National Job Task Analysis Study for Healthcare Interpreters

November 2016

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EXECUTIVE SUMMARY

The Certification Commission for Healthcare Interpreters (CCHI) is a non-profit 501(c)(6) organization whose main mission is to develop and administer a national, valid, credible, vendor-neutral certification program for healthcare interpreters. CCHI serves the current and future needs of healthcare interpreters and other stakeholders (healthcare providers and institutions, language services agencies, interpreter educators, government agencies, and patients) who are counting on CCHI to provide a population of certified healthcare interpreters. CCHI programs include the Core Certification Healthcare Interpreter™ (CoreCHI™) and Certified Healthcare Interpreter™ (CHI™) certifications.

The National Commission for Certifying Agencies (NCCA) has accredited the CoreCHI™ Certification and the CHI™-Spanish Certification, affirming that the examinations were developed in compliance with the NCCA's Standards for the Accreditation of Certification Programs. CCHI is the first organization certifying healthcare interpreters to receive NCCA accreditation. This is an outstanding achievement, strong and clear recognition of CCHI's leadership and beneficial to healthcare interpreters, healthcare providers, and other stakeholders.

Professional healthcare interpreters provide assurance of the safety, accuracy, respect of boundaries, and transparency required in any healthcare setting and any interpreting modality. Trained healthcare interpreters understand medical terminology in source and target languages and employ professional techniques to handle the complexities that arise with patients, families, and healthcare providers.

CCHI identified a qualified group of certified healthcare interpreters and other qualified experts in healthcare interpreting to meet with Castle Worldwide, Inc., (Castle) for two days in Raleigh, North Carolina, to define domains and tasks as well as the knowledge required for the competent performance of the tasks. The group delineated these elements of the role through intense analysis of the practice of healthcare interpreting, with particular attention to the divergent ways that it applies in different settings, interpreting modalities, and patient circumstances.

As the primary process for identifying the competency areas and knowledge needed for proficient performance in healthcare interpreting, job task analysis offers a clear and useful basis for defining the essential components of the certification examination. This is because job task analysis studies help to establish content validity, the most commonly applied and accepted validation strategy for certification examinations. Validation through systematic job task analysis studies helps to document that the competence to be inferred when a candidate has passed a CCHI certification examination bears a sound linkage to practice. This was the underlying intent of the study.

The National Job Task Analysis Study for Healthcare Interpreters identified the point in time at which newly certified healthcare interpreters are expected to perform the tasks (Performance Expectation), the nature of harm that the inability to perform the tasks competently might bring about (Consequence), and how often healthcare interpreters perform the tasks (Frequency). Ratings addressing these issues and provided by certificants and other members of the profession play an important role in determining the content of the examination.

CCHI desired to adhere to established standards for the conduct of job analysis studies, the general family of methods to which job task analysis study belongs. These standards have their foundation in logically sound and legally defensible procedures drawn from psychometric literature and case law. Essential principles and procedures are outlined in federal regulation (*Uniform Guidelines on Employee Selection Procedures*) and in manuals such as *Standards for Educational and Psychological Testing*

(published by the American Educational Research Association, 2014). Castle employed these standards as well as those of NCCA (NCCA, 2015) throughout the study.

In order to prepare for the project, Castle reviewed the Job Task Analysis Study published by CCHI in 2010. Castle also reviewed a number of other publications (see the bibliography) and consulted with Idolly Oliva, CCHI Commissioner, who provided oversight for the project on behalf of the Commission, and Natalya Mytareva, CCHI's Managing Director. The purpose of these preliminary activities was to acquaint Castle staff with the basic activities and terminology of healthcare interpreting. Castle then prepared a booklet of instruction for use in meeting with the panel of experts. The job task analysis study consisted of the following major phases, which provide the organization of this report:

I. Initial Development and Evaluation. The panel of expert healthcare interpreters identified the essential domains, tasks, and knowledge.

II. Validation Study. All certified healthcare interpreters whose certification was current in spring 2016 were invited to review and validate the work of the panel. The names and contact information for participants in the survey were drawn from CCHI certification databases. Additionally, data were collected from other healthcare interpreters who receive CCHI's newsletter. A qualified and representative group of respondents provided data in this phase.

III. Conclusions and Recommendations. After concluding that the ratings validated the domains and tasks, Castle made recommendations to provide direction for decision making about the design of the CCHI certification assessments.

The panel of experts in healthcare Interpreting appointed by CCHI defined the essential framework of the job task analysis study.

JTA panel and other project personnel

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JTA project sponsors and supporters

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Thank you!

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INITIAL DEVELOPMENT AND EVALUATION

Consistent with its mission, CCHI offers certification for healthcare interpreters and requires that candidates for the certification credentials pass a standardized assessment of interpreting knowledge and skills. As part of the many quality assurance measures that CCHI employs to ensure fairness and appropriate rigor, CCHI conducted a job task analysis study to define the responsibilities that healthcare interpreters have in their work and the essential, practice-related knowledge and skills they must possess to carry out these responsibilities proficiently. In defining these responsibilities, the job task analysis study focuses on newly certified healthcare interpreters and how the responsibilities apply in the variety of settings and interpreting modalities in which they are employed. Of particular interest is the degree to which certified healthcare interpreters are expected to be proficient in the domains and tasks within the first six months of certification.

The job task analysis study began with a preliminary review of literature and preparatory discussions in the fall of 2015 and a meeting of the job task analysis panel on February 11-12, 2016, in Raleigh, North Carolina. Assisted by Castle, the panel of experts outlined domains, tasks, and knowledge that are essential to the proficient performance of newly certified healthcare interpreters. A large-scale validation study conducted in May-July 2016 provided information that was used to assess the appropriateness of the domains and tasks as delineated by the panel of experts.

Professional healthcare interpreters provide assurance of the safety, accuracy, respect of boundaries, and transparency required in any healthcare setting and any interpreting modality. Trained healthcare interpreters understand medical terminology in a source and target language, and they employ professional techniques to handle the complexities that arise with patients, families, and healthcare providers.

A certified healthcare interpreter is defined as:

> *A person who is able to perform the functions of a healthcare interpreter competently, independently, and unsupervised in any setting and in any modality where health care is provided, with the knowledge, skill, and ability required to relay messages accurately from a source language to a target language in a culturally competent manner and in accordance with established ethical standards.*

A CoreCHI™ certificant has been tested on a critical part of the knowledge, skills, and abilities that are required of a healthcare interpreter. The CoreCHI™ examination assesses the core professional knowledge as well as critical thinking, ethical decision making, and cultural responsiveness skills and abilities needed to perform the duties of the healthcare interpreter regardless of the language of interpreting. The CoreCHI™ certification is available for interpreters of all languages except those for which an oral performance examination exists.

Certified Healthcare Interpreter™ (CHI™) – A CHI™ must first complete the CoreCHI™ written examination and then pass an oral performance examination testing the individual's language-specific interpreting skills and abilities in consecutive and simultaneous interpreting, sight translation, and translation. The CHI™ credential is currently available for Spanish, Arabic, and Mandarin interpreters.

Applicants for CCHI CoreCHI™ and CHI™ certifications must meet all of the following requirements:

- Eighteen (18) years of age;
- Graduation from a U.S. high school or its equivalent, including an equivalent from an educational program outside the United States;
- Language proficiency in English and target language; and
- Completion of a minimum of 40 hours of training in healthcare interpreting.

Early Steps in the Job Task Analysis Study

The first steps in conducting the job task analysis study included a preliminary review of sources about healthcare interpreting, an interview with the CCHI Commissioner supervising the study, an interview with the CCHI Managing Director, the preparation of instructional materials, and a two-day meeting with a panel of experts whose members represent a broad range of practice settings, regions, and qualifications. Building on the previous job task analysis study (2010), the purpose of the preliminary analysis was to identify the essential responsibilities of the certified healthcare interpreter and key terminology used in the discipline. The preliminary analysis also was important as a means of identifying trends in practice that might have implications for entry-level proficiency. With this information, Castle prepared instructional materials that members of the expert panel used to inform their participation in the job task analysis study and that Castle used to convey essential explanations during the meeting. The objective of the meeting was to use the existing content outline as the starting point to define the current domains of practice, tasks, and knowledge required for each task at a level commensurate with certification (Appendix A)**.**

Preliminary Analysis

In order to provide leadership for the job task analysis study, Castle sought to become acquainted with the roles and major responsibilities of certified healthcare interpreters. Castle reviewed relevant material on the CCHI website, and CCHI leadership provided 16 references in addition to the report of the CCHI 2010 job task analysis study that Castle reviewed thoroughly. Discussion with the CCHI Managing Director and the CCHI Commissioner who supervised the project on behalf of the Commission was extremely informative, particularly because of their deep knowledge of healthcare interpreting. The preliminary analysis enhanced Castle's familiarity with terminology, major responsibilities, new modes of interpreting, and the general background of the target audience.

Instructional Materials

Key to the success of the job task analysis meeting were the materials used to inform panelists about key concepts. The instruction booklet for the job task analysis study included CCHI's target audience statement for healthcare interpreters, essential definitions, and sample language for domains, tasks, knowledge, and skill. The instruction booklet also included a set of validation scales that are commonly used in job task analysis studies and worksheets that were used for various purposes in the project.

Instructional materials were used during the meeting of the panel of experts as a means of building understanding among participants about key concepts and terms and to orient the essential thought processes and activities of the meeting.

