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Value of communication, value of language: Nahuatl speakers and public health services in Sierra Norte de Puebla

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Abstract: This paper is based on the data collected during fieldwork in the northern part of Mexico's state of Puebla in 2018–2019. During that period, there was a need to gather information that would serve as a starting point for the participatory-action research project in San Miguel Tenango, a village where the majority of people speak Nahuatl as their mother tongue. In contrast, the employees of the health center located in the village have been exclusively Spanish-speaking doctors and nurses assigned there by the state department of health. The paper analyzes problems of communication between the medical staff and Indigenous patients, many of whom are not proficient in Spanish. It presents two different perspectives on communication in local health care settings, the one of medics and the other of patients. On comparing between them, we can recognize that the existing strategy of overcoming language barriers in Tenango, based mainly on family interpreters, has certain shortcomings, unnoticeable for the staff of the health center. The communication problems are discussed in the context of changing language attitudes among Nahuatl speakers. In addition, the paper includes a critical overview of recent initiatives to promote the use of Nahuatl in health services in the state of Puebla.

Keywords: communication in health care, Indigenous peoples, language barriers, linguistic rights, Mexico, Nahuatl

1 Introduction

In Mexico, the public health system has recently made important advances in providing health care for the poor. The implementation of the *Seguro Popular de Salud* ("National Health Insurance") in 2001 allowed, for the first time,

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economically disadvantaged populations to receive many vital treatments for free. However, the positive impact of the *Seguro Popular* across the country cannot overshadow the shortcomings of public health care in rural communities (García-Díaz et al. 2018), such as lack of medical supplies, insufficient numbers of personnel and poor conditions of premises.

Alongside these shortcomings there is also a lack of cultural and linguistic competence amongst the doctors and nurses who are dispatched to work in areas with predominantly Indigenous populations. Only a tiny fraction of health care employees who work in such areas are at all proficient in the relevant Indigenous languages. In these cases, the employees' proficiency can result only from their own Indigenous origins or from their personal willingness to learn the language of the relevant community. There are virtually no programs for teaching Indigenous languages to health personnel. Likewise, no doctors or nurses are tested for their familiarity with the culture of the area in which they are about to start working. This situation is also typical in the state of Puebla, where the largest numbers of Nahuatl speakers (about 400,000) reside.

As a case study, this paper focuses on San Miguel Tenango, a village in the Western part of Sierra Norte de Puebla, a mountainous region in Central Mexico mostly populated by Indigenous peoples. Based on ethnographic approach, it analyzes the challenges that Spanish-speaking doctors and Nahuatl-speaking patients face in their daily communication with each other and how these challenges correlate with their language attitudes. It also refers to recent initiatives to introduce the Nahuatl language in regional health services of Puebla.

The purpose of the paper is not only to expose the problems of communication in rural health services and current practices for solving them, but also to consider these problems and practices from the perspective of linguistic human rights. It has been shown that public health care, apart from its general significance for human well-being, is an important domain of language use, where the linguistic rights of minorities should be respected and promoted (Angelelli 2012; Briggs 2019). Interestingly, there are not a lot of sociolinguistic studies that focus on the implications of the use or absence of minoritized Indigenous languages in public health domain. This is despite a growing scientific interest in links between language vitality and revitalization on the one hand and health and well-being of Indigenous communities around the world on the other (Capone et al. 2011; Oster et al. 2014; Walsh 2018). In this area, research in sociolinguistics or language policy and planning may draw feedback from that part of social medicine which deals with language barriers and practices for overcoming them.

2 Overcoming language barriers in Western health care: a short overview of practice and theory

Academic interest in cross-linguistic and cross-cultural communication in health care developed during the last quarter of the twentieth century. A number of quantitative studies, which tackled various aspects of health care in various geographical contexts, have proved what was already apparent: there were disparities between the efficiency of health care received by patients who spoke the majority language fluently and those who were not proficient in it (e.g., Bischoff et al. 2003; Chan and Woodruff 1999; David and Rhee 1998; Liao and Macllwaine 1995). Likewise, the unqualified interpretation of doctor-patient communication proved to have potentially dangerous consequences for the patient's health (Flores et al. 2003, 2012). Patients from language minorities have also reported a lower level of satisfaction with health services (Han and Lee 2016; O'Brian and Shea 2011).

Awareness of the importance of language concordance between patients and healthcare providers and the growing dominance of the patient-centered paradigm in Western health care, led to the acknowledgment that access to health services in the patient's first language must be considered a basic right. Nevertheless, the actualization of that right has turned out to be a complex issue, even for countries with the most developed economies and resourceful health systems.

Since the early 1970's, for example, the US Department of Health and Human Services has required that persons with limited English proficiency be given the same access to health care as fluent speakers. But without clear regulations regarding how these rights should be enacted, health care providers have been made largely responsible for allocating funds for interpretation services. This has caused many to search for the most affordable solutions in their daily practice and the quality of interpretation has suffered as a result. Consequently, no considerable improvement in communication in health care has been observed (DeCamp et al. 2013; Jacobs et al. 2006). The public health system of Canada has recently introduced the policy of "active offer", which states that a health care provider should actively invite a patient to use services in either of the two official languages of the country, English or French. However, this new policy does not extend to the Indigenous and migrant populations of Canada, as these do not comprise "official language minorities" according to the country's legislation (Drolet et al. 2017).

