

**Over the *Tipping Point*: Using the Diagnostic Discourse of
Standardized Patients to Educate Medical Interpreters / *O tipping
point: usando o discurso diagnóstico de pacientes simulados para educar
intérpretes médicos***

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ABSTRACT

Rather than amassing 10,000 hours of practice before mastery is achieved – Ericsson’s famed tipping point – medical interpreters can gain considerable, concomitant experience by analyzing videos of provider-patient interactions, even when the pair speak the same language. Teaching hospitals commonly film such interactions using standardized patients (SPs). Such films have been effectively used in classroom-based instruction with interpreters. The novel use of SP films in an on-line learning environment is described herein, where discussion boards and worksheets supplanted traditional instruction methods. In this problem-based learning (PBL) approach, typical of medical education, graduate-level medical interpreting students became familiar with common diagnostic and treatment discourse. Students reported that this familiarity helped free their cognitive resources for planning and monitoring translations and other decisions on-the-job. The learning materials and methods used in this on-line approach are detailed. The value of the PBL context is described in relation to healthcare interpreting education approaches generally.

KEYWORDS: Signed language interpreting; Medical interpreting; Healthcare interpreting; Problem-based learning; Standardized patients

RESUMO

Em detrimento do acúmulo de 10.000 horas de prática antes do domínio sobre algo – o famoso tipping point de Ericsson – intérpretes médicos podem ganhar considerável experiência ao analisar vídeos de interações médico-paciente, mesmo quando esse par fala a mesma língua. Os hospitais-escola comumente filmam tais interações usando pacientes simulados (PSs). Tais filmes têm sido usados em instruções de aula com intérpretes. Aqui, é descrito o uso recente de filmes com PS em um ambiente de aprendizado online, no qual fóruns de discussão e fichas de atividade suplantaram os métodos de trabalho convencionais. Nessa abordagem de aprendizagem baseada em problemas (ABP), típica da educação médica, estudantes de pós-graduação em interpretação em serviços de saúde se familiarizam com o discurso típico de diagnóstico e tratamento. Os alunos relataram que essa familiarização os ajudou a liberar seus recursos cognitivos para planejar e monitorar traduções e outras decisões imediatas. Os materiais e métodos de aprendizado usados nessa abordagem online são descritos detalhadamente. O valor do contexto da ABP é descrito em relação às abordagens educacionais de interpretação para o sistema de saúde de modo geral.

PALAVRAS-CHAVE: Interpretação de língua de sinais; Interpretação médica; Interpretação em saúde; Aprendizado com base em tarefa; Pacientes simulados

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Introduction

The tipping point was a term originally proposed by Anders Ericsson (GLADWELL, 2006). He suggested that it takes 10,000 hours of practice to master a skill, further suggesting that talent takes a back seat to the rigor and repetition of practice. The Beatles, who practiced and performed anytime and anywhere they could, became an international sensation because of this magic number (GLADWELL, 2006).

I don't know how many hours I spent inside the walls of exam, trauma, surgical, and treatment rooms. I never set out to count the number of hours of interpreting practice I had amassed as a full-time medical interpreter. Yet, there was a point of departure between *waiting* on the next utterance of the healthcare provider and expecting – actually *knowing* – what it would be before it was even articulated. At some point, I had a sense of *confident anticipation*.

As a medical interpreter, this distinction between depending on versus predicting with relative accuracy what will come next in the discourse, and even the purpose behind the utterance, afforded me many advantages. First and foremost, it gave me confidence. Not a type of hubris, but a confidence that improved my competency. This discourse-level knowledge and awareness of its overall purpose better prepared me to draw upon a variety of possible translations¹ into American Sign Language (ASL). In other words, if I knew where the provider was going with a question, I was able to select from several possible translation routes before actually getting there, choosing in advance the one that I determined would be most effective. Lastly, because certain diagnostic and treatment discourse became so familiar to me, the amount of cognitive capacity consumed was lower. Other cognitive energies were now available for other pertinent mental activities, such as monitoring the effectiveness of my contributions to the communication event.