Job Task Analysis Meeting

The panel of experts was selected by CCHI based on the open public recruitment process (see page 2 of this report). A national call for Subject Matter Experts was posted in CCHI's e- newsletter, on its website, social media channels, and on various other professional listservs in November 2015 – January 2016. CCHI's Test Development Committee selected 15 subject matter experts based on demographic and professional criteria CCHI applies to its SMEs to ensure diverse, inclusive and balanced representation of the certification program target audience. The selection criteria include gender, age, state of residence, general educational level, language of interpreting and its acquisition method, ethnicity and, for-non-U.S. born panelists, country of origin, educational background specific to healthcare interpreting, professional experience, employment type and role in healthcare interpreting, type of healthcare settings they work in, and special professional skills. Thirteen panelists are CCHI certificants, while two panelists are not certified yet, representing potential candidates for certification. Fourteen panelists are practicing healthcare interpreters, and one is a bilingual healthcare provider, who used to perform interpreter duties. Culturally and linguistically, the panelists represent the following languages of interpreting and countries: American Sign Language (USA), Arabic, German, Haitian Creole, Mandarin, Nepali, Russian, and Spanish (Argentina, Colombia, Costa Rica, Mexico, Peru, Spain, USA).

The panel of experts reviewed the target audience definition and then reached consensus on suggestions for its minor revision. After this discussion, panelists expressed clear understanding that the purpose of certification was to ensure that newly certified healthcare interpreters are proficient to practice, and that while the level of proficiency expected for the program is high, it is at a lower level on the continuum of competence than complete mastery. The panel then focused on the existing content outline, in place since 2010, and the updates that would ensure its currency and adequacy for the upcoming five-year period. Through facilitated discussion, participants reached consensus on domains and tasks that are current and appropriate for the newly certified healthcare interpreter. The domains are as follows:

I. Professional Responsibility and Interpreter Ethics
II. Manage the Interpreting Encounter
III. Healthcare Terminology
IV. U.S. Healthcare System
V. Cultural Responsiveness
VI. Interpret in Healthcare Settings

For each domain, panel experts worked in separate focus groups to draft tasks, which the whole group then reviewed and refined through a consensus process. The participants' diversity led to discussions that challenged terminology, phrasing, and every aspect of the draft statements, with the resulting consensus on revisions representing a position that all members of the panel believed to be valid. The panel also developed a set of knowledge statements and skill statements for each task in the domains, making refinements and reaching consensus through whole-group discussion.

At the end of the meeting, all panelists evaluated a set of proposed rating scales addressing Performance Expectation, Consequence, and Frequency relative to the practice of newly certified healthcare interpreters. This exercise and discussion led to the panel's refinement of the validation scales that were employed in the validation survey.

Based on the work of the expert panel and in consultation with CCHI staff, Castle developed an electronic validation survey. The process of review informed revisions and led to the validation study that involved a large sample. The results of the validation survey are the major focus of this report.

VALIDATION STUDY

Questionnaire Design and Distribution

Castle developed an online questionnaire to be completed by interpreters who hold a current CCHI certification, either as CoreCHI™ or CHI™, as well as interpreters who receive the CCHI newsletter and other knowledgeable individuals. The purpose of the questionnaire was to collect data on the tasks and domains that were developed by the panel of experts. The questionnaire phase of the job task analysis study was important because qualified healthcare interpreters should have input into the delineation of their role. Such input is critical because the panel of experts, although highly qualified and representative in many key ways, constituted only a small sample of the population of healthcare interpreters. Evaluation by the larger professional community is essential in order to make well-founded generalizations. The questionnaire also was designed to solicit demographic information to ensure that the respondents were qualified to participate and were adequately representative of the population. To encourage participation, CCHI offered gift cards to a random selection of 20 individuals who completed the entire survey and who met the selection criteria for analysis, described below.

The sampling plan was two-pronged. First, everyone who has a current CCHI certification and receives the CCHI newsletter was included in the sample, made up of 9,453 individuals who were sent an email invitation along with an access code so they could return as often as they wished to work on the survey prior to its submission. Fifty-two emails bounced back to Castle because of incorrect or out-of-date addresses, and 150 people opted out of the survey; in all, 202 invitation emails were removed from the sample. Castle monitored responses and sent email follow-up correspondence as appropriate on two occasions to members of this group.

The second prong of the sampling plan was to open the survey to individuals who were informed of the survey via CCHI's website, social media, and referrals from interpreter associations and organizations, and others who learned of the survey informally. Members of this group received a link that did not require an access code, and they were advised to complete the entire survey in one sitting. The number of people who learned of the survey informally is not known, so it is impossible to estimate the size of this population. CCHI managed the correspondence with this group using email and reminder notices. As they completed the survey, members of this group provided their email address and name as a condition for being eligible for the drawing.

A complication in the two-pronged sampling strategy was the fact that some individuals were in both groups, and some of them completed the survey more than once. As a result, Castle used unique identifiers (email addresses) to determine 120 people with more than one response record and eliminated the shorter of the records. In the event that the records were equal, Castle eliminated the record that did not have the access code.

The criteria used to determine which response records were provided by participants who could be considered qualified focused on the responses to one of the questions that asked about the individual's current work as it relates healthcare interpreting. Specifically, respondents listed if they currently work as an interpreter, supervise interpreters, train them, etc., or work as a translator. Five individuals who indicated only that they translate were not considered eligible to participate in the survey, and their responses were excluded. Finally, incomplete responses were excluded if the individual provided less than 15% of the ratings requested in the survey.

Castle included 2,095 unique, qualified, usable responses in the analysis. Of this total, 999 respondents completed the survey using the access code provided to CCHI certificants; given the bounce-backs and

opt-outs for this group, this represents a 10.6% response rate. The response rate accounting for this group is typical of most online job task analysis studies, especially because the survey was long and complex—20 to 30 minutes were required to complete it. The remaining respondents in the analysis completed the survey through the second prong of the sampling strategy. While no emails bounced back from this group and no people opted out, the dimensions of this population are not known, so it is not possible to characterize the rate of participation. Taken together, the level of participation appears to be satisfactory, both in number and the qualifications of respondents as healthcare interpreters. Not all individuals responded to every question, so the total number of responses per question varies.

Who Responded to the Survey?

The survey included 16 demographic questions. These questions were largely consistent with those in CCHI's first job task analysis survey, but some questions were modified from the form in which they were used then, and some questions used in the previous survey were not used at all. In addition, there were several new questions.

There were several reasons for collecting and analyzing demographic data. One was to determine the degree of diversity among respondents along dimensions that may be seen as influencing practice, and another was to assess the degree to which respondents as a group account for the known characteristics of the population of certified healthcare interpreters. Demographic data are summarized in the tables and graphs on the following pages. Based on a review of these statistics and a comparison of them with previous CCHI surveys, it is reasonable to conclude that respondents represented the diverse population to a reasonable degree.

The first demographic question in the survey asked respondents to indicate their state of residence or the global region in which they reside, if outside the United States. The state with the largest number of respondents was California, with 374. No respondents live in Alaska and Wyoming, and several states had a single respondent. Grouping the states into regions demonstrates the general presence of respondents across the United States. There were 110 respondents living in other countries, 67 of whom live outside the United States but in North America. It is possible that a substantial portion of this group reside outside the United States but work as remote interpreters to serve patients in the United States.

Table 1. What is your state of residence or if you do not reside in the United States, in which global region do you reside?

Region	Count	Percent in Region	Percent Overall
Northeastern U.S.	227	13.2%	12.4%
Southeastern U.S.	255	14.9%	14.0%
Central U.S.	630	36.7%	34.5%
Western U.S.	604	35.2%	33.1%
Total U.S.	**1716**	**100.0%**	**94.0%**
Africa	2	1.8%	0.1%
Asia	21	19.1%	1.2%
Australia	1	0.9%	0.1%
Europe	4	3.6%	0.2%
Other North America	67	60.9%	3.7%
South America	15	13.6%	0.8%
Total Global Region	**110**	**100.0%**	**6.0%**
Grand Total	**1826**		**100.0%**

The second demographic question asked what role(s) the respondent had with respect to healthcare interpreting; that is, respondents had the opportunity to indicate if they interpret in healthcare settings, train healthcare interpreters, supervise, etc. Respondents were asked to mark all of the responses that pertained to them, so the total adds to a substantially larger number than the total group of respondents. The largest group serve as interpreters in healthcare settings, followed by those who interpret in other settings as well. As explained in Questionnaire Design and Distribution (above), the five respondents who indicated only that they are translators were excluded from the data set being analyzed because they do not serve as interpreters.

Table 2. What is your relationship to healthcare interpreters? (Check all that apply.)

Relationship	Count
I am a healthcare interpreter	1603
I manage and/or supervise healthcare interpreters	222
I train healthcare interpreters	307
I am an interpreter in other settings	578
I am a translator	416
I am a bilingual healthcare provider	121

The third demographic question asked about gender identity. Over three-fourths of the respondents are female.

Table 3. How do you identify yourself?

Gender Identity	Count	Percent
Male	386	22.0%
Female	1334	76.2%
Other	3	0.2%
Do not wish to share	28	1.6%
Total	**1751**	**100.0%**

Regarding age, the largest group of respondents is in the range of 51 to 60 years old. Fewer than 10% of the respondents reported that they were 30 or younger. CCHI requires that certificants be a minimum of 18 years of age; therefore, 18 years was a starting point for this question.

Table 4. What is your age?

Age Group	Count	Percent
18 to 30 years of age	154	8.8%
31 to 40 years of age	335	19.2%
41 to 50 years of age	475	27.2%
51 to 60 years of age	534	30.6%
61 years of age and over	249	14.3%
Total	**1747**	**100.0%**

CCHI requires that certificants have at least a high school (U.S.) diploma. All but two respondents have this amount of education, and more than half have completed a four-year degree or more. Table 5 summarizes responses to this question.

Table 5. What is the highest level of formal education (from any country) that you have completed?