Essentially, there are three basic strategies for minimizing language barriers between patients and health personnel. First is the use of professional interpreters,

either in person or remotely (by means of telephone service or video conference). In both cases, the use of interpreters has proved most effective in comparison to other solutions (Joseph et al. 2018). However, the employment of professional interpreters also requires considerable funds, and so that practice is still far from widespread. The next strategy consists of hiring bilingual doctors and nurses, or providing training in the target languages to health personnel. In practice, it often turns out that bilingual health personnel, in the case of a necessity, is expected to support their colleagues who are not proficient in the target language. This practice can easily lead to an overreliance on bilingual employees, who do not usually receive remuneration for their additional services (Bradby 2001).

The last strategy is the use of *ad hoc* or unqualified interpreters, who in most cases are patient's family members or friends. In this way, the health care provider can shift responsibility for language concordance onto the patient and thus avoid additional costs. This appears to be the main reason why this method is still widely used in Western health care. However, the pitfalls associated with *ad hoc* interpreters in the context of doctor-patient communication have been described in the literature numerous times (e.g., Flores et al. 2003; Gerrish et al. 2004; Jacobs et al. 2006). They can be grouped into three categories: 1) lack of confidentiality, especially in the case of intimate issues; 2) intentional distortion of the communication due to interpreter's personal interest in the matter; 3) further risk of inappropriate interpretation due to the lack of medicinal knowledge and/or lack of proficiency in one of the languages of communication. Medical workers are particularly cautioned against using patient's children as *ad hoc* interpreters (Flores et al. 2012; Juckett and Unger 2014).

Although printed information, either in the form of leaflets or posters, is rarely featured in the research on interpretation in health care, it is an undeniably important channel of communication with patients, which is meant to increase their health literacy without direct interference of medical workers. As in the case of poor oral interpretation, poorly translated health-related materials may also have a negative impact on patient's care (Clerehan 2014). Apart from the educational impact, there is evidence that a lack of written materials in the patient's native language creates a negative psychological effect, as the patient can feel unwelcomed or ignored by the health care provider, if not discriminated (Gele et al. 2017; Madoc-Jones 2004).

Overall, the research on language barriers in health care deals more with migrant and refugee contexts than with Indigenous peoples. It seems that Indigenous minorities are not generally viewed as the primary beneficiaries of language services, as they are already assumed to speak the language of the majority sufficiently. Nonetheless, it has been argued that this utilitarian approach to language and language diversity contradicts the contemporary principle of linguistic human

rights (Angelelli 2012; Davies 2001). Hence, there have been recent attempts in European countries to implement full-scale provisions for minority languages, such as Basque and Welsh, in public health care (Higham 2018). In Latin American context, it is worth-mentioning the project *Quru Kawoq* in Guatemala, which combines diabetes treatment in Mayan communities with revitalization of Mayan languages (Flood et al. 2019).

Despite the rise of the policy of cultural competence in Western health care, language issues still receive little attention in the training of health professionals, who, according to this policy, have to learn and respect the cultural traditions of their patients. In other words, there is a tendency to differentiate between the problem of language barriers and that of cultural barriers, applying different approaches to each (see e.g., Segalowitz and Kehayia 2011). Yet, the reality of cross-cultural encounters between patients and doctors show how Indigenous views on illness and the body are deeply connected to the relevant lexicon, so that truly "culturally competent" health care would involve learning both ethnographic and linguistic information (e.g., Jackson et al. 1997). In view of the threats to Indigenous languages and traditional knowledge worldwide (including medicinal knowledge), there is a growing need for an approach to health care that respects both the ethnicity and language of Indigenous patients.

3 The social profile of San Miguel Tenango

The village of San Miguel Tenango (referred to as Tenango henceforth) is a part of the Zacatlán municipality, located in the southwestern part of Sierra Norte de Puebla. Sierra Norte is a mountainous and humid region in the northern part of the state of Puebla, which lies between the tropical lowlands along the Gulf of Mexico and the Central Mexican plateau. Tenango is situated directly southeast of the town of Zacatlán de las Manzanas, being separated from it by Almoloya river and the deep ravine it forms.

The population of Tenango is currently about 1800 people[1]. The village itself is geographically rather dispersed, as most of the households are located at considerable distance from each other. The majority of households rely on agriculture to one extent or another. Other sources of income include daytime labor and small trade, which mostly take place outside the village. The population of

1 According to the statistics of the Health Center of San Miguel Tenango.

Figure 1: San Miguel Tenango, view from southwest. Photo: Gregory Haimovich.

Tenango is considered poor according to national standards: the official data from 2011 shows that over 80% of households live on no more than a single minimal salary (Foro-Mexico.com 2018).