Schön (1983) referred to these metacognitive moments as *reflection-in-action*. Having additional mental resources allows the practitioner to assess performance with questions like: *How is it going?*; *What might make it better?* and *Should I be doing*

¹ Some use the term *translate* to apply only to working with text and *interpret* to apply only to working with spoken and signed languages, yet the terms are virtually interchangeable. I use *translation* to mean the final product or decision. *Interpretation* also can refer to a mental process, as in “My interpretation of what you said is...” As such, I choose to use the term *translation* to indicate any cross-linguistic decision.

anything differently? In my case, these metacognitive moments also allowed me to note other key elements of the medical encounter (e.g., the importance of a provider shifting into an informed consent conversation). I recognized that all of this was knowledge that could be acquired by other medical interpreters, perhaps before amassing 10,000 hours of on-the-job experience.

That is to say, I am not a particularly talented medical interpreter. I just have had more practice and diverse situational exposure than most. The reality is that this type of exposure can be made available in educational settings rather than needing to acquire it from on-the-job experience. If so, interpreters can be prepared, *before* they start to serve patients and providers, through an educational endeavor that mimics the often valuable, hands-on experiences of in-vivo work settings. This article describes an educational approach and associated learning materials that may supplant *years of experience* for medical interpreters. The approach replaces the burden of interpreting while learning (or learning while interpreting) with exposing graduate interpreting students to monolingual (same-language) diagnostic interviews via videotaped interactions between providers and patients. The videos employed were borrowed from a medical school's "Standardized Patient" program (described below). Depending on the location and the networking capabilities of other interpreter education programs, the approach and the materials described herein may well be replicable.

Literature Review: Healthcare Interpreting

Healthcare interpreting is second only to legal interpreting as the most formalized specialization of community interpreting. There are several national and international professional organizations for healthcare interpreting (e.g., International Medical Interpreting Association); there are quality assurance measures and certifying bodies for medical interpreting (e.g., The National Board of Certification for Medical Interpreters). Most notably, there are medical interpreter training programs ranging from one-day workshops to graduate degree programs (e.g., the Bridging the Gap and the Master's in Health Care Interpretation programs, see below). There also are medical interpreting books and resources (e.g., Fernandez, 2015; Roat, 2010). Such programs

and resources exist in varying degrees for both signed language and spoken language interpreting.

The field of healthcare interpreting also has an extensive research literature. Significant contributions address the ethics and effectiveness of interpreters' behavioral decisions in healthcare situations (DAVIDSON, 2000; DYSART-GALE 2007; HSIEH, 2006; HSIEH, 2007; HSIEH, 2008; LEANZA, 2005). Other literature focuses on interpreters' vital contributions to patient care and the overall contributions of language services to effective healthcare (JUCKETT; UNGER, 2014; LINDHOLM, et al., 2012). Still other scholars focus on educational efforts for training healthcare interpreters (CRUMP, 2012; DE WIT; SALAMI, HEMA 2012; DEAN; POLLARD, 2012; MAJOR, NAPIER; STUBBE, 2012).

Regarding literature on the education of healthcare interpreters, some offer a broader perspective by suggesting training standards (CRUMP, 2012; SWABEY; FABER, 2012;). Others focus on behavior and ethics in healthcare settings (Nicodemus, et al. 2012). Some propose educational approaches (DEAN; POLLARD, 2009, 2012), describe specialized educational materials (MAJOR, NAPIER; STUBBE, 2012) or course delivery methods (BOWEN-BAILEY, 2012).

This article lies at a particular intersection of this medical interpreting literature. It describes an educational approach (associated with problem-based learning), the use of unique specialized materials involving standardized patients, and how these are used in an asynchronous, online teaching environment.

Problem-Based Learning

Problem-based learning (PBL) is a teaching approach that became popular in medical schools in the 1960s (FROST, 1996) but has been adopted by educators across the educational spectrum (MCKEACHIE, 1999). In medical education, it favors the contextualized learning of required curricular topics such as anatomy, physiology, and pathology within the experiential processes of an unfolding patient case. This is in lieu of the non-contextualized, rote learning typical of textbook-based and lecture-style methods of the past. PBL (or the case method approach) occurs via small group learning environments. The *case* (a patient's healthcare scenario) reveals itself in stages (as is

typical with real patients' cases – new data is revealed over time via test results, responses to interventions such as medication, etc.) and is guided by a physician instructor who acts only as a facilitator.