Level of Education	Count	Percent
Did not complete high school	2	0.1%
High school diploma/GED	225	12.9%
Associate's degree (any major)	333	19.0%
Bachelor's degree (any major)	682	39.0%
Master's degree (any major)	411	23.5%
Doctoral degree (any major)	96	5.5%
Total	**1749**	**100.0%**

CCHI eligibility criteria include a minimum of 40 hours of instruction in healthcare interpreting. Over 90% of the respondents reported having completed that amount or more. It is important to recall that not all participants in the survey were certified.

Table 6. How much formal training do you have in healthcare interpreting?

Level of Education	Count	Percent
None	44	2.5%
Less than 40 instructional hours	109	6.2%
40 instructional hours or more	1412	80.8%
Associate's degree in healthcare interpreting	110	6.3%
Bachelor's degree in healthcare interpreting	41	2.3%
Master's degree in healthcare interpreting	32	1.8%
Total	**1748**	**100.0%**

Just over 35% of the respondents indicated that they have worked in healthcare interpreting for five years or less. Only about 11% of the respondents have worked in healthcare interpreting for 21 years or more.

Table 7. How many years of experience do you have in healthcare interpreting?

Response	Count	Percent
Less than 2 years	232	13.3%
2 to 5 years	423	24.2%
6 to 10 years	443	25.4%
11 to 20 years	458	26.2%
21 years or more	191	10.9%
Total	**1747**	**100.0%**

A point of special interest in the job task analysis study was the perceived increase in the degree to which healthcare interpreting services are performed via video remote interpreting (VRI) modality. Survey data indicate that an increase has occurred. The vast majority of respondents (88%) indicated that the primary modality through which they deliver healthcare interpreting is in person; however, 5.1% perform healthcare interpreting primarily via VRI. These outcomes compare to 2% of the 2010 job task analysis survey respondents who indicated that their primary modality was VRI. Refer to Table 8 for a summary of 2016 responses.

Table 8. What is the primary modality through which you deliver healthcare interpreting?

Specialty	Count	Percent
In person	1525	88.0%
Telephonic (OPI)	119	6.9%
Video remote interpreting (VRI)	88	5.1%
Total	**1732**	**100.0%**

The largest group of respondents indicated that they currently work as a freelancer (contractor); however, almost as many reported being a staff interpreter. It is important to keep in mind that respondents could work as supervisors and trainers of healthcare interpreters, meaning that the respondents indicating that they do not do interpreting in healthcare settings are still viewed as qualified respondents.

Table 9. What is your current employment status in relation to healthcare interpreting? (Check all that apply.)

Response	Count
I am a staff interpreter	790
I am a freelancer (contractor)	969
I am a volunteer	172
I don't do interpreting in healthcare settings	91

Many respondents deliver healthcare interpreting services on a part-time basis. Although it is not possible to determine how many respondents of those who interpret 21 to 40 hours per week actually do this work full time, it is reasonable to think that a substantial number do.

Table 10. How many hours do you interpret per week in a healthcare setting?

Response	Count	Percent
Less than 2 hours	235	13.6%
3 to 20 hours	663	38.3%
21 to 40 hours	659	38.1%
41 hours and over	172	9.9%
Total	**1729**	**100.0%**

Many respondents work in more than a single setting. Asked to indicate all settings that applied to them, the largest group of respondents interpret in hospitals, followed by the groups that interpret in outpatient clinics and in physician practices.

Table 11. In what setting(s) do you interpret? (Check all that apply.)

Response	Count
Hospital	1377
Physician Practice	968
Outpatient Clinic	1069
Home Health	444
Public Health Setting	501
Health Insurance Company	233

The next demographic question asked respondents to select the primary language in which they interpret from a pulldown list of 75 languages. Respondents then had the option to indicate a secondary language in which they interpret, if they have one, by selecting from a second, equivalent pulldown list. Spanish is the most widely interpreted primary language, followed by American Sign Language (ASL). For their secondary language, the largest number of respondents marked *Other*, followed by Spanish.

Table 12. In what language(s) do you interpret in healthcare settings?

	Primary		Secondary			Primary		Secondary	
Language	**Count**	**Percent**	**Count**	**Percent**	**Language**	**Count**	**Percent**	**Count**	**Percent**
Amharic	3	0.2%	2	0.5%	Karen	1	0.1%	1	0.2%
Arabic	58	3.4%	5	1.2%	K'iche	1	0.1%	0	0.0%
Arakanese	0	0.0%	1	0.2%	Kinyarwanda	4	0.2%	1	0.2%
Armenian	3	0.2%	1	0.2%	Kisii	0	0.0%	1	0.2%
Am Sign Lang(ASL)	158	9.2%	12	2.9%	Korean	17	1.0%	1	0.2%
Bengali	1	0.1%	1	0.2%	Kurdish	0	0.0%	1	0.2%
Bosnian	4	0.2%	3	0.7%	Laotian	3	0.2%	4	1.0%
Bulgarian	2	0.1%	1	0.2%	Lingala	0	0.0%	1	0.2%
Burmese	9	0.5%	2	0.5%	Mandarin	69	4.0%	25	6.0%
Cambodian/Khmer	6	0.4%	1	0.2%	Marathi	0	0.0%	1	0.2%
Cantonese	38	2.2%	11	2.7%	Mien	1	0.1%	0	0.0%
Cape Verdean	1	0.1%	2	0.5%	Nepali	13	0.8%	0	0.0%
Catalan	0	0.0%	4	1.0%	Oromo	0	0.0%	1	0.2%
Cebuano	0	0.0%	2	0.5%	Polish	5	0.3%	3	0.7%
Chaldean	0	0.0%	1	0.2%	Portuguese	28	1.6%	29	7.0%
Chamorro	0	0.0%	1	0.2%	Punjabi	2	0.1%	1	0.2%
Chuukese	1	0.1%	0	0.0%	Romanian	2	0.1%	1	0.2%
Criolo	0	0.0%	1	0.2%	Russian	63	3.7%	6	1.4%
Croatian	0	0.0%	1	0.2%	Serbian	1	0.1%	0	0.0%
Czech	1	0.1%	1	0.2%	Serbo-Croatian	2	0.1%	1	0.2%
Dari	0	0.0%	4	1.0%	Other Sign Lang	0	0.0%	6	1.4%
Die-jiu	0	0.0%	1	0.2%	Slovak	0	0.0%	1	0.2%
Estonian	0	0.0%	5	1.2%	Somali	11	0.6%	1	0.2%
Farsi	7	0.4%	0	0.0%	Spanish	1020	59.7%	71	17.1%
Finnish	0	0.0%	1	0.2%	Swahili	2	0.1%	5	1.2%
French	15	0.9%	46	11.1%	Tagalog	6	0.4%	0	0.0%
Georgian	0	0.0%	1	0.2%	Taiwanese	0	0.0%	11	2.7%
German	2	0.1%	5	1.2%	Thai	0	0.0%	3	0.7%
Greek	1	0.1%	0	0.0%	Tigrinya	1	0.1%	1	0.2%
Gujarati	2	0.1%	0	0.0%	Toisanese	0	0.0%	2	0.5%
Haitian Creole	6	0.4%	1	0.2%	Turkish	1	0.1%	0	0.0%
Hakka	0	0.0%	2	0.5%	Twi	1	0.1%	0	0.0%
Hebrew	0	0.0%	1	0.2%	Ukrainian	1	0.1%	15	3.6%
Hindi	2	0.1%	7	1.7%	Urdu	2	0.1%	2	0.5%
Hmong	15	0.9%	0	0.0%	Uzbek	0	0.0%	1	0.2%
Hungarian	0	0.0%	1	0.2%	Vietnamese	35	2.0%	1	0.2%
Italian	8	0.5%	6	1.4%	Other	69	4.0%	82	19.8%
Japanese	5	0.3%	1	0.2%	**Total**	**1709**	**100.0%**	**415**	**100.0%**

Asked to indicate their current interpreter certification status and to mark all certifications that apply, respondents provided the information reported in Table 13. The largest group holds CHI™-Spanish. Of the 2,068 total certifications reported, 1,100 are in the CCHI programs.

Table 13. What is your current interpreter certification status? (Check all that apply.)

Response	Count
Not certified in interpreting at this time	334
CoreCHI™	352
CHI™-Arabic	34
CHI™-Mandarin	50
CHI™-Spanish	664
Other medical interpreter certification	353
Other interpreter certification (e.g. RID, court)	281

The large majority of respondents reported that they learned their primary interpreting language (non-English) as native speakers.

Table 14. How was your primary (non-English) interpreting language acquired?

Response	Count	Percent
Native speaker	1242	71.7%
Non-native speaker	392	22.6%
Heritage speaker	99	5.7%
Total	**1733**	**100.0%**

Over half of the respondents translate as part of their duties as healthcare interpreter, as may be seen in Table 15. The survey asked that if respondents answered *Yes* to this question, they provide a brief description of the type and length of the documents translated. There was an open text box for this purpose. All responses received are kept by CCHI and are available upon request.

Table 15. Do you translate as part of your responsibilities as a healthcare interpreter?

Response	Count	Percent
Yes	953	55.0%
No	781	45.0%
Total	**1734**	**100.0%**

Validation of the Domains and Tasks

Validation Scales

Respondents were asked to evaluate each task using scales for Performance Expectation, Consequence, and Frequency. A three-point scale was used for Performance Expectation, with the most desired response being "2" (within the first six months after certification). The Consequence scale employed five units (1 to 5), with a "5" indicating the potential for extreme harm. It is important to note that even "minimal" harm occurring due to the interpreter's inability to perform this task is unacceptable in the context of health care as the purpose of the interpreter in health care is to facilitate effective communication among the patient, the patient's family, and healthcare providers. A five-point scale (1 to 5) was used for the Frequency scale, with a response of "5" representing the highest rating. The scales are listed below as a reference:

Performance Expectation: At what point are newly certified healthcare Interpreters first expected to perform the domain or task?