The majority of Tenango residents identify themselves as Indigenous persons and speaks Nahuatl as their mother tongue. However, very few children now learn to speak Nahuatl from their parents. This has resulted in a significant linguistic disparity between children and elderly residents, since the latter are much more proficient in Nahuatl than in Spanish and mainly use Nahuatl in their daily communication. In addition, there are very limited opportunities for Tenango children to learn and use Nahuatl in formal education. There is a high school, a secondary school, two primary schools and three kindergartens, but there are only two kindergartens where Nahuatl is taught in some form.

In Tenango, the most acute health problems are hypertension and diabetes type II. The principal reason for this is the drastic changes to nutritional patterns, which have taken place in Indigenous communities in Mexico in recent decades, particularly in Sierra Norte. The doctors interviewed during the study suggested that although the same health issues are present in large cities as well, Tenango and neighboring rural communities have worse statistics for diabetes, including a higher mortality rate, and that it was mostly caused by the lack of timely attention.

Until 2020, most of the village population has been protected by *Seguro Popular*, national health insurance system. In practice, it means that the residents can receive medical consultations and various health services for free. Only in instances when a particular medicine or supplement is not available in the local clinic, or health center, patients may be required to buy it themselves. At the start of the research, the residents, who received governmental support from the social program called *Prospera* were obliged to visit the health center for regular check-ups in order to maintain their right for this kind of support.

The local Health Center (*Centro de Salud* in Spanish) is situated in the central part of the village, opposite the cemetery. Its staff ordinarily includes a senior doctor, who is head of the clinic (*doctor/-a de base*), an intern (*doctor/-a pasante*), two nurses (*enfermeras*) and a health educator (*promotor).* At the time of research all the staffs were Spanish-speaking employees from outside of the village. However, near the main square, there is also a small private clinic, which is run by a bilingual Tenango-born physician and her husband, also physician, originally from Nicaragua.

In addition, Tenango has the Health Committee (*Comité de Salud*), which consists of 10 local volunteers and does maintenance works for the Health Center. Members of the Committee usually accompany the *promotor* during his visits around the village. The village authorities, or *junta auxiliar*, also hold the position of health councilor *(regidor/-a de salud*), with a wide range of responsibilities, including monitoring sewerage and drinking water. *Regidor/-a de salud* is also a first-call person in a case of emergency, when the affected person lives in a remote area and requires urgent transportation.[2]

Indigenous medicine is still widely practiced in Tenango. There are a number of elderly persons, mostly women, who specialize in the use of medicinal plants and massages, but they are barely able to make living out of their practice. *Hueseros*, healers who specialize in bone and muscle therapy, are also present in the village and are often sought-after. Residents usually prefer to appeal to *hueseros* than to public health care in the cases of bone fractures, dislocations, muscle strains and ruptures, as *hueseros* are known to cure an injured person faster than in a hospital. However, in general, Indigenous medicine in Tenango has experienced the same problem of intergenerational transmission as the Nahuatl language – younger residents who grew up as Spanish speakers have little knowledge of it.

2 Unfortunately, during the period of the survey a lot of issues that fell within the responsibility of the health councilor were left unattended and the person who held the position could not be easily reached.

4 Health personnel's perspective on their communication with patients

The studies of language barriers in doctor-patient communication are usually conducted by researchers who are themselves health professionals and speak the majority language fluently. In contrast, patients who come from ethnolinguistic minorities are typically assigned a passive role in the research. The current study is different, as it has been conducted jointly by a foreign researcher who is not a health professional and by a local resident who is both Nahuatl speaker and nurse by profession. Such a situation created an opportunity to provide a more critical, multifaceted perspective on the subject.

The case of San Miguel Tenango also shows the ambivalence of majority-minority relationships between medics and patients in Indigenous contexts. In the context of Mexico or the state of Puebla, it is clear that the employees of the Tenango Health Center (henceforth THC) represent the linguistic and cultural majority, e.g., urban and Spanish-speaking. But within the village itself, with its Indigenous Nahuatl-speaking population, these employees find themselves in the minority. This creates a situation in which the lack of cultural competence on the part of employees may lead to tension between them and the community they are supposed to serve.

This was precisely the situation that took place in August 2018, several months before I got involved in the participatory-action research in Tenango. At some point, the *doctor de base* tried to prohibit local women from coming to THC dressed in traditional Indigenous clothes, since certain elements of these clothes made it difficult for him to conduct examinations. Rather than thinking about some compromise solution (for example, allotting a small space where female patients could undress and a female nurse could examine them), the doctor made a simple decision that was both culturally insensitive (at best) and short-sighted. In Tenango, as well as in many other communities of the Sierra Norte de Puebla, traditional female dress is an important and cherished marker of Indigenous identity, and many adult women still wear it on regular basis. Not surprisingly, the attempted ban on traditional clothing for female patients was met with frustration by many villagers, as it capped their earlier experience of negligence and discrimination in health services (see section 5). As a result, the senior doctor had to be swiftly replaced by the health authorities with a new *doctora de base*.