PBL approaches are based on the belief that humans are inherently *problem solvers* and are therefore, motivated to work in order to reach a solution to a problem (MCKEACHIE, 1999). As such, PBL type curricular designs are known for activating student learning and motivating participation (FROST, 1996). They have also shown to improve retention of content knowledge and improve the transfer of knowledge to clinical practice (FROST, 1996). Curricular modifications can be made to accommodate a PBL approach which result in a complete overhaul to a curriculum or curricular approach that incorporates PBL-type activities within a traditional curriculum, referred to as post-holing (FOGARTY, 1997).

Dean and Pollard (2009) previously implemented a PBL approach to educate interpreters for work in specialized settings. In keeping with PBL philosophy, the training environment and processes paralleled real practice environments. Instead of interpreters learning about medical interpreting in a classroom or from a textbook, this approach put them in direct contact with healthcare service settings. In this PBL application, termed *observation-supervision* (O-S), interpreters shadowed medical and mental health providers as they interacted with patients. During this observation phase, interpreter students documented relevant data particular to the potential interpreting demands of the situation they observed and then returned that material to the classroom for research and analyses during the subsequent, supervision component of the PBL experience. It is during supervision where important applications are made from the hypothetical interpreting demands recorded during the observation to the practice of interpreting through reflection and discussions with colleagues, with guidance from the content expert facilitator (see Dean; Pollard, 2004, 2009).

Same-Language Interactions and Authentic Dialogue

In the O-S approach described above, interpreters were exposed to same-language, provider-patient dialogue. The observations are of providers and patients who share the same language, so the interpreter student is not there to observe the work of

another interpreter. It was based on the belief that observing same-language interactions is advantageous for interpreters to learn directly, in their own language, what is *typical* for these service settings (DEAN; POLLARD, 2009; MAJOR, NAPIER; STUBBE, 2012). Certainly, there is value in learning from interpreter colleagues and from the patients they serve but since we are aiming to collect a wide variety of data for later research and analysis to add to our knowledge base for later use, it is better not to be distracted by the particularities of a patient and their unique communication needs (DEAN; POLLARD, 2009).

Having access to what *really happens* in a medical setting and not what is contrived or made up for the purposes of training has significant value for interpreters.

Authentic interaction is never as ‘clean’ as created script examples; the discourse is filled with hesitations, repairs, repetitions, laughter and many other features that make up real-life talk but are often forgotten when we report our experiences of communication” (MAJOR, NAPIER; STUBBE, 2012, p.31).

Learning about medical interpreting should not solely focus on topics such as body systems, common diseases, common tests and procedures, or *who’s who* in a medical setting but should include an appreciation for the state of mind of an anxious patient, frustrated family members, overworked staff, and addressing sensitive topics (MAJOR, NAPIER; STUBBE, 2012).

In a unique collaboration between healthcare communication researchers and signed language interpreting educational programs, interpreter educators from Australia and New Zealand used authentic, recorded provider – patient dialogue to teach discourse analysis to interpreters (MAJOR, NAPIER; STUBBE, 2012). These analyses highlighted different components of typical healthcare discourse (e.g., health history versus advice-giving), aspects of the dialogue that conveyed empathy and rapport building, and the potential for sensitive topics to emerge. However, because this recorded data was that of actual patients, only limited amounts of recorded dialogue were permitted for interpreter use.

Patient confidentiality in recordings of patient dialogue was a limitation of this project. Additionally, in some instances, interpreter observers in the O-S approach were also turned away due to concerns for patient confidentiality and privacy. The more

significant limitation in employing an O-S approach was the complex logistical nature of securing in-vivo observations for interpreters. The project described below attempts to address both of these limitations while maintaining many of the same advantages of these unique education materials and processes.

Standardized Patients

Standardized patient (SP) programs are used extensively in medical schools and other healthcare training programs in North America, Europe, and Australia (MAY; PARK; LEE, 2009). SP programs have been used to educate healthcare professionals in Asia (KARADAQ; CALISKAN; ISERI, 2015; DAS, et al., 2012). SP programs were introduced as a method for exposing medical students to realistic patient care situations in a systematic manner that did not rely on finding actual patients to participate in the exercise. An SP can be a trained actor (CLELAND; ABE; RETHANS, 2009) or any person who has been carefully coached to adopt the role of a patient with an assigned condition, disease, or presenting complaint. SPs are used for a variety of purposes in healthcare education programs – to teach medical students how to conduct an interview, a physical examination, how to effectively communicate with patients (MAY; PARK; LEE, 2009) and, in some cases, to improve intercultural competence (PAROZ, et al., 2016).