1 = Not at all
2 = Within the first six months of certification (includes exactly six months)
3 = Only after the first six months of certification (does not include exactly six months)

Consequence: To what degree would the inability of newly certified healthcare Interpreters to perform duties in each domain or task be seen as causing harm to stakeholders? (Harm may be seen as physical, psychological, emotional, legal, financial, etc.)

1 = No harm
2 = Minimal harm
3 = Moderate harm
4 = Substantial harm
5 = Extreme harm

Frequency: How often do newly certified healthcare interpreters perform duties in each of the domains or tasks, assuming full-time employment over a one-year period?

1 = Never
2 = Rarely (once per year)
3 = Sometimes (once per month)
4 = Often (once per week)
5 = Repetitively (daily)

Castle's analysis for Performance Expectation responses addressed the number and percentage of respondents selecting the response choices, which are classifications instead of ratings. Castle determined the number and percentage of respondents who selected the various options for Frequency and Consequence as well, but in addition computed various descriptive statistics for these responses, which may be considered ordinal in nature. The descriptive statistics include means, which are the simple arithmetic average of the scale values given by the respondents. The standard errors of the mean describe the theoretical range within which the means of other samples drawn from this population would lie. The standard deviation statistics describe the spread of the response distributions, with small estimates indicating tight groupings and agreement among the respondents.

Professional Responsibility and Interpreter Ethics

The first domain, Professional Responsibility and Interpreter Ethics, includes tasks that address the steps newly certified healthcare interpreters take when engaged in activities related to the domain. The tasks in this domain, which are abbreviated with key words in tables 16-20, are presented in full below:

1. Maintain the boundaries of the interpreter's professional role by refraining from personal involvement in order to respect the needs and contributions of all parties.

2. Maintain impartiality by separating personal values, beliefs, and biases from those of all parties in order to respect their autonomy and self-determination.

3. Assess the need for advocacy by considering all available information to prevent harm or disrespect to any party.

4. Address ethical dilemmas using decision-making skills and established codes of ethics in order to support optimal patient outcomes and to maintain the integrity of the healthcare interpreting profession.

5. Present self in a professional manner to all parties involved in the healthcare encounter by upholding national and locally applicable standards of practice.

6. Pursue professional growth and development on an ongoing basis by keeping abreast of the working languages and their variants, relevant legislation, health care, and public health to enhance the capacity to interpret accurately.

7. Adhere to personal and occupational safety measures by following standard precautionary protocols to reduce the risk of harm and disease.

8. Manage stress using self-monitoring and self-care strategies in order to encourage personal and professional wellness.

As may be seen in Table 16, respondents' Performance Expectation for the tasks in Professional Responsibility and Interpreter Ethics indicate strongly that newly certified healthcare interpreters are expected to perform all of them. The level of support is overwhelming for most tasks, with a very high percentage of respondents finding that they are expected of certified healthcare interpreters in the first six months after earning certification. However, the expectation for entry-level performance is less clear for the task that addresses professional growth and development. The majority of respondents expect newly certified interpreters to perform the task, but nearly 40% indicate performance of the task is expected only after the first six months of certification.

Table 16. Counts and Percentages for Performance Expectation, Tasks in Professional Responsibility and Interpreter Ethics

Task (Key Words)	N	1	% 1	2	% 2	3	% 3
Maintain boundaries	2081	32	1.5%	1946	93.5%	103	4.9%
Maintain impartiality	2075	42	2.0%	1949	93.9%	84	4.0%
Assess need for advocacy	2076	57	2.7%	1648	79.4%	371	17.9%
Address ethical dilemmas	2066	33	1.6%	1746	84.5%	287	13.9%
Present self professionally	2056	43	2.1%	1933	94.0%	80	3.9%
Pursue professional growth	2046	40	2.0%	1211	59.2%	795	38.9%
Adhere to safety measures	2044	41	2.0%	1871	91.5%	132	6.5%
Manage stress	2034	56	2.8%	1560	76.7%	418	20.6%

Ratings: 1 = Not at all, 2 = Within first six months, 3 = Only after first six months

There is also substantial support for the hypothesis that tasks in Professional Responsibility and Interpreter Ethics must be performed proficiently (Consequence scale). For all tasks, over half of the ratings are above the scale midpoint. This finding indicates that at least moderate harm would result from poor performance. The ratings are especially high for the task on adherence to safety measures (Table 17), which has the highest average Consequence ratings of all tasks in the domain (Table 18).

Table 17. Counts and Percentages for Consequence, Tasks in Professional Responsibility and Interpreter Ethics

Task (Key Words)	N	1	% 1	2	% 2	3	% 3	4	% 4	5	5%
Maintain boundaries	2079	239	11.5%	275	13.2%	596	28.7%	692	33.3%	277	13.3%
Maintain impartiality	2076	236	11.4%	230	11.1%	538	25.9%	734	35.4%	338	16.3%
Assess need for advocacy	2070	239	11.5%	319	15.4%	624	30.1%	590	28.5%	298	14.4%
Address ethical dilemmas	2064	231	11.2%	247	12.0%	585	28.3%	683	33.1%	318	15.4%
Present self professionally	2054	334	16.3%	535	26.0%	652	31.7%	391	19.0%	142	6.9%
Pursue professional growth	2046	378	18.5%	491	24.0%	626	30.6%	389	19.0%	162	7.9%
Adhere to safety measures	2038	212	10.4%	178	8.7%	325	15.9%	624	30.6%	699	34.3%
Manage stress	2035	228	11.2%	364	17.9%	722	35.5%	519	25.5%	202	9.9%

Ratings: 1 = No harm, 2 = Minimal harm, 3 = Moderate harm, 4 = Substantial harm, 5 = Extreme harm

Table 18. Descriptive Statistics for Consequence, Tasks in Professional Responsibility and Interpreter Ethics

Task (Key Words)	N	Median	Mean	SE Mean	Std Dev
Maintain boundaries	2079	3	3.2	0.0	1.2
Maintain impartiality	2076	4	3.3	0.0	1.2
Assess need for advocacy	2070	3	3.2	0.0	1.2
Address ethical dilemmas	2064	3	3.3	0.0	1.2
Present self professionally	2054	3	2.7	0.0	1.1
Pursue professional growth	2046	3	2.7	0.0	1.2
Adhere to safety measures	2038	4	3.7	0.0	1.3
Manage stress	2035	3	3.1	0.0	1.1

Ratings: 1 = No harm, 2 = Minimal harm, 3 = Moderate harm, 4 = Substantial harm, 5 = Extreme harm

Given that new certificants perform the tasks in Professional Responsibility and Interpreter Ethics and that they must perform them proficiently, the question then becomes how often they do so. The Frequency scale addressed this question. The modal Frequency rating was 5 for half of the tasks, indicating that they are performed daily, and 4 for the remaining tasks, indicating they are performed about once per week. Counts and percentages for each response option bear this out (Table 19), as do the descriptive statistics as given in Table 20. It is clear that the tasks in this domain are performed routinely.

Table 19. Counts and Percentages for Frequency, Tasks in Professional Responsibility and Interpreter Ethics

Task (Key Words)	N	1	% 1	2	% 2	3	% 3	4	% 4	5	% 5
Maintain boundaries	2074	54	2.6%	115	5.5%	237	11.4%	421	20.3%	1247	60.1%
Maintain impartiality	2074	69	3.3%	116	5.6%	253	12.2%	436	21.0%	1200	57.9%
Assess need for advocacy	2067	48	2.3%	308	14.9%	639	30.9%	466	22.5%	606	29.3%
Address ethical dilemmas	2058	44	2.1%	229	11.1%	456	22.2%	489	23.8%	840	40.8%
Present self professionally	2051	49	2.4%	97	4.7%	137	6.7%	305	14.9%	1463	71.3%
Pursue professional growth	2046	38	1.9%	127	6.2%	459	22.4%	740	36.2%	682	33.3%
Adhere to safety measures	2038	46	2.3%	143	7.0%	333	16.3%	421	20.7%	1095	53.7%
Manage stress	2032	42	2.1%	150	7.4%	483	23.8%	638	31.4%	719	35.4%

Ratings: 1 = Never, 2 = Rarely (once per year), 3 = Sometimes (once per month), 4 = Often (once per week), 5 = Repeatedly (daily)

Table 20. Descriptive Statistics for Frequency, Tasks in the Professional Responsibility and Interpreter Ethics

Task (Key Words)	N	Median	Mean	SE Mean	Std Dev
Maintain boundaries	2074	5	4.3	0.0	1.0
Maintain impartiality	2074	5	4.2	0.0	1.1
Assess need for advocacy	2067	4	3.6	0.0	1.1
Address ethical dilemmas	2058	4	3.9	0.0	1.1
Present self professionally	2051	5	4.5	0.0	1.0
Pursue professional growth	2046	4	3.9	0.0	1.0
Adhere to safety measures	2038	5	4.2	0.0	1.1
Manage stress	2032	4	3.9	0.0	1.0

Ratings: 1 = Never, 2 = Rarely (once per year), 3 = Sometimes (once per month), 4 = Often (once per week), 5 = Repeatedly (daily)

Manage the Interpreting Encounter

The second domain is Manage the Interpreting Encounter. The tasks are presented in full here and are abbreviated in tables 21-25.

1. Monitor one's own competence and limitations by recognizing personal, scheduling, linguistic, and cultural constraints in order to interpret effectively.

2. Manage unfamiliar terms and concepts in a manner that maintains transparency and supports effective communication for all parties.

3. Manage the flow of communication from the start of the encounter to the end by adhering to professional standards of practice to support effective communication.

As was the case with the first domain, tasks in Manage the Interpreting Encounter are regarded overwhelmingly as work that newly certified healthcare interpreters are expected to perform (Table 21). All tasks are endorsed overwhelmingly by respondents as being performed in the first six months after certification.