At the start of the research, it became clear that this incident caused both the new personnel of THC and the villagers to respond very cautiously to any questions about the relationship between the two groups, even though I made it clear that the research had nothing to do with the events that had taken place a few months ago. I

was able to interview the new head of the clinic (without recording), the intern, the *promotor* and the head of the Health Committee, who was a local resident but originally came from Mexico City. However, first I took the opportunity to meet the native doctor (from now on referred to as Dr YL) from the aforementioned private clinic and record an interview with her and her husband.

Hearing the perspective of a person who was both a health professional and at the same time a member of the community had significant value for the study. The doctor had left Tenango as a child and did not actually speak Nahuatl until her decision to return to the village. At that point, with the help of her friends and relatives, she gradually learned the language well enough to communicate with her elderly patients. Interestingly, she noted that upon her coming back, the villagers did not show much trust in her as a doctor. First, they doubted that one of their kin would have managed to obtain a medical qualification, and even then they could not understand why, having become a qualified doctor, she decided to come back to work in Tenango.

Dr YL pointed out that, historically language had been one of the two main obstacles that prevented Tenango residents from accessing public health care, the other being transportation difficulties. Even after the construction of the asphalt road to Zacatlán and the foundation of THC in mid-1980, the barriers to access endured, as the local population was still largely monolingual.

> YL: It is true, in the beginning the people didn't have trust [in the Health Center], because, first of all, there was no form of communication, right? Native [persons] from here, with Nahuatl language, couldn't communicate with a medic…
>
> GH: And didn't they send here any medic who could speak the Indigenous language?
>
> YL: No, no. There was no such concern, like to facilitate the communication, so this was also a big problem, the lack of communication. Nowadays, the children of elderly persons actually serve as their interpreters.

Thus, according to Dr YL, the problem of the language barrier has been resolved, but not due to any change in the policy of the Secretary of Health. The growth of a new bilingual generation in Tenango eventually facilitated the contact between Spanish-speaking medics and Nahuatl-speaking patients. Thus, the use of younger relatives of monolingual or nearly monolingual Indigenous patients as *ad hoc* interpreters emerged as a solution that perfectly satisfied the employees of THC. Those who worked with patients who spoke little Spanish, maintained that the language barrier, in the rare case that it arose, was always easily overcome and that health worker did not have any need to learn Nahuatl. Even the *promotor* was confident about that:

> CG: Actually I don't speak it, I understand it a little bit, but there were only some moments where I ran into a need [for interpreter] because there were some person who didn't speak Spanish. But this is not really a big need for me, because all the community speaks Spanish. The persons who speak Nahuatl, they are already elderly persons, or sometimes the young people also speak it, but they don't use it that much now. So I don't have that need to learn Nahuatl, because everybody speaks Spanish. [...] If we are going, for example, I am going to visit an old person who don't speak Spanish, who speaks only Nahuatl, so what I do is that if there is someone there, from the family, who would help me, [the problem is settled] and if not, I find some neighbor or someone who would accompany me, so that I could talk to that person by the means of interpreter.

"Interpreter" in this context means a person who is not trained professionally but who sometimes can assume this role spontaneously. This was confirmed by the head of the Health Committee, who told me that on some occasions the Committee provides the *promotor* with an interpreter from among its members, but if this is not possible, or if some unexpected circumstances emerge, the *promotor* and the accompanying members of the Committee can pick up "some person who they find on the road who can speak [Nahuatl]".

The doctors, the *promotor* and the head of the Health Committee all stated that no elderly patient who speaks little or no Spanish comes to visit THC without an interpreter, who in most cases is a younger relative of the patient. According to the senior doctor, it is not difficult to find a bilingual *ad hoc* interpreter in any family, so no problems arise during the visits. However, she also recalled instances when patients had to bring along two interpreters, one being a close relative who spoke better Nahuatl and another being a more distant relative or neighbor who spoke better Spanish, so that a chain of communication could be established. The THC employees maintained that they could not remember any occasion of using children as family interpreters. The reason for this appears to be more practical than ethical, as the majority of children in Tenango are already monolingual in Spanish.

The only doctor in Tenango who did not need *ad hoc* interpreters in her daily work was Dr YL. However, she admitted that she still faced difficulties while talking to her Nahuatl-speaking patients and often preferred to double-check if they understood her correctly:

> So even now this is a challenge for me. Yes, even now, because I'm telling you, there are many persons who understand Spanish but don't speak it, so they always talk to you in their language. And I don't speak my language perfectly. Yes, there are many things that I lack ... [...] But even so, with faltering and laughing and everything, I try to explain as much as possible to them so that they can understand me. Even when I give a prescription, I often ask them: "Did you understand me? If you don't understand me, tell me where you didn't understand me, so that I can explain it to you again and you can leave knowing how to take your medicine."

Both the *doctora de base* and *doctora pasante* from THC considered their main obligation in doctor-patient communication to be ensuring that the family interpreters clearly understood what the doctors wanted to tell them. As the conversation between the interpreter and the patient was beyond the doctors' comprehension, they could only hope that their words were correctly translated. Thus, it resulted that the quality of interpretation in the context of public health care was considered to be exclusively the responsibility of the patients and their families. No health care worker could recall that there was ever a position of official medical interpreter in any Indigenous community of the region.