The most common use of SPs in medical schools is for the evaluation of students' clinical and communication skills (CLELAND; ABE; RETHANS, 2009). In a clinical examination using an SP, a medical student enters his or her *station* where they are presented with a new patient, their chart, and a presenting complaint. The session is timed and they are expected to complete the interview, the physical exam, and to propose to their preceptor an initial diagnosis or disposition (a decision about what should happen next). At the conclusion, the SPs give the medical students feedback – which they are trained how to do – on all aspects of the recent interaction from the patient's point of view (CLELAND; ABE; RETHANS, 2009; MAY; PARK; LEE, 2009). Each medical student rotates through a series of stations with different standardized patients. These are recorded for later viewing and final assessment with the medical students' preceptor for the course.

The Materials: Standardized Patient Program Videos

I became acquainted with an affiliated medical school's SP program when they hired deaf and Spanish-speaking actors to be SPs. Several signed language and Spanish interpreters, including myself, were involved in the medical student – patient interactions. Since that introduction, I began to imagine ways in which these SP – provider dialogues could be used for interpreter education.

After negotiating the terms for using these videotapes for interpreter education purposes, I was given access to over 100 SP – provider recorded sessions. Each video is about 30 minutes in length. All of these SP dialogues were diagnostic interviews. However, even though different medical students might interact with the same SP, their interviews did not necessarily follow the same trajectory. As an example, in one series of videos, an SP presented with abdominal pain. While the intended diagnosis was appendicitis, one medical student followed a line of questioning that concluded with a diagnosis of a gall bladder attack while another student informed the patient she was having a heart attack.

It is important to note that these diagnostic discourses were not scripted. The SPs are given basic information about what they are to say *at some point* in the interview (either voluntarily or when asked by the provider) but otherwise, it is all spontaneous, authentic speech even though it is a simulation.

For my medical interpreting course, I use videos primarily featuring one medical student and approximately twenty of his SP encounters. The student is confident and articulate. From an interview and communication skill standpoint, he is arguably of the same caliber as a practicing physician. I have used the following SP videos in the course (titled according to presenting complaint): Abdominal Pain, Asthma, Back pain, Blood pressure check, Breast cancer screening, Chest pain 1, Chest pain 2, Diabetes check, Dizzy, Headaches, Knee pain (inpatient), Fatigue (low energy), Missed period (menses), Physical exam, Prostate cancer screening, Shoulder pain, Slurred speech, Stressed out, Well child visit, Wrist injury.

I have used these videos in semester-length courses as well as one-off workshops, usually as a way to highlight important contextual features of community

interpreting or to teach about the unique demands of medical interpreting. Most interpreter educators immediately see the value in utilizing video recordings of patient – provider dialogues. What is less immediately evident is the strategy involved in lesson planning around these videos. In a one-off workshop the strategy can be as simple as “this is an example of a diagnostic interview” or for use in interpreting practice (e.g., How would you interpret, *what brings you in today?*). What is less clear is how SP videos can be a major resource for an entire medical interpreting course.

One of the dangers in using materials designed to train other professionals (medical students in this case) is overloading the non-healthcare student with medical information to the point of distraction. The goal is not make them mini-doctors or to fascinate them with medical information. The goal is to improve their effectiveness as medical interpreters and, as such, it is important to keep returning to the question of, “How is this information *not just interesting*, but helpful?” (DEAN; POLLARD, 2012). Toward this goal, the facilitator needs to structure the materials that guide the use of the SP video toward interpreting learning objectives. The materials for guidance in my online course took the form of worksheets. These worksheets and their relation to the corresponding SP videos are described below.

Consider a brief excerpt from the Abdominal Pain SP video. This exchange between the provider (a female medical student) and the college-aged female SP is presented as a sample of the type of learning that can be drawn from a filmed interaction.