Table 21. Counts and Percentages for Performance Expectation, Tasks in Manage the Interpreting Encounter

Task (Key Words)	N	1	% 1	2	% 2	3	% 3
Monitor competence, limitations	1878	29	1.5%	1636	87.1%	213	11.3%
Manage unfamiliar terms, concepts	1879	29	1.5%	1683	89.6%	167	8.9%
Manage flow of communication	1878	23	1.2%	1643	87.5%	212	11.3%

Ratings: 1 = Not at all, 2 = Within first six months, 3 = Only after first six months

The question of potential for harm if the tasks are performed improperly (Consequence) is less clear than for Performance Expectation. Ratings summarized in Table 22 indicate that poor performance of tasks in Manage the Interpreting Encounter is associated with moderate to substantial harm. The task on managing unfamiliar terms has the highest Consequence ratings, with a mean of 3.5 on the five-point scale, as shown in Table 23.

Table 22. Counts and Percentages for Consequence, Tasks in Manage the Interpreting Encounter

Task (Key Words)	N	1	% 1	2	% 2	3	% 3	4	% 4	5	% 5
Monitor competence, limitations	1874	184	9.8%	213	11.4%	524	28.0%	657	35.1%	296	15.8%
Manage unfamiliar terms, concepts	1877	180	9.6%	199	10.6%	429	22.9%	608	32.4%	461	24.6%
Manage flow of communication	1876	212	11.3%	302	16.1%	598	31.9%	545	29.1%	219	11.7%

Ratings: 1 = No harm, 2 = Minimal harm, 3 = Moderate harm, 4 = Substantial harm, 5 = Extreme harm

Table 23. Descriptive Statistics for Consequence, Tasks in Manage the Interpreting Encounter

Task (Key Words)	N	Median	Mean	SE Mean	Std Dev
Monitor competence, limitations	1874	4	3.4	0.0	1.2
Manage unfamiliar terms, concepts	1877	4	3.5	0.0	1.2
Manage flow of communication	1876	3	3.1	0.0	1.2

Ratings: 1 = No harm, 2 = Minimal harm, 3 = Moderate harm, 4 = Substantial harm, 5 = Extreme harm

Frequency ratings presented in tables 24 and 25 make it clear that the tasks in Manage the Interpreting Encounter are performed by newly certified healthcare interpreters at least weekly, if not daily.

Table 24. Counts and Percentages for Frequency, Tasks in Manage the Interpreting Encounter

Task (Key Words)	N	1	% 1	2	% 2	3	% 3	4	% 4	5	% 5
Monitor competence, limitations	1874	33	1.8%	96	5.1%	251	13.4%	515	27.5%	979	52.2%
Manage unfamiliar terms, concepts	1875	20	1.1%	91	4.9%	286	15.3%	505	26.9%	973	51.9%
Manage flow of communication	1873	27	1.4%	66	3.5%	180	9.6%	461	24.6%	1139	60.8%

Ratings: 1 = Never, 2 = Rarely (once per year), 3 = Sometimes (once per month), 4 = Often (once per week), 5 = Repeatedly (daily)

Table 25. Descriptive Statistics for Frequency, Tasks in Manage the Interpreting Encounter

Task (Key Words)	N	Median	Mean	SE Mean	Std Dev
Monitor competence, limitations	1874	5	4.2	0.0	1.0
Manage unfamiliar terms, concepts	1875	5	4.2	0.0	1.0
Manage flow of communication	1873	5	4.4	0.0	0.9

Ratings: 1 = Never, 2 = Rarely (once per year), 3 = Sometimes (once per month), 4 = Often (once per week), 5 = Repeatedly (daily)

Healthcare Terminology

There is only one task in the domain titled Healthcare Terminology. It is presented in its entirety below and in abbreviated form in the tables.

1. Remain current on healthcare terminology and general vocabulary in working languages through research, continuing education, etc., to interpret accurately and completely.

There is support in the data (Table 26) for the claim that the newly certified healthcare interpreter is expected to perform the task.

Table 26. Counts and Percentages for Performance Expectation, Task in Healthcare Terminology

Task (Key Words)	N	1	% 1	2	% 2	3	% 3
Remain current on terminology and vocabulary	1868	19	1.0%	1449	77.6%	400	21.4%

Ratings: 1 = Not at all, 2 = Within first six months, 3 = Only after first six months

Ratings for Consequence indicate that moderate to substantial harm would result if newly certified healthcare interpreters do not maintain currency with healthcare terminology. Tables 27 and 28 summarize the Consequence ratings.

Table 27. Counts and Percentages for Consequence, Task in Healthcare Terminology

Task (Key Words)	N	1	% 1	2	% 2	3	% 3	4	% 4	5	% 5
Remain current on terminology and vocabulary	1863	191	10.3%	235	12.6%	484	26.0%	573	30.8%	380	20.4%

Ratings: 1 = No harm, 2 = Minimal harm, 3 = Moderate harm, 4 = Substantial harm, 5 = Extreme harm

Table 28. Descriptive Statistics for Consequence, Task in Healthcare Terminology

Task (Key Words)	N	Median	Mean	SE Mean	Std Dev
Remain current on terminology and vocabulary	1863	4	3.4	0.0	1.2

Ratings: 1 = No harm, 2 = Minimal harm, 3 = Moderate harm, 4 = Substantial harm, 5 = Extreme harm

The majority of respondents indicated that the task is performed repeatedly (daily).

Table 29. Counts and Percentages for Frequency, Task in Healthcare Terminology

Task (Key Words)	N	1	% 1	2	% 2	3	% 3	4	% 4	5	% 5
Remain current on terminology and vocabulary	1861	17	0.9%	74	4.0%	237	12.7%	539	29.0%	994	53.4%

Ratings: 1 = Never, 2 = Rarely (once per year), 3 = Sometimes (once per month), 4 = Often (once per week), 5 = Repeatedly (daily)

Table 30. Descriptive Statistics for Frequency, Task in Healthcare Terminology

Task (Key Words)	N	Median	Mean	SE Mean	Std Dev
Remain current on terminology and vocabulary	1861	5	4.3	0.0	0.9

Ratings: 1 = Never, 2 = Rarely (once per year), 3 = Sometimes (once per month), 4 = Often (once per week), 5 = Repeatedly (daily)

U.S. Healthcare System

The fourth domain addresses responsibilities related to the U.S. Healthcare System. As with Healthcare Terminology, there is a single task. It is presented in full here and is abbreviated in the tables.

1. Maintain working familiarity with the U.S. health system as a part of a legal and socioeconomic environment with its own culture and organizational structure to predict and respond to events appropriately and navigate the system effectively.

Newly certified healthcare interpreters are viewed by respondents as being responsible for maintaining familiarity with the U.S. healthcare system in the first six months after certification.

Table 31. Counts and Percentages for Performance Expectation, Task in U.S. Healthcare System

Task (Key Words)	N	1	% 1	2	% 2	3	% 3
Maintain familiarity with system	1834	60	3.3%	1100	60.0%	674	36.8%

Ratings: 1 = Not at all, 2 = Within first six months, 3 = Only after first six months

Ratings for Consequence indicate that minimal to moderate harm would result if newly certified healthcare interpreters do not maintain currency with healthcare terminology. Tables 32 and 33 summarize the Consequence ratings.

Table 32. Counts and Percentages for Consequence, Task in U.S. Healthcare System

Task (Key Words)	N	1	% 1	2	% 2	3	% 3	4	% 4	5	% 5
Maintain familiarity with system	1832	243	13.3%	551	30.1%	589	32.2%	308	16.8%	141	7.7%

Ratings: 1 = No harm, 2 = Minimal harm, 3 = Moderate harm, 4 = Substantial harm, 5 = Extreme harm

Table 33. Descriptive Statistics for Consequence, Task in U.S. Healthcare System

Task (Key Words)	N	Median	Mean	SE Mean	Std Dev
Maintain familiarity with system	1832	3	2.8	0.0	1.1

Ratings: 1 = No harm, 2 = Minimal harm, 3 = Moderate harm, 4 = Substantial harm, 5 = Extreme harm

The majority of respondents indicated that the task is performed often (once per week) or repeatedly (daily), but the largest number of respondents indicated that the task is performed sometimes (monthly).

Table 34. Counts and Percentages for Frequency, Task in U.S. Healthcare System

Task (Key Words)	N	1	% 1	2	% 2	3	% 3	4	% 4	5	% 5
Maintain familiarity with system	1825	36	2.0%	274	15.0%	525	28.8%	504	27.6%	486	26.6%

Ratings: 1 = Never, 2 = Rarely (once per year), 3 = Sometimes (once per month), 4 = Often (once per week), 5 = Repeatedly (daily)

Table 35. Descriptive Statistics for Frequency, Task in U.S. Healthcare System

Task (Key Words)	N	Median	Mean	SE Mean	Std Dev
Maintain familiarity with system	1825	4	3.6	0.0	1.1

Ratings: 1 = Never, 2 = Rarely (once per year), 3 = Sometimes (once per month), 4 = Often (once per week), 5 = Repeatedly (daily)

Cultural Responsiveness

Two tasks work together to comprise the Cultural Responsiveness domain. It is presented in its entirety below and in abbreviated form in the tables.

1. Recognize that individuals have different levels of acculturation and intracultural variation in order to avoid making assumptions that may misrepresent a speaker's meaning.

2. Serve as a culture mediator by recognizing when there is risk of potential miscommunication and responding appropriately so that each person's own beliefs are expressed.

Performance Expectation data (Table 36) supply strong evidence that newly certified healthcare interpreters are expected to perform both tasks in Cultural Responsiveness.

