health Law Program and The Access Project. *Language Services Action Kit: Interpreter Services in Health Care Settings for People with Limited English Proficiency*. Available at [www.healthlaw.org]. Accessed August 29, 2005.
- Parrella, David. Director, Connecticut Department of Social Services. Personal communication. January 4, 2006.
- Preciado, Juan, and Manuel Henry. "Linguistic Barriers in Health Education and Services." In *Psychological Interventions and Research with Latino Populations*, edited by Jorge Garcia and Maria Cecilia Zea, pp. 235–254. Needham Heights, Mass.: Allyn and Bacon, 1997.
- Shin, Hyon B., and Rosalind Bruno. *Language Use and English-Speaking Ability*, 2000. Washington, D.C.: U.S. Census Bureau, 2003.
- U.S. Census Bureau. *Census 2000, Public Use Microdata Sample (PUMS), Technical Documentation*. Washington, D.C.: 2003a.
- U.S. Census Bureau. 2003b. *Census 2000, Public Use Microdata Sample (PUMS), Files*. Washington, D.C.: 2003b.
- U.S. Census Bureau. *Ability to Speak English: 2000*. Available at [factfinder.census.gov]. 2006, Table QT-P17.
- U.S. Department of Health and Human Services. *National Standards for Culturally and Linguistically Appropriate Services in Health Care*. Washington, D.C.: Office of Minority Health, 2001.
- U.S. Department of Health and Human Services. "Policy Guidance on the Prohibition Against National Origin Discrimination as It Affects Persons with Limited English Proficiency." *Federal Register*, vol. 67, no. 22, 2002, pp. 4968–4982.
- U.S. Office of Management and Budget, Report to Congress. "Assessment of the Total Benefits and Costs of Implementing Executive Order No. 13166: Improving Access to Services for Persons with Limited English Proficiency." Washington, D.C.: U.S. Government Printing Office, March 14, 2002.

ABOUT THE AUTHORS:



Ann Bagchi, Ph.D., is a researcher at Mathematica Policy Research, Inc., (MPR), with expertise in demography and health care access, as well as utilization among immigrant and native racial and ethnic groups. Her recent work includes a study of how limited English proficiency (LEP) and citizenship status interact to create disadvantages in accessing health care among residents of California; and a separate investigation of how acculturation level influences racial and ethnic differences in self-rated health. Both studies were presented in poster sessions at the 2006 Population Association of America annual meeting. Prior to joining MPR, the University of Wisconsin-Madison alum was an assistant research professor at the Institute for Health, Health Care Policy and Aging Research at Rutgers University. Her work at Rutgers focused on racial and ethnic disparities in accessing treatments for major mental disorders and HIV/AIDS.



Beth Stevens, Ph.D., is a senior health researcher at MPR and area leader for work with foundations specializing in health care. She works in the area of health disparities and directed the Working Group on Culturally-Appropriate Medicare Education Materials for the Center for Medicare Education and wrote an issue brief for national distribution. Prior to joining MPR, Stevens was a member of the research staff of the Robert Wood Johnson Foundation (RWJF), where she concentrated on programs to expand access to care, improve the health care workforce and educate vulnerable populations about the health care system. While at RWJF she designed the evaluation for the Opening Doors Program, an \$8 million program with 11 sites to encourage improved cultural competence in maternal and child health care. The Harvard University graduate also designed the Native American Breast Cancer Research Project, an effort to evaluate the effectiveness of culturally appropriate breast cancer screening and counseling.

The authors would like to thank Mary Alice Lee, who is a Senior Policy Fellow at Connecticut Voices for Children, for her tireless efforts in providing data and other information for this report.

Connecticut Health
Foundation



74B Vine Street
New Britain, CT 06052
www.cthealth.org