Provider: Ok, alright...now have you had anything like this (the pain) before?
Patient: Something like this when I was a junior in high school.
Provider: Mm hm...
Provider: What helped the pain then?
Patient: I went to the doctor's and they said it was gonorrhea, PID. [Pelvic Inflammatory Disease]
Provider: And PID...
Patient: And he gave me a shot of some medication.
Provider: I know this is not an easy subject to talk about but have you had any sexually transmitted diseases since...just the gonorrhea once?
Patient: And the PID
Provider: And since that time nothing...no other symptoms?
Patient: No.

There are several teaching points from this brief exchange alone. First, interpreting students would be expected to investigate sexually transmitted infections (STIs) and specifically gonorrhea and pelvic inflammatory disease. Next, from the video, it is evident that the provider is exhibiting empathy in several ways that the interpreter would want to be aware of and express similarly (either in translation decisions or behaviorally). For example, the provider acknowledges that it might not be easy to talk about STIs; she uses quiet verbal responses of “Mm hm” throughout the dialogue, presumably to show she is actively attending; she repeats what the patient says after she says it (as in “and PID”) and, in the film, she touches the patient gently with her hand, likely in an attempt to soothe her. There are also paralinguistics that are not recognizable from the printed dialogue. The patient is in pain and speaking in a staccato way – her speech is punctuated with sharp exhalations of breath. The provider speaks softly, in a calm manner. All of these contextual demands impact the work of interpreters. These SP videos facilitate the problem-solving style of PBL learning and engage students in identifying interpreting demands and proposing ways in which they can be effectively addressed in practice.

Apart from the specific service setting and presenting complaint learning points noted above, this video also allows for a broader analysis of healthcare interpreting demands. From this short dialogue, there are sample questions from a pain evaluation. Asking if someone has ever had a particular pain before is a common question under the topic of *time* in assessments of pain (a more detailed description of the topics in a pain evaluation is provided below). The other broad topic this video affords for discussion is the implications of a female presenting to an urgent care setting with complaints of abdominal pain. Because of the many systems implicated in the female abdomen, the diagnostic interview directions, the type of tests potentially needed, and the many differential pain-related diagnoses to rule out are extensive.

Analyzing an SP video for all of the potential components that would be salient to a medical interpreter is a skill that takes time to develop. Students need to be led through the process in a step-by-step fashion. Just one thirty-minute video provides an instructor with many potential teaching opportunities to design lesson plans. Each video can be steered in a variety of ways. Worksheets should be guided by the overarching question of: How is this material helpful in advancing healthcare interpreters? As noted

above, the goal of the approach described is not to make mini-doctors but to advance the effectiveness of healthcare interpreters.

SP Videos Compliment the Course Curriculum

The course that uses these SP videos is part of an online graduate program in healthcare interpreting offered by the Rochester Institute of Technology in Rochester, New York. This online program admits interpreters who are experienced practitioners. Most enter the program with some degree of medical interpreting experience. The course, Healthcare Practical Interpreting I is scheduled for the second semester of the program, after students have been introduced to the theoretical framework that undergirds the curriculum (e.g., the demand control schema for interpreting by Dean & Pollard, 2011) and the four core principles of biomedical ethics by Beauchamp & Childress (2012), and after the students have learned basic information regarding body systems and human diseases. Given the course pre-requisites, the students are well positioned to analyze interpreting situations and practice decisions within a medical context.

While the SP videos lie at the center of each week's assignments, they are supplemented by other learning sources. The main textbook used in this course is *Introduction to healthcare for interpreters and translators* (CREZEE, 2013). Students were also required to use *Psych Notes* (PEDERSEN, 2008) for content related to mental healthcare.

SP videos were paired with corresponding written course materials. Table 1 lists examples of how Crezee's (2013) text chapters were paired with SP videos:

Table 1: Corresponding textbook content and SP videos

Chapter 13: Child Health	SP Video: Well child visit
Chapter 18: Cardiology	SP Video: Chest Pain 1
Chapter 19: Respiratory System	SP Video: Asthma
Chapter 21: Orthopedics	SP video: Arm/Shoulder Pain
Chapter 25: Endocrine System	SP video: Fatigue (low energy)

Pairing written course content with experiential learning components such as videos is a vital aspect of the course. Unlike the static content of a textbook, the SP

videos highlight and animate the typical dynamics of provider – patient interactions that are vital to include in the education of medical interpreters. The worksheets act as a means to focus the student on particular problem-solving tasks. In that way, it is modeled after problem-based learning. In essence, this newer approach is like the observation-supervision approach *writ small*. Instead of an entire observation, the material is focused on the discourse of a briefer, more topic-focused diagnostic interview, physical exam, or disposition dialogue.