When I asked the head of the Health Committee if, in her opinion, there were other better options than the use of family interpreters, she responded:

> Well, on the one hand, it is ok [as it is], and on the other hand it is very difficult … now yes, since the doctors come from outside, it's obvious that they don't know all the *dialects*[3], and this … that's why indeed there must be someone … if they (medics) already come here to the village, there might come a doctor or a nurse who could speak *dialects* of every place, but it's going to be … obviously it's going to be very difficult to find someone like that.

Indeed, the *doctora de base* also acknowledged that it would not be a bad thing for at least some of the THC the employees to speak Nahuatl. She also explained that she would not object to learning Nahuatl herself, so long as the health authorities provided her with support in this respect, so that the process of learning would not result in unpaid hours of work.

In addition, the doctors noted in our conversations that the Indigenous language *per se* did not constitute the only problem in their communication with patients – even if both the doctor and the patient spoke Spanish, misunderstandings could always rise due to the differences in cultural and educational background. The doctor couple from the private clinic both stressed that in any situation it was important to explain health issues to their patients, including why they should take their medicine, in familiar terms, either in Nahuatl or Spanish.

The intern from THC expressed concern that in the case of diabetes mellitus, many local patients were barely aware of the nature and dangers of the illness. She recalled persons telling her: "they only told me that I had to have a certain number of glucose, but they never told me why". The intern agreed that "it is not their obligation to learn about it [themselves], it's also part of our duty as medics to

3 The use of the word *dialecto*, "dialect", for Indigenous languages is a commonplace in Mexico and is a product of assimilationist policies in education, which propagated the superiority of European languages over the Indigenous ones (Perez et al. 2016: 263). Spanish, English or any other language of general use are never called *dialecto*, only *lengua* or *idioma*.

guide them in the most comprehensible manner possible and [explain them] what can happen to them".

When asked about their attitudes towards the Nahuatl language and its vitality, there was no medical worker who spoke about Nahuatl with disdain. At a declarative level, everyone noted that it is important to keep Indigenous languages and cultures alive. The *promotor* even described how he encouraged the Indigenous youth to learn and speak Nahuatl, himself focusing on the career opportunities that could open up to those who spoke more languages. Moreover, not one of the interviewed medical workers expressed any animosity towards Indigenous medicinal knowledge and practices. Many agreed that there are many effective treatments that Indigenous medicine can offer, especially those based on herbs and steam baths (*temazcales*). However, the *doctora de base*, *doctora pasante* and Dr YL all pointed out that pharmaceutical drugs deserved more trust than Indigenous herbal medicine, because, they argued, in modern pharmacy all medicine is scientifically tested and approved, while the Indigenous medicine is not "properly" tested.

5 Indigenous patients' perspective on their communication with doctors

During the first visit of Gregory Haimovich to San Miguel Tenango in September 2017 he implemented a short questionnaire in order to learn more about the use of Nahuatl and language attitudes in the community. The results of the questionnaire revealed that the idea of language revitalization was quite popular among the inhabitants of Tenango. Suffice it to say that at that moment there were two groups of language activists in the village, who nonetheless did not collaborate with each other.

Apart from the collection of data about language transmission in families, local Nahuatl speakers were also asked to share their opinions about the promotion of their language in various public domains. The mention of health services in this respect provoked many emotional responses. The villagers emphasized that wider use of Nahuatl in health services would be of great importance for elderly people, telling stories about the difficulties the latter had dealt with while visiting doctors, including experiences of discrimination. Interestingly, those who strongly advocated the introduction of medical interpreters or Nahuatl-speaking doctors were younger residents (below 45 years). Older residents mostly referred to the language barriers in their communication with medics as to an immutable reality.

All these responses influenced our decision to launch a more profound research project on the use of Nahuatl in public health care in the region.

It seems that, at that time, the unresolved tension between the residents and the former *doctor de base* had a certain impact on the responses we received. Several months after his replacement, in December 2018, we conducted a survey, which focused on communication in health care and attitudes to health care in general. During the survey we noticed that people answered questions about health care with more caution than in the previous year, avoiding talking about negative experiences. Taking into consideration the fact that the expulsion of the ill-famed *doctor de base* was also preceded by a poll, many residents now understood that their opinions had power to change the order of things. Accordingly, it appeared that they did not want to exploit this power after the situation had already changed in their favor. Nevertheless, the survey provided us with valuable data, which brought a new perspective on the relations between the villagers and public health services. Over the course of approximately three weeks, our survey reached 120 persons of different ages and genders; a representative sample of the population of Tenango. Although the survey was based on close-ended questions, any additional comments from the respondents were highly welcomed and were documented.