Table 36. Counts and Percentages for Performance Expectation, Tasks in Cultural Responsiveness

Task (Key Words)	N	1	% 1	2	% 2	3	% 3
Recognize individual variation	1801	29	1.6%	1527	84.8%	245	13.6%
Serve as culture mediator	1799	32	1.8%	1503	83.5%	264	14.7%

Ratings: 1 = Not at all, 2 = Within first six months, 3 = Only after first six months

Moderate to substantial harm could develop as a consequence of poor performance of the tasks in Cultural Responsiveness. See tables 37 and 38.

Table 37. Counts and Percentages for Consequence, Tasks in Cultural Responsiveness

Task (Key Words)	N	1	% 1	2	% 2	3	% 3	4	% 4	5	% 5
Recognize individual variation	1802	144	8.0%	299	16.6%	580	32.2%	522	29.0%	257	14.3%
Serve as culture mediator	1803	141	7.8%	271	15.0%	593	32.9%	559	31.0%	239	13.3%

Ratings: 1 = No harm, 2 = Minimal harm, 3 = Moderate harm, 4 = Substantial harm, 5 = Extreme harm

Table 38. Descriptive Statistics for Consequence, Tasks in Cultural Responsiveness

Task (Key Words)	N	Median	Mean	SE Mean	Std Dev
Recognize individual variation	1802	3	3.2	0.0	1.1
Serve as culture mediator	1803	3	3.3	0.0	1.1

Ratings: 1 = No harm, 2 = Minimal harm, 3 = Moderate harm, 4 = Substantial harm, 5 = Extreme harm

Newly certified healthcare interpreters perform the tasks in Cultural Responsiveness on a weekly basis.

Table 39. Counts and Percentages for Frequency, Tasks in Cultural Responsiveness

Task (Key Words)	N	1	% 1	2	% 2	3	% 3	4	% 4	5	% 5
Recognize individual variation	1799	21	1.2%	103	5.7%	374	20.8%	554	30.8%	747	41.5%
Serve as culture mediator	1799	27	1.5%	146	8.1%	489	27.2%	489	27.2%	648	36.0%

Ratings: 1 = Never, 2 = Rarely (once per year), 3 = Sometimes (once per month), 4 = Often (once per week), 5 = Repeatedly (daily)

Table 40. Descriptive Statistics for Frequency, Tasks in Cultural Responsiveness

Task (Key Words)	N	Median	Mean	SE Mean	Std Dev
Recognize individual variation	1799	4	4.1	0.0	1.0
Serve as culture mediator	1799	4	3.9	0.0	1.0

Ratings: 1 = Never, 2 = Rarely (once per year), 3 = Sometimes (once per month), 4 = Often (once per week), 5 = Repeatedly (daily)

Interpret in Healthcare Settings

The sixth domain is Interpret in Healthcare Settings. The tasks are presented in full here and are abbreviated in tables 41-45.

1. Interpret consecutively between source and target languages to facilitate communication.

2. Interpret simultaneously from the source language into the target language to facilitate communication.

3. Sight translate a written message by rendering it into a spoken or a signed language to facilitate communication.

4. Translate a written message by rendering it into a written or a signed language to facilitate communication.

5. Maintain fidelity to the message by taking into consideration register, cultural context, and nonverbal content to convey the original intent.

The evidence that newly certified healthcare interpreters are expected to perform tasks in Interpret in Healthcare Settings is very strong (Table 41). All tasks are endorsed by respondents as being performed in the first six months after certification.

Table 41. Counts and Percentages for Performance Expectation, Tasks in Interpret in Healthcare Settings

Task (Key Words)	N	1	% 1	2	% 2	3	% 3
Interpret consecutively	1738	15	0.9%	1566	90.1%	157	9.0%
Interpret simultaneously	1738	64	3.7%	1231	70.8%	443	25.5%
Sight translate	1740	73	4.2%	1402	80.6%	265	15.2%
Translate written message	1739	205	11.8%	1182	68.0%	352	20.2%
Maintain fidelity to message	1746	30	1.7%	1511	86.5%	205	11.7%

Ratings: 1 = Not at all, 2 = Within first six months, 3 = Only after first six months

For all tasks in this domain, the largest percentage of respondents indicated that substantial harm would result if the newly certified healthcare interpreter did not perform them proficiently (Table 42, next page). As may be seen in Table 43 (next page), the task on consecutive interpreting has the highest Consequence ratings, with a mean of 3.5 on the five-point scale.

Table 42. Counts and Percentages for Consequence, Tasks in Interpret in Healthcare Settings

Task (Key Words)	N	1	% 1	2	% 2	3	% 3	4	% 4	5	% 5
Interpret consecutively	1738	162	9.3%	192	11.0%	386	22.2%	572	32.9%	426	24.5%
Interpret simultaneously	1738	178	10.2%	243	14.0%	485	27.9%	508	29.2%	324	18.6%
Sight translate	1739	176	10.1%	226	13.0%	466	26.8%	526	30.2%	345	19.8%
Translate written message	1731	219	12.7%	237	13.7%	432	25.0%	500	28.9%	343	19.8%
Maintain fidelity to message	1747	150	8.6%	236	13.5%	458	26.2%	572	32.7%	331	18.9%

Ratings: 1 = No harm, 2 = Minimal harm, 3 = Moderate harm, 4 = Substantial harm, 5 = Extreme harm

Table 43. Descriptive Statistics for Consequence, Tasks in Interpret in Healthcare Settings

Task (Key Words)	N	Median	Mean	SE Mean	Std Dev
Interpret consecutively	1738	4	3.5	0.0	1.2
Interpret simultaneously	1738	3	3.3	0.0	1.2
Sight translate	1739	4	3.4	0.0	1.2
Translate written message	1731	3	3.3	0.0	1.3
Maintain fidelity to message	1747	4	3.4	0.0	1.2

Ratings: 1 = No harm, 2 = Minimal harm, 3 = Moderate harm, 4 = Substantial harm, 5 = Extreme harm

Frequency ratings presented in tables 44 and 45 indicate that newly certified healthcare interpreters interpret consecutively on a routine basis and interpret simultaneously on a regular basis, with over 54% of respondents interpreting simultaneously on a weekly or daily basis. Nearly 50% of respondents sight translate on a weekly or daily basis. Written translation is done less frequently, but at least monthly. Also, the most frequent response for maintaining fidelity to the message is repeatedly, or daily.

Table 44. Counts and Percentages for Frequency, Tasks in Interpret in Healthcare Settings

Task (Key Words)	N	1	% 1	2	% 2	3	% 3	4	% 4	5	% 5
Interpret consecutively	1736	20	1.2%	71	4.1%	148	8.5%	291	16.8%	1206	69.5%
Interpret simultaneously	1736	46	2.6%	269	15.5%	477	27.5%	319	18.4%	625	36.0%
Sight translate	1739	54	3.1%	246	14.1%	570	32.8%	404	23.2%	465	26.7%
Translate written message	1733	175	10.1%	375	21.6%	467	26.9%	315	18.2%	401	23.1%
Maintain fidelity to message	1745	30	1.7%	93	5.3%	257	14.7%	430	24.6%	935	53.6%

Ratings: 1 = Never, 2 = Rarely (once per year), 3 = Sometimes (once per month), 4 = Often (once per week), 5 = Repeatedly (daily)

Table 45. Descriptive Statistics for Frequency, Tasks in Interpret in Healthcare Settings

Task (Key Words)	N	Median	Mean	SE Mean	Std Dev
Interpret consecutively	1736	5	4.5	0.0	0.9
Interpret simultaneously	1736	4	3.7	0.0	1.2
Sight translate	1739	3	3.6	0.0	1.1
Translate written message	1733	3	3.2	0.0	1.3
Maintain fidelity to message	1745	5	4.2	0.0	1.0

Ratings: 1 = Never, 2 = Rarely (once per year), 3 = Sometimes (once per month), 4 = Often (once per week), 5 = Repeatedly (daily)

Domain Ratings

After rating the tasks, participants in the survey were asked to evaluate the domains as a whole, considering all tasks in the domain taken together. The evidence that newly certified healthcare interpreters are expected to perform the domains within the first six months after earning certification is very strong, but about one-third of the respondents believe that proficiency in the U.S. healthcare system is expected only after the first six months. See Table 46 for the details.

Table 46. Counts and Percentages for Performance Expectation of Domains

Domain	N	1	% 1	2	% 2	3	% 3
Professional Responsibility and Interpreter Ethics	2029	29	1.4%	1866	92.0%	134	6.6%
Manage the Interpreting Encounter	1872	33	1.8%	1679	89.7%	160	8.5%
Healthcare Terminology	1857	24	1.3%	1503	80.9%	330	17.8%
U.S. Healthcare System	1818	76	4.2%	1150	63.3%	592	32.6%
Cultural Responsiveness	1787	30	1.7%	1503	84.1%	254	14.2%
Interpret in Healthcare Settings	1733	34	2.0%	1503	86.7%	196	11.3%

Ratings: 1 = Not at all, 2 = Within first six months, 3 = Only after first six months

Domain-level responses for Consequence are summarized in tables 47 and 48. They suggest that the last domain (Interpret in Healthcare Settings) has the greatest criticality, with the degree to which harm might result from the improper performance of newly certified healthcare interpreters ranging between moderate and substantial. For the other domains, the level of harm is best characterized as moderate.