Some of the problem-solving tasks outlined in the worksheet were simple and straightforward (examples of these are detailed below) and were *resolved* simply by individual students answering questions on the worksheets. In other instances, questions were more complex and required a collaborative problem-solving approach among the students (examples of these are also detailed below); discussions amongst peers to problem-solve is more typical of a PBL style classroom (MCKEACHIE, 1999). Since this course was delivered in an asynchronous online forum, this occurred in the online classroom management system using the discussion board.

Guiding Students: Standardized Patient Video Worksheets

In order to create a worksheet to guide student learning while watching the videos, each video was analyzed for desired learning points using the framework of the demand control schema. The demand control schema identifies the salient factors that impact interpreting, which emerge from environmental, interpersonal, paralinguistic, and intrapersonal categories. It is not within the scope of this article to delve into the definitions and implications of these four demand categories (see Dean; Pollard, 2005, 2011, 2013). For a summary on how to structure experiential learning using the demand control schema, see Dean and Pollard (2012).

The worksheets vary in complexity. Some worksheets focus on a single task, such as the defining of medical terms or suggesting translations of phrases that emerge from the SP video dialogue. In the above excerpt from the Abdominal Pain SP video, the terms gonorrhoea and pelvic inflammatory disease were used. Some SP videos lend themselves to knowledge-focused activities because a particular condition or indicated body system draws on specialized terminology and descriptors (e.g., what a transient

ischemic attack is or what the location of the parathyroid is and how it's removed during surgery). These tasks were completed individually and submitted to the course management system directly.

Environmental demands, including medical terminology, tend to be the easiest to identify and define. *Intrapersonal* demands or how the hypothetical situation would impact the student as the potential interpreter in that situation are also more straightforward for students to identify and explore (i.e., how might this impact your work and how might that emotional or psychological impact be mitigated?). *Interpersonal* demands, such as predicting how the patient or provider might be feeling or thinking are more challenging. Determining what a patient or provider means, what is the intention behind the question, how an utterance should be translated or interpreted, or how to deal with deficits in a patient's *fund of information*² (POLLARD, 1998) are significantly more complex. These more complex questions are initially included on the worksheet but then are typically moved onto the online discussion board for the students to exchange their ideas and deliberate collectively.

The SP videos and the worksheets that address the more basic tasks should not be dismissed as trivial. As mentioned above, it is important that students continue to be exposed to the diagnostic dialogue for the sake of repetition and the worksheets serve to focus their attention. However, the majority of worksheets are designed to activate students' learning by engaging them in research, analysis, and reflective tasks.

For example, in the SP video Chest Pain 1, the patient presents with chest pain and shortness of breath. Through the diagnostic interview, it is determined that the patient is on dialysis but has missed some of his dialysis appointments. Students are first asked to reflect on what they already know about dialysis, then to investigate additional information about dialysis using the Crezee (2013) textbook and the internet. After reporting on that collected data, students propose the top three demands of interpreting a dialysis appointment. Lastly, they are asked to imagine what the significance of a patient missing dialysis appointments means to the provider (i.e., what would be his

² The term *fund of information* (FOI) refers to the collection of knowledge a person has acquired. Only a limited portion of one's FOI comes from formal education. Most information comes from other sources in our daily lives. Many pathways to information access are unavailable or less accessible for deaf individuals, including information from the radio, movie and television soundtracks, public address systems, hearing family members' conversations, conversations in public that otherwise could be "overheard." Acquiring information is a significant challenge for any deaf person and therefore interpreters must take FOI issues into consideration when working with deaf individuals.

thought world). Knowing this information helps interpreters predict what would likely happen next in the conversational exchange and treatment planning for the patient (i.e., how a provider might treat a compliant versus a less compliant patient).