The respondents were provisionally divided into two age groups, Group 1 (from 18 to 50 years old) and Group 2 (persons older than 50). According to our initial assumptions, people who had difficulties communicating in Spanish primarily belonged to Group 2. Indeed, the results showed that more than 80% of Group 2 estimated their proficiency in Spanish as “low” (“hablo poco”) or “average” (“hablo regular”). In contrast, the self-estimated proficiency in Nahuatl within this group was “good” (“hablo bien”) or “excellent” (“hablo excelente”). Participants in Group 1 reported nearly equal self-estimated proficiency in Spanish and Nahuatl (Table 1 and Table 2).

The two age groups also differed, although to a lesser extent, in their responses to the questions about difficulties in communication with medics (Table 3 and Table 4).

Interestingly, we could see that the younger patients also had occasional problems in their interactions with medics. According to the testimonies of several respondents from Group 1, this occurred mostly because they lacked a good grasp of “*tecnología*”, as they said, – in other words, biomedical concepts and terminology, which the medics did not always bother to explain.

The survey showed that the persons with low self-estimated proficiency in Spanish, most of whom were of advanced age (Table 1), attended public health services more often: from the 30 persons surveyed, only four said that they had visited health services never or only once during the last year, while 14

Table 1: Self-estimated proficiency in Spanish among the two age groups.

		hablo poco	hablo regular	hablo bien	hablo excelente	Total
Age group 1	Count	3	24	20	5	52
(18–50 y. o.)	% within age group	5.8%	46.2%	38.5%	9.6%	100%
Age group 2	Count	27	27	12	1	67
(>50 y. o.)	% within age group	40.3%	40.3%	17.9%	1.5%	100%
Total (valid)	Count	30	51	32	6	119
	%	25.2%	42.9%	26.9%	5.0%	100%

Table 2: Self-estimated proficiency in Nahuatl among the two age groups.

		hablo poco	hablo regular	hablo bien	hablo excelente	Total
Age group 1	Count	4	23	19	6	52
(18–50 y. o.)	% within age group	7.7%	44.2%	36.5%	11.5%	100%
Age group 2	Count	1	16	35	16	68
(>50 y. o.)	% within age group	1.5%	23.5%	51.5%	23.5%	100%
Total (valid)	Count	5	39	54	22	120
	%	4.2%	32.5%	45.0%	18.3%	100%

Table 3: Answering the question "How often do you find it difficult to understand what a doctor tells you while receiving you as a patient?"

		never	rarely	sometimes	many times	almost always	always	Total
Age group 1	Count	19	16	15	2	0	0	52
(18–50 y. o.)	%	36.5%	30.8%	28.8%	3.8%	0.0%	0.0%	100%
Age group 2	Count	14	19	23	6	4	1	67
(>50 y. o.)	%	20.9%	28.4%	34.3%	9.0%	6.0%	1.5%	100%
Total (valid)	Count	33	35	38	8	4	1	119
	%	27.7%	29.4%	31.9%	6.7%	3.4%	0.8%	100%

respondents said that they had visited health services at least eight times during the same period. However, when the same participants were asked how often during the last year a friend or member of their family had accompanied them to

Table 4: Answering the question "How often do you find it difficult to explain to a doctor your problems as a patient?"

		never	rarely	sometimes	many times	almost always	always	Total
Age group 1	Count	29	4	15	3	1	0	52
(18–50 y. o.)	%	55.8%	7.7%	28.8%	5.8%	1.9%	11.5%	100%
Age group 2	Count	18	20	12	12	3	2	67
(>50 y. o.)	%	26.9%	29.9%	17.9%	17.9%	4.5%	3.0%	100%
Total (valid)	Count	47	24	27	15	4	2	119
	%	39.5%	20.2%	22.7%	12.6%	3.4%	1.7%	100%

the clinic as an interpreter, more than two thirds (21 from 29) answered that it had never happened. Next, when we asked Group 1 if they had ever accompanied a friend of family member as an interpreter during the last year, the majority (56%) stated that they had not, even though the majority had elderly relatives.

This data created a different picture than that of the interviews with health care employees, including the head of the Health Committee. It showed that elderly persons who spoke little Spanish were often left without an interpreter when they had to go to the clinic, while the younger and middle-age generation did not or could not help them as *ad hoc* interpreters. During the survey, for example, a woman of 65 years old complained to us about her son, who was never around when she needed to go to a doctor and who constantly scolded her for speaking Nahuatl. However, such cases do not mean that the younger generation as a whole should be castigated for ignoring the needs of their parents and grandparents. There is an important contributing factor that is not usually accounted for in the official statistics of Tenango or other similar communities – labor migration. In our interview, Dr YL specifically referred to the effect this had on community demographics:

> YL: […] Here the problem is that our lands are rugged, they are subject to season changes, so the gain [from cultivating the land] is not sufficient. So now, actually, the kids go to Zacatlán, to Mexico City […] or to United States through necessity, to earn more, in terms of money. But it is very sad, because, if you notice, this community is full of children of school age, up to 17 years old, and of persons of advanced age.
>
> GH: And the persons of middle age migrate…
>
> YL: They had to go, that's right. That's right, yes, the need obliges them.