Table 47. Counts and Percentages for Consequence of Domains

Task (Key Words)	N	1	% 1	2	% 2	3	% 3	4	% 4	5	% 5
Pro Respons. & Interpreter Ethics	2025	243	12.0%	207	10.2%	546	27.0%	723	35.7%	306	15.1%
Manage Interpreting Encounter	1870	217	11.6%	250	13.4%	567	30.3%	580	31.0%	256	13.7%
Healthcare Terminology	1857	208	11.2%	251	13.5%	463	24.9%	574	30.9%	361	19.4%
U.S. Healthcare System	1815	247	13.6%	549	30.2%	577	31.8%	314	17.3%	128	7.1%
Cultural Responsiveness	1788	165	9.2%	281	15.7%	620	34.7%	511	28.6%	211	11.8%
Interpret in Healthcare Settings	1732	157	9.1%	210	12.1%	475	27.4%	565	32.6%	325	18.8%

Ratings: 1 = No harm, 2 = Minimal harm, 3 = Moderate harm, 4 = Substantial harm, 5 = Extreme harm

Table 48. Descriptive Statistics for Consequence of Domains

Domain	N	Median	Mean	SE Mean	Std Dev
Professional Responsibility and Interpreter Ethics	2025	4	3.3	0.0	1.2
Manage the Interpreting Encounter	1870	3	3.2	0.0	1.2
Healthcare Terminology	1857	4	3.3	0.0	1.2
U.S. Healthcare System	1815	3	2.7	0.0	1.1
Cultural Responsiveness	1788	3	3.2	0.0	1.1
Interpret in Healthcare Settings	1732	4	3.4	0.0	1.2

Ratings: 1 = No harm, 2 = Minimal harm, 3 = Moderate harm, 4 = Substantial harm, 5 = Extreme harm

Ratings for Frequency (tables 49 and 50) indicate that newly certified healthcare interpreters attend to responsibilities in Professional Responsibility and Interpreter Ethics, Manage the Interpreting Encounter, Healthcare Terminology, and Interpret in Healthcare Settings on a routine basis. Responsibilities related to the U.S. Healthcare System and Cultural Responsiveness require slightly less constant attention but are performed monthly, if not weekly.

Table 49. Counts and Percentages for Frequency of Domains

Task (Key Words)	N	1	% 1	2	% 2	3	% 3	4	% 4	5	% 5
Pro Respons. & Interpreter Ethics	2016	45	2.2%	97	4.8%	216	10.7%	532	26.4%	1126	55.9%
Manage Interpreting Encounter	1869	32	1.7%	80	4.3%	193	10.3%	470	25.1%	1094	58.5%
Healthcare Terminology	1852	23	1.2%	90	4.9%	238	12.9%	507	27.4%	994	53.7%
U.S. Healthcare System	1814	44	2.4%	274	15.1%	489	27.0%	508	28.0%	499	27.5%
Cultural Responsiveness	1788	27	1.5%	142	7.9%	427	23.9%	536	30.0%	656	36.7%
Interpret in Healthcare Settings	1733	34	2.0%	93	5.4%	274	15.8%	487	28.1%	845	48.8%

Ratings: 1 = Never, 2 = Rarely (once per year), 3 = Sometimes (once per month), 4 = Often (once per week), 5 = Repeatedly (daily)

Table 50. Descriptive Statistics for Frequency of Domains

Domain	N	Median	Mean	SE Mean	Std Dev
Professional Responsibility and Interpreter Ethics	2016	5	4.3	0.0	1.0
Manage the Interpreting Encounter	1869	5	4.3	0.0	0.9
Healthcare Terminology	1852	5	4.3	0.0	0.9
U.S. Healthcare System	1814	4	3.6	0.0	1.1
Cultural Responsiveness	1788	4	3.9	0.0	1.0
Interpret in Healthcare Settings	1733	4	4.2	0.0	1.0

Ratings: 1 = Never, 2 = Rarely (once per year), 3 = Sometimes (once per month), 4 = Often (once per week), 5 = Repeatedly (daily)

RELIABILITY ANALYSIS FOR DOMAINS

The reliability of the scales for domains was assessed in order to determine how consistently the tasks performed as measures. Reliability refers to the degree to which tests or surveys are free from measurement error. With inconsistency (i.e., unreliability), it would be difficult to interpret the results of the study. Reliability analysis expresses the adequacy of data reported for the Consequence and Frequency ratings for each performance domain for which there was more than a single task, based on the tasks in that area of responsibility. (Reliability for Performance Expectation, a categorical variable, was not assessed.)

Reliability, reported in Table 51, was measured by estimating internal consistency (Cronbach's alpha) using the respondents' ratings for Consequence and Frequency for the tasks in each domain. This procedure calculates the extent to which the task ratings within a domain consistently measure what other tasks within that performance domain measure. Reliability coefficients range from 0 to 1 and should be above 0.70 to be judged as adequate. The reliability coefficients obtained for this study were strong.

Table 51. Reliability

Reliability	Consequence	Frequency
Professional Responsibility and Interpreter Ethics	0.88	0.93
Manage the Interpreting Encounter	0.83	0.89
Healthcare Terminology	---	---
U.S. Healthcare System	---	---
Cultural Responsiveness	0.84	0.89
Interpret in Healthcare Settings	0.77	0.93

CONCLUSIONS AND RECOMMENDATIONS

The purpose for which CCHI conducted the job task analysis study was to characterize the role and responsibilities of newly certified healthcare interpreters because CCHI relies on this methodology to establish the basis for its examinations' content validity. A total of 9,453 interpreters receiving CCHI's newsletter, including all 2,500 CCHI-certified healthcare interpreters, were invited by email invitation to participate in the survey, and Castle received 999 usable responses from this group. Additionally, a public link to the survey was publicized in CCHI newsletters and on social media, and made available from the CCHI website. After validating the data, Castle included 2,095 unique, qualified, usable responses in the analysis. Responses to items in the demographic portion of the survey support the conclusion that participants constitute a reasonable sample of healthcare interpreters, and demographic statistics are consistent with CCHI's previous job task analysis study.

Tasks were evaluated using scales for Performance Expectation, Consequence, and Frequency. The Performance Expectation scale offered insight into whether newly certified healthcare interpreters are expected to perform the task within the first six months of their certification. Frequency (how often) and Consequence (potential for harm) also supplied information about the validity of the job task analysis, which should be considered when making decisions about the certification examination.

Data collected in the validation study are reliable (for the domains for which it was possible to compute the coefficients) and give clear evidence that the domains and tasks are appropriate elements of responsibility for newly certified healthcare interpreters. As a result, several specific recommendations may be useful to CCHI:

1. The content outline for the certification examination should be based on the job task analysis.

2. A multiple-choice examination may be developed in accordance with psychometric and test development principles as an effective assessment of knowledge required by the job task analysis.

3. A performance examination to assess candidates' skill in interpreting in healthcare settings is appropriate.

The data collected in the JTA study defines the healthcare interpreter at the entry point to the profession as:

> *A person who is able to perform the functions of a healthcare interpreter competently, independently, and unsupervised in any setting and in any modality where health care is provided, with the knowledge, skill, and ability required to relay messages accurately from a source language to a target language in a culturally competent manner and in accordance with established ethical standards.*

The nature of this profession and currently available testing options allow for two types of assessment that would differentiate a certified healthcare interpreter ready to perform the necessary job tasks from an unqualified individual: a multiple-choice examination and a performance examination. CCHI has two corresponding types of certification examinations. This JTA study provides CCHI with the necessary data confirming that the existing examinations align with the current practices of the healthcare interpreting profession.

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APPENDIX A: CONTENT OUTLINE

Certification Commission for Healthcare Interpreters

Content Outline for the CERTIFICATION EXAMINATION FOR HEALTHCARE INTERPRETERS

Target Audience

Professional healthcare interpreters provide assurance of safety, accuracy, respect of boundaries, and transparency required in any healthcare setting and any interpreting modality. Trained healthcare interpreters understand medical terminology in source and target languages and employ professional techniques to handle the complexities that arise with patients, families, and healthcare providers.

A certified healthcare interpreter is defined as:

A person who is able to perform the functions of a healthcare interpreter competently, independently, and unsupervised in any setting and in any modality where health care is provided, with the knowledge, skill, and ability required to relay messages accurately from a source language to a target language in a culturally competent manner and in accordance with established ethical standards.

A CoreCHI™ certificant has been tested on a critical part of the knowledge, skills, and abilities that are required of a healthcare interpreter. The CoreCHI™ examination assesses the core professional knowledge as well as critical thinking, ethical decision-making, and cultural responsiveness skills and abilities needed to perform the duties of the healthcare interpreter regardless of the language they interpret. The CoreCHI™ certification is available for interpreters of all languages except those for which an oral performance examination exists.

Certified Healthcare Interpreter™ (CHI™) – A CHI™ must first complete the CoreCHI™ written examination and then pass an oral performance examination testing the individual's language-specific interpreting skills and abilities in consecutive and simultaneous interpreting, sight translation and translation. The CHI™ credential is currently available for Spanish, Arabic and Mandarin interpreters.

Applicants for CCHI CoreCHI™ and CHI™ certifications must meet all of the following requirements:

- Eighteen (18) years of age;
- Graduation from a U.S. high school or its equivalent, including an equivalent from an educational program outside the United States;
- Language proficiency in English and target language; and
- Completion of a minimum of 40 hours of training (not experience) in healthcare interpreting.

Domain I. Professional Responsibility and Interpreter Ethics

1. Maintain the boundaries of the interpreter's professional role by refraining from personal involvement in order to respect the needs and contributions of all parties.

   Knowledge of:
   a. Healthcare interpreter codes of ethics and standards of practice
   b. Roles of all parties in a healthcare encounter
   c. Consequences if boundaries are violated

   Skill in:
   a. Applying critical thinking skills
   b. Adhering to the interpreter role while maintaining transparency
   c. Redirecting patients' questions and requests to appropriate healthcare team members

2. Maintain impartiality by separating personal values, beliefs, and biases from those of all parties in order to respect their autonomy and self-determination.