Another worksheet question requires students to analyze the overall interaction shown on the video and to consider its component parts. In diagnostic interviews, the most apparent component is a series of questions and answers about symptoms but there are other significant aspects too. There is likely to be conversation about health history (e.g., *do you have any past surgeries?*), social history (e.g., *do you live alone?*), family health history (e.g., *any heart disease in your family?*), patient education (e.g., *the recommendation for a heart healthy diet is...*), discussion of a diagnosis (e.g., *what I think is going on here...*), seeking corroborating evidence or additional information (e.g., *a blood test and an echocardiogram will rule out...*), treatment planning or disposition (e.g., *here is what I think is going on and therefore I recommend...*), and if necessary, informed consent or seeking patient compliance (e.g., *are you okay with that, does that make sense?*). During the video interaction and on the worksheets, students are expected to attend to and note these shifts in the dialogue.

To link both the broad view of the interview with its more specific aspects, using another SP video worksheet, students are introduced to typical questions associated with a pain evaluation. There are many versions of the mnemonic used to remember the topics covered in a pain evaluation but a common one is: **PQRST** (Crozer-Keystone Health System, 2018).

Provocation/Palliation:	What were you doing when it started? What makes it worse or better?
Quality/Quantity:	What does it feel like? What kind of a pain is it? Stabbing, aching, dull?
Region/Radiation:	Where is the pain located? Does it move or radiate?
Severity Scale:	On a scale from 1 to 10, does it interrupt life activities? How long does an episode last?
Timing:	When/at what time did the pain start? Have you had this pain before? How long did it last? How often does it occur? Is it sudden or gradual? Is it accompanied by other signs and symptoms?

In the SP video, Chest Pain 2, students are asked to identify the pain evaluation questions in the dialogue. Table 2 depicts a sample dialogue where the traditional pain evaluation script is evident and many of the PQRST can be identified:

Table 2: Pain Evaluation Dialogue

Provider	Patient
How long have you been having this pain?	Well, it probably started about a year ago.
Okay.	And it's probably been the last couple of months, month or two, that they've been a little worse, a little more intense.
Okay. And are they also more frequent or just more intense when they come?	I don't know. That's hard to say. Probably happens three or four times a week, so maybe it was two or three times early on, but it's been probably three or four for quite a while now.
And does it come on like a switch, or does it sort of build up?	No, it comes on pretty quickly.
Quickly? How long before it feels better?	I'd say on average it's, it lasts for maybe an hour or two. Sometimes a little longer. Sometimes 15 minutes.
Okay. And is it always that way? You know, is an hour the longest that it lasts?	No, sometimes it's longer.
Sometimes it's longer? Okay. Does it happen during a particular time of day?	I don't know if there's a pattern. It happens sort of randomly.
Kind of whenever?	Maybe a little worse at night.
And do you do anything to make it better? You know, if you take aspirin or something? Get in a different position? Take a deep breath? Does anything help?	

Note that the final series of questions in this excerpt is an example of a palliation question – or, *what makes the pain better?* The questions that will follow, not scripted here, involve provocation or the question of *what makes the pain worse?* In this video, the patient's responses suggest evidence that the pain is related to gastrointestinal reflux and not something more concerning like a heart attack. As noted above, differential diagnoses, in the mind of the provider, follows from answers to a series of questions stemming from the presenting complaint. In the worksheet for Chest Pain 1, students are asked to investigate the possible differential diagnoses and the types of questions that might be asked to rule it out to favor the initial diagnosis.

Another series of SP videos and worksheets yield more sophisticated learning outcomes. In the SP video, Wrist Injury, the female patient presents after an injury to her wrist. She hurt her wrist because of a misstep getting into her car after spending time with her coworkers unwinding after work. She tells the provider that her husband wanted her to be seen because of her recent fall. The provider asks her to give more

specifics about how she came to fall and, later, begins to inquire about the regularity of her drinking. It is not unusual for presenting complaints to become secondary to a more concerning issue, such as a patient's safety due to alcohol use. Similarly, in the SP video, *Stressed Out*, a first-year college student presents because of struggles keeping up with her coursework. This diagnostic interview quickly turns into an evaluation for depression. In both of these SP videos, students are referred to the Psych Notes text and their worksheets to compare the providers' interview questions with the formal questions listed in Psych Notes such as the CAGE screening questionnaire, the Short Michigan Alcohol Screening Test, or the Depression-Arkansas Scale (PEDERSEN, 2008).