Given this situation, it is clear why a large proportion of persons with poor Spanish have difficulties with finding a relative to act as interpreter: mostly, it occurs

because their sons and daughters are not easily accessible on a daily basis, as so many of them have to look for wages outside the village and sometimes leave it for years, if not for ever. The assurances of health care workers, that no person who speaks little Spanish ever comes unaccompanied to THC, do not appear to consider the possibility that many people are compelled to stay at home because they cannot find a bilingual companion to accompany them to the clinic. Indeed, providing elderly persons with interpreters sometimes requires a high level of assistance from neighbors, as seen from the testimony of a woman of 81 years (translation from Nahuatl):

> They (doctors) never reproach me; it's me who doesn't understand Spanish well … Earlier, Nati (a younger female neighbor) was accompanying me and she was interpreting[4] what I said, and right now, that Carmelita (an old woman who belongs to the same congregation) accompanies me, so the doctors receive me well and give me medicine.

Here it is also remarkable how this Nahuatl-speaking woman positions herself against the health care professionals. From her perspective, it is she who must be held accountable for the language barrier. Moreover, her testimony suggests that if she were not able to provide an interpreter, the attitude of the doctors towards her could worsen. This view may not reflect the actual order of things, yet its roots lie in the long history of discrimination towards Indigenous people in Mexico. It reveals what has long been a common attitude in many public spaces: Indigenous languages are considered "inappropriate", and their speakers forced to disguise their indigeneity in order to make themselves visible.

The perspective of *ad hoc* interpreters on communication issues in health care was particularly interesting. We did not meet anyone who provided an interpretation service for any kind of remuneration; generally they all did it out of good will or filial responsibility. But even the interpreters who acted solely out of good will and found time to help various persons confessed that life would be easier for them if there were someone who could do this work on regular basis. "It is necessary that there would be someone who could speak for the rest", such person told us, meaning that the community as a whole should take responsibility and elect or hire an interpreter, who could always be reached when needed.

From 120 respondents, 67 acknowledged that they had accompanied a patient as an interpreter on at least one occasion. Most of these people stated that they never had difficulties interpreting the doctor's words to the patient (35 out of 67) or interpreting the patient's words to the doctor (42 out of 67). The number of *ad hoc* interpreters, who experienced such problems, either "rarely" or "sometimes", was

4 Here the person actually uses the form *onechtlahtoaya*, which literally means "spoke for me" and is normally used to convey the concept of interpretation in the local variety of Nahuatl.

25 and 19 respectively. The difficulties, they admitted, were mostly associated with the interpretation of medical concepts. Although the majority of *ad hoc* interpreters belonged to Group 1, we found persons in their late 70's and early 80's who also acted as interpreters for their relatives and neighbors, even though they themselves admitted that their Spanish was far from perfect.

The final questions of the survey asked respondents about their opinions on whether there should be an increase in the usage of Nahuatl in health services and health-related information. The responses were highly positive. The approval rate for increasing of the use of Nahuatl in health care, based on the answer range from 0% ("definitely not") to 100% ("definitely yes"), constituted 88.5%, and the approval rate for providing more health-related information in Nahuatl was 94%. Most remarkably, the respondents who served as interpreters more frequently (the eight people who had accompanied patients at least 4 times during the last year) expressed absolute confidence that such information was needed.

In general, the results of both the survey and private discussions with residents showed that both patients and family interpreters had to deal with problems that most local health care workers were seemingly unaware of. Hence, from the perspective of patients, their relatives and friends, there was a need to change the current order of things, by introducing a reliable interpretation service and giving more space to the Nahuatl language in health services. The question, however, is whether providing such service is possible in current conditions.

6 The place of Nahuatl in health services in Sierra Norte de Puebla: current initiatives and possible solutions

Providing a community interpreter in Tenango and neighboring villages would require funding for one full-time salary at a minimum. With the limited resources that village authorities have at their disposal, funding such a salary is a complicated task. In fact, the health authorities' representatives in the sanitary jurisdiction of Chignahuapan, which includes the Zacatlán municipality, also said, in a private conversation, that the lack of funds hampers any planning in their case as well.

Still, in last few years there have been initiatives aimed at making public health care in the region more oriented towards Indigenous patients. Recently, the National Institute of Indigenous Languages (INALI), in collaboration with the Secretary of Health of the state of Puebla, announced the upcoming certification of

"intercultural" health promoters, who speak Indigenous languages and are meant to work in the Indigenous communities of the state (INALI 2016).[5] However, little information could be obtained about the outcome of this initiative, principally if the certified promoters had indeed started their service in the relevant communities.

In the early 2000's, the Secretary of Health of Puebla launched the State Program of Traditional Medicine (*Programa Estatal de Medicina Tradicional*), which led to the establishment of special units of "traditional medicine" (*módulos de medicina tradicional*) at 15 state hospitals in areas with predominantly Indigenous populations. These "Modules of Traditional Medicine" employ a variety of experts in Indigenous medicinal practices, including *hueseros*, midwives, herbalists and spiritual healers (SS Puebla 2017).