   Knowledge of:
   a. Healthcare interpreter codes of ethics and standards of practice
   b. Personal values, beliefs, and biases

   Skill in:
   a. Applying self-restraint
   b. Respecting the expertise, autonomy, and right to self-determination of all parties

3. Assess the need for advocacy by considering all available information to prevent harm or disrespect to any party.

   Knowledge of:
   a. Healthcare interpreter codes of ethics and standards of practice
   b. Roles and goals of other members of the healthcare team
   c. Levels of advocacy
   d. Prevailing norms in a specific situation
   e. Appropriate and available resources

   Skill in:
   a. Identifying situations that are appropriate for advocacy
   b. Asking questions to determine the need for advocacy
   c. Determining best approach and time frame
   d. Asserting oneself respectfully when necessary
   e. Advocating appropriately and within limitations

4. Address ethical dilemmas using decision-making skills and established codes of ethics in order to support optimal patient outcomes and to maintain the integrity of the healthcare interpreting profession.

   Knowledge of:
   a. Core values
   b. Healthcare interpreter codes of ethics and standards of practice

   Skill in:
   a. Recognizing ethical dilemmas
   b. Applying decision making skills
   c. Applying ethical principles
   d. Identifying appropriate solutions
   e. Disclosing potential conflicts
   f. Maintaining confidentiality
   g. Educating parties about the role and responsibilities of healthcare interpreters

5. Present self in a professional manner to all parties involved in the healthcare encounter by upholding national and locally applicable standards of practice.

   Knowledge of:
   a. Healthcare interpreter codes of ethics and standards of practice
   b. Dress code for healthcare settings

   Skill in:
   a. Abiding by standards for behavior and appearance in professional settings

6. Pursue professional growth and development on an ongoing basis by keeping abreast of working languages and their variants, relevant legislation, health care, and public health to enhance the capacity to interpret accurately.

   Knowledge of:
   a. Credible sources of continuing education on topics affecting proficiency in interpreting
   b. Professional associations, conferences, and publications

   Skill in:
   a. Gaining maximum benefit from continuing education activities
   b. Networking in professional organizations related to interpreting
   c. Sharing resources with colleagues

7. Adhere to personal and occupational safety measures by following standard precautionary protocols to reduce the risk of harm and disease.

   Knowledge of:
   a. Occupational health risks and their corresponding protocols and safety procedures (e.g., personal protective equipment, universal precautions)

   Skill in:
   a. Abiding by standard operating procedures
   b. Asking for information on safety protocols

8. Manage stress using self-monitoring and self-care strategies in order to encourage personal and professional wellness.

   Knowledge of:
   a. Personal and professional stressors
   b. Appropriate resources for managing personal and professional stressors
   c. Appropriate self-care strategies
   d. Self-monitoring techniques
   e. Secondary (vicarious) trauma and its potential effect on interpreters

   Skill in:
   a. Identifying internal and external factors that can cause stress
   b. Finding and using appropriate strategies for self-care and alleviating stress

Domain II. Manage the Interpreting Encounter

1. Monitor one's own competence and limitations by recognizing personal, scheduling, linguistic, and cultural constraints in order to interpret effectively.

   Knowledge of:
   a. Healthcare interpreter code of ethics
   b. Language and memory limitations
   c. Existing language variants
   d. Protocols of specific modalities (in-person, telephonic, video remote)
   e. Potential conflicts of interest
   f. Personal cultural biases
   g. Emotional stressors
   h. Scheduling

   Skill in:
   a. Professionally express personal limitations
   b. Disclosing limitations related to language variants
   c. Disclosing skill limitations
   d. Appropriate recusal
   e. Time management
   f. Terminology management
   g. Cultural competence

2. Manage unfamiliar terms and concepts in a manner that maintains transparency and supports effective communication for all parties.

   Knowledge of:
   a. Research tools and resources
   b. Techniques for intervening and clarifying

   Skill in:
   a. Interpreting accurately and completely

b. Matching register and style
c. Correcting errors
d. Maintaining transparency
e. Asking for clarification
f. Establishing equivalence

3. Manage the flow of communication from the start of the encounter to the end by adhering to professional standards of practice to support effective communication.

   Knowledge of:
   a. Healthcare interpreter codes of ethics and standards of practice
   b. Various modes of interpreting
   c. Obligations to all parties
   d. Healthcare specialties, policies, protocols, and procedures
   e. Proper positioning to support effective communication
   f. Modalities of interpreting (in-person, telephonic, video remote)

   Skill in:
   a. Promoting direct communication between provider and patient
   b. Setting ground-rules (e.g., pre-session, pre-conference, introduction)
   c. Intervening at the least intrusive level of disruption appropriately and incrementally
   d. Monitoring for comprehension
   e. Adapting to the physical environment (e.g., positioning, lighting, volume) and modality of interpreting (in-person, telephonic, video remote)
   f. Choosing mode and switching as needed
   g. Asking for pauses
   h. Managing register and style
   i. Maintaining transparency
   j. Gathering and providing feedback after encounters
   k. Working effectively as a member of a team

Domain III. Healthcare Terminology

1. Remain current on healthcare terminology and general vocabulary in working languages through research, continuing education, etc., in order to interpret accurately and completely.

   Knowledge of:
   a. Healthcare terminology (e.g., anatomy, physiology, system terminology, dental, nutrition, behavioral health, culturally specific medical terms, alternative medicine)
   b. General vocabulary and idioms used in healthcare settings
   c. Available resources

   Skill in:
   a. Evaluating the validity of resources
   b. Establishing equivalence

Domain IV. U.S. Healthcare System

1. Maintain working familiarity with the US health system as a part of a legal and socioeconomic environment with its own culture and organizational structure to predict and respond to events appropriately and navigate the system effectively.

   Knowledge of:
   a. U.S. healthcare delivery systems
   b. Public health and its implications on populations
   c. Federal and state legislation and regulations pertaining to language and healthcare access
   d. Applicable legislation and regulations regarding the role of interpreters as mandated reporters
   e. Latest developments in the U.S. health and healthcare system
   f. Relevant organizational structure and protocols
   g. Roles and responsibilities of healthcare providers and staff
   h. Social determinants of health
   i. Relevance of disparities that prevent access to health care

   Skill in:
   a. Using health system terminology
   b. Locating resources and information about legislation and regulations that pertain to the U.S. health system
   c. Abiding by standard operating procedures
   d. Asking for information on organizational protocols

Domain V. Cultural Responsiveness

1. Recognize that individuals have different levels of acculturation and intracultural variation in order to avoid making assumptions that may misrepresent a speaker's meaning.

   Knowledge of:
   a. Culture of participants in a healthcare encounter
   b. Healthcare interpreter standards of practice
   c. Effect of one's own culturally embedded behaviors and mannerisms and those of other parties

   Skill in:
   a. Monitoring own assumptions
   b. Interpreting verbal and nonverbal communication
   c. Interpreting culturally embedded behaviors and mannerisms

2. Serve as a culture mediator by recognizing when there is risk of potential miscommunication and responding appropriately so that each person's own beliefs are expressed.

   Knowledge of:
   a. Cultures of participants in a healthcare encounter
   b. Healthcare interpreter standards of practice
   c. Various intervention strategies

Skill in:

a. Assessing situations and determining the most appropriate intervention
b. Applying an incremental approach to interventions

Domain VI. Interpret in Healthcare Settings

1. Interpret consecutively between source and target language to facilitate communication.

   Knowledge of

   a. Terminology, idioms, usage, and cultural significance
   b. Structure and grammar of working languages

   Skill in:

   a. Retaining and recalling information in short-term memory
   b. Notetaking
   c. Listening actively
   d. Communicating fluently in working languages
   e. Hearing and discerning dialects
   f. Maintaining accuracy and transparency
   g. Maintaining the register
   h. Reducing interpreter accent to avoid impact on understanding
   i. Self-monitoring for comprehension and output
   j. Anticipatory listening

2. Interpret simultaneously from the source language into the target language to facilitate communication.

   Knowledge of

   a. Terminology, idioms, usage, and cultural significance
   b. Structure and grammar of working languages

   Skills:

   a. Listening, processing, and interpreting simultaneously
   b. Retaining and recalling information in short-term memory
   c. Notetaking
   d. Listening actively
   e. Communicating fluently in working languages
   f. Hearing and discerning dialects
   g. Maintaining accuracy and transparency
   h. Maintaining the register
   i. Reducing interpreter accent to minimize impact on understanding
   j. Self-monitoring for comprehension and output
   k. Anticipatory listening

3. Sight translate a written message by rendering it into a spoken or a signed language to facilitate communication.

   Knowledge of
   a. Healthcare documents that are appropriate for sight translation
   b. Sight translation protocols
   c. Terminology, idioms, usage, and cultural significance
   d. Structure and grammar of working languages

   Skill in:
   a. Reading and comprehending written text in English
   b. Converting written text into the spoken or signed target language
   c. Anticipatory reading
   d. Maintaining accuracy and transparency
   e. Maintaining the register
   f. Reducing interpreter accent to minimize impact on understanding
   g. Self-monitoring output

4. Translate a written message by rendering it into a written or signed language to facilitate communication.

   Knowledge of
   a. Healthcare documents that are appropriate for written translation
   b. Written translation protocols
   c. Terminology, idioms, usage, and cultural significance
   d. Structure and grammar of working languages

   Skill in
   a. Reading and comprehending written text in source and target languages
   b. Converting written text into the written target language
   c. Maintaining accuracy
   d. Maintaining the register
   e. Self-monitoring output
   f. Writing in target language

5. Maintain fidelity to the message by taking into consideration register, cultural context, and nonverbal content to convey the original intent.

   Knowledge of
   a. Self-capacity for retaining and recalling information
   b. Terminology, idioms, usage, and cultural significance
   c. Culture of the linguistic community

   Skill in
   a. Self-monitoring for accuracy
   b. Researching unfamiliar and emerging terminology
   c. Evaluating the validity of resources
   d. Interpreting without additions, omissions, or substitutions