



Estimates for the Cost of Interpreter Services in the Connecticut Medicaid Program: Summary of How the Cost Estimates Were Derived

The total costs for interpreter services within the Medicaid program (\$4.7 million) presented in the Connecticut Health Foundation report (2006) were estimated based on a formula used in a report to Congress by the Office of Management and Budget (2002).

Formula: Total Cost of Interpreter Services =

Percentage of limited English proficient (LEP) Medicaid beneficiaries ×

Volume of services used ×

Patient-provider interaction time ×

Interpreter costs per hour

Deriving the estimates required four steps to estimate each of the four elements on the right side of the equation and a fifth step which involved multiplying all of the four estimates together to arrive at an estimate for the total cost.

Step 1: Estimate the percentage of LEP Medicaid beneficiaries

Because no data are readily available directly from the Medicaid enrollment files, the number of LEP Medicaid beneficiaries had to be estimated based on enrollment data and what we know about the percentage of LEP Connecticut residents by language group, based on data from the U.S. Census Bureau. This required six sub-steps:

(1) Determine the number of Medicaid enrollees by coverage type

487,989 individuals were enrolled in the Medicaid program in 2003

- 366,601 were HUSKY A enrollees (based on data from Connecticut Voices for Children)
- 121,388 were fee-for-service and other managed care enrollees (based on data from the Medicaid Statistical Information System)

(2) Use data from the U.S. Census to estimate the percentage of LEP beneficiaries among HUSKY A enrollees (because data by language groups are available only for the HUSKY A population)

Based on the 2000 Census:

- 48.7 percent of Spanish-speakers in Connecticut are limited English proficient
- 43.0 percent of speakers of other languages are limited English proficient

(3) Calculate the number of LEP HUSKY A enrollees by multiplying the size of the HUSKY A population by the percent LEP from the Census.

Within the HUSKY A population:

- 29,113 beneficiaries were Spanish-speaking
- 6,081 beneficiaries reported speaking other languages

To determine the percent LEP within the HUSKY A program, multiply the number of beneficiaries by the percentage LEP from the Census:

- Spanish: $29,113 * 0.487 = 14,178$
- Other languages: $6,081 * 0.43 = 2,615$

Therefore, there were 16,793 (14,178 + 2,615) LEP individuals enrolled in HUSKY A in 2003.

(4) Determine the overall percentage LEP among HUSKY A enrollees

LEP enrollees represent 4.6 percent of the total HUSKY A population ($16,793/366,601 = 4.6$).

(5) Apply LEP estimate for managed care to fee-for-service

Assuming that LEP individuals are equally distributed among HUSKY A and other Medicaid beneficiaries, multiply the percentage LEP derived for HUSKY A enrollees (4.6 percent) to the fee-for-service and other managed care population (121,388) :

$$121,388 * 0.046 = 5,560$$

(6) Calculate totals

To estimate the total size of the LEP population within the Medicaid program, add the total for HUSKY A (16,793) and that for fee-for-service and other managed care (5,560):

$$16,793 + 5,560 = 22,353$$

Therefore, the Medicaid population served approximately 22,353 LEP individuals in 2003, representing 4.6 percent of the total Medicaid population.

Step 2: Determine the volume of services used

The volume of services were estimated separately for HUSKY A and other Medicaid beneficiaries. Data on service use were provided by Connecticut Voices for Children for HUSKY A beneficiaries and by the Medicaid Statistical Information System for all other enrollees. Because the data came from two separate data sources, the service categories were

different. See Table B.5 of the report for the total service volume for HUSKY A enrollees and Table B.6 for the volume of services used by all other Medicaid beneficiaries. For example:

- Within the HUSKY A program, there were a total of 22,400 visits for well-child care (second to last column of Table B.5)
- Assuming LEP individuals comprise 4.6 percent of those individuals seeking well-child care, 10,693 of the 22,400 visits were with LEP beneficiaries (last column of Table B.5)

Step 3: Estimate patient-provider interaction time

Estimates for patient-provider interaction time were derived from the OMB report, a literature review of academic studies, and raw data provided by the Minnesota Medicaid program. See the second column of Table B.7 of the report (“Interaction Time in Hours”) for these estimates. For example:

- Well-child care visits were assumed to take 0.70 hours (42 minutes) based on estimates from available data sources (see Table B.7)

Step 4: Determine interpreter costs per hour

The analysis assumed \$50 per hour for the cost of interpreter services. This number was based on the cost for medically trained interpreter services, as provided by Connecticut interpreter service providers and estimates from other states currently participating in the federal matching program.

Step 5: Multiply estimates from Steps 1-4 together to arrive at the final estimate of the Total Cost of Interpreter Services

The OMB formula must be applied to each type of service described in Table B.7. Take, for example, well-child care visits among HUSKY A enrollees:

Percentage of limited English proficient (LEP) Medicaid beneficiaries = 4.6 percent

Volume of services used = 22,400 visits

Patient-provider interaction time = 0.70 hours

Interpreter costs per hour = \$50 per hour

Total cost of interpreter services for well-child care among HUSKY A beneficiaries =

$$(0.46)*22,400*(0.70)*50 = \$374,255$$

Applying this formula for the five types of services identified for HUSKY A beneficiaries and adding up the results (see Table B.7) generates a total cost estimate of \$3,219,540 to provide interpreter services to HUSKY A beneficiaries.

Doing the same for the fee-for-service and other managed care enrollees leads to an estimate of \$1,464,129 (see the bottom row of Table B.7).

Therefore, the total estimated cost of providing interpreter services to all Medicaid beneficiaries:
 $\$3,219,540 + \$1,464,129 = \$4,683,669$ or, approximately \$4.7 million.

Note that the model is likely to overestimate the need for interpreter services and, therefore, also the cost:

- The estimates do not discount for the availability of bilingual providers. Areas with large numbers of bilingual providers who speak the languages of LEP residents will have lower need for interpreter services than the model assumes.
- The model assumes \$50/hour charges for interpreter services; these charges could be lower depending on the language (charges are usually lower for Spanish than for less commonly spoken languages), services reimbursed (interpreter travel time, waiting time, and no-show appointments), and the type of interpreter service agency employed (a community language bank is less expensive than a contract agency).
- Based on the Census estimates, the model assumes 4.6 percent of Medicaid beneficiaries are LEP. This is likely an upper bound estimate since many LEP individuals in Connecticut are recent immigrants or undocumented individuals who are ineligible for most Medicaid services.
- The model assumes the same payment mechanism for all managed care and fee-for-service enrollees and does not take into account what managed care organizations are already paying for interpreter services through their capitation rates.

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References

Connecticut Health Foundation. 2006. *Estimates for the Cost of Interpretation Services for Connecticut Medicaid Recipients*. New Britain, CT: Hitchcock Printing.

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, DC: U.S. Government Printing Office, March 14, 2002.