In January 2019, we visited one such "Module of Traditional Medicine" at the municipal hospital of Ahuacatlán, a town northeast from Zacatlán, where speakers of Nahuatl and Totonac live in the vicinity of each other. A unique attribute of this health care institution were trilingual signs, written in Spanish, Nahuatl and Totonac. In addition, there were booklets in Nahuatl with information about health rights, produced jointly by INALI and the Secretary of Health. All the doctors of the clinic, according to the hospital administration, could speak either Nahuatl or Totonac, yet the administration itself consisted solely of Spanish speakers. The Nahuatl signs, however, left us with certain doubts about their helpfulness. First of all, the writing did not use any of widely accepted Nahuatl orthographies, but seemingly mixed them altogether. For example, we noted the simultaneous use of "c/qu" and "k" for /k/, as well as of "hu" and "w" for /w/. In addition, Nahuatl verbal prefixes, which denominate subject and object markers, imperative mood and passive voice, were written separately from verbal stems.[6]

Ideally, the signs should have been made in the Nahuatl variety of Zacatlán-Ahuacatlán-Tepetzintla, also called Nahuatl of the Western Sierra of Puebla (*Ethnologue* 2019, INALI 2008). This is also the variety spoken in Tenango, although with some variations (for example, in the Tenango dialect verbal prefixes *ni-*, *ti-* and *xi-* acquired the forms of *in-*, *it-* and *ix-*). The comprehensibility of text from the Ahuacatlán hospital signs was tested with several native speakers from Tenango and Tepetzintla. They read only the Nahuatl versions of the signs and

5 In personal communication, members of INALI noted that in fact they collaborated on that initiative with local rural authorities more than with the Secretary of Health.

6 In the modern era this has become a widespread phenomenon in Nahuatl writing, presented even in the educational materials published by the Secretary of Education of Mexico. Obviously, this manner of word separation emerged under the influence of Spanish, a far more analytic language than Nahuatl.

were asked if they understood them. Each of the speakers acknowledged that the signs were written in a variety of Nahuatl different from the one spoken in their communities. The principal linguistic feature that indicated this difference was the extensive use of the letters "u" and "e", where the pronunciation norms of Western Sierra Nahuatl would require the use of "o" and "i" respectively (Sasaki 2015).

The majority of the signs were still generally intelligible for the Tenango and Tepetzintla speakers, but some terms left them confused. For example, the inscription *Kane Echpitlane*, which in Ahuacatlán corresponds to *Área de parto* ("delivery room"), was interpreted as "a place where people come to themselves" or "a place for learning". The term *Kuitlacumo*, as found in one sign, caused significant confusion, although there was a hint as to the meaning of the signs, as there were *Kuitlacumo Sihuame* ('X women') and *Kuitlacumo Tlacame* ("X men"). Nahuatl speakers from Tenango explained that the word *kuitlacumo* most closely corresponded to "pot of feces". In fact, of course, it must have corresponded to "toilet".

The booklet given to us by the administration turned out to be written in Nahuatl of North-Eastern Sierra of Puebla or Sierra Nahuat, which belongs to a different dialectal cluster, namely Eastern Peripheral (INALI 2008; Sasaki 2015). Its text followed the same pattern of word separation as the hospital signage, yet the booklet also contained many neologisms, for which no explanation was given. Not surprisingly, even perfectly literate speakers of Western Sierra Nahuatl, whom I asked to read the text, had significant problems trying to understand it.

The informational materials from the Ahuacatlán hospital revealed the challenges of producing such materials in Indigenous languages. If the intention is to create helpful and comprehensible health information in Nahuatl, the following points should be considered:

1. Nahuatl is not a homogeneous language, so any health-related materials in Nahuatl, including signs, will be more useful if produced in the variety spoken in the target region. A proper localization of the materials can be achieved through consultations with language experts, who are familiarized with Nahuatl dialectology.
2. Materials should be written in only one orthography, most preferably in one that is officially approved or widely used. The orthography should respect the phonological and morphosyntactic features of Nahuatl in general and those of the target variety as well.
3. If the informational materials contain neologisms in Nahuatl, they should be properly and clearly explained using widely known vocabulary. Otherwise, instead of assisting the patients, the materials may create additional difficulties for them.

As regards the usefulness of text materials in health care, in the context of this current study we have to take into account that the majority of elderly Nahuatl speakers in Sierra Norte de Puebla cannot read or write – when they were children and adolescents, school education in their communities was not as accessible as it is now. In order to benefit from written information in their language, they still need a younger relative or friend to read for them. The production of audio and video materials in Nahuatl could thus play a more significant role, on condition that such materials could be transmitted in rural health centers or in other public spaces with practical support from health authorities. Notably, many rural health centers, at least in the state of Puebla, have TV sets that can broadcast educational videos, but no video production in Nahuatl can be found there. A few years ago, a group of language activists from Tenango, with the support of the National Institute of Migration, made a few infomercials in the local variety of Nahuatl that were meant to help Indigenous women migrants. These infomercials included two videos about breast cancer and cervical cancer, but this production has not made its way to public health services.

It is also a remarkable fact that the only public health institutions in Puebla where Nahuatl has any presence are "modules of traditional medicine". There are no signs or informational booklets in Indigenous