Finally, another type of lesson built into worksheets and discussion board posts are those that build students' capacity for empathy. In the SP video, *Asthma*, a young teenaged patient and his mother are following up after the son was hospitalized for several days following an asthma attack. The attack was so serious that the son had to be intubated and was on a ventilator. The provider asks questions of the son but the son struggles to answer them and the mother interrupts and takes over. The provider does not correct this behavior. In discussion posts, many students express discontent that the mother does not let her son answer the provider's questions. For signed language interpreters in particular, this likely is a sensitive issue, as hearing family members commonly speak for their deaf family members, leaving them out of the interaction. Many students have commented that this dynamic would constitute an *intrapersonal* demand for them. They also noted it would be an *interpersonal* demand as well, since it is often difficult to keep pace in a back-and-forth, hearing-to-hearing person dialogue, especially if that dialogue is about a deaf individual who is being left out of the conversation. If a conversation is happening about someone but is not involving them, it is often difficult to check in with the person to see if they are sufficiently understanding the exchange.

This understandable sore spot for SL interpreters can unfortunately become a blind spot. As students in this course were discussing their frustrations with these familiar interpersonal and intrapersonal demands, they failed to discuss other components of the provider – family interaction. As the facilitator, I asked for volunteers to put themselves in the mother's position and to speak on her behalf.

Eventually they recognized that the mother had almost lost her son, that most teenage boys are poor at answering questions, even when they are directed at them, and – hearing or deaf – many parents would dominate the conversation in such a follow up appointment to make sure nothing potentially dire like this happened again. One student who initially was the most vocal about her frustrations with the mother was grateful for this time to think more deeply about the observed interaction and the mother’s behavior. She noted that she, too, probably would have acted in the same way with her own sons.

Completing the worksheets and engaging in online dialogues with their colleagues allowed interpreting students to cover a wide range of healthcare topics. Whether it was researching the typical side effects of medications, analyzing the dynamics between providers and patients, or reflecting on their own cognitive and emotional reactions to the people and the environments they viewed, students were able to draw on and discover resources and knowledge for this future work setting.

Discussion

Educators who are interested in replicating this approach to healthcare interpreter education should contact a medical school or *teaching hospital* in their area or a more distant one where there may be an existing affiliation to see if they have a standardized (sometimes called *simulated*) patient program. Such programs are very common in teaching hospitals and medical schools. While videotaped SP interactions have been the preferred approach for my online course, they are not the only option. In other training endeavors, I have arranged for students to be physically present in the room with the medical student and the standardized patient. In other cases, I have arranged for the SP interview to be streamed into another classroom where the interpreting students and I observed and discussed the interaction, in real time, without distracting the provider and the standardized patient.

Once these SP programs are engaged, instructors must determine the role these videos will play in the lesson plan. Will they serve as a highlight to existing lessons or will they be the main element of the course design? From there, careful attention must be placed on structuring the material through the use of appropriate theoretical frameworks so that attention is focused on interpreting-specific learning objectives, and

not just on what is “interesting” in the observed dialogues. The lesson should not only focus on relevant healthcare content but on the important interpersonal and intrapersonal aspects of working in healthcare settings (see Dean; Pollard, 2012). Given that my course was delivered online, this initial analysis of the SP video happened through use of a structured worksheet. Finally, instructors must shift their role from teacher to facilitator and use the content derived from the SP videos to engage students in discussions that flow from the worksheet material into large group discussions, research, and PBL-style reflection with their peers.

Conclusion and Further Research

The aim in advancing healthcare interpreters’ knowledge and skills using these SP videos is two-fold. Certainly, it is about teaching important healthcare knowledge in a more efficient, effective, and contextualized manner. It also is about advancing students’ appreciation and preparedness for the complexities of the healthcare environment and the many people with whom they will interact. It is also about the benefits of repeated exposure to healthcare dialogue that facilitates students’ predictive skills. If interpreters are able to confidently anticipate what comes next in healthcare dialogue, their cognitive load is decreased. Theoretically, when their cognitive load is decreased, there is a corresponding increase in their cognitive capacities to be used in other ways – opportunities for *reflections* and in-the-moment corrections, improvements, and meta-level understanding – all of which advance an interpreter’s effectiveness. Future research studies should aim at assessing such an effect as well determining the value of this PBL method in comparison to others currently being used in medical interpreter education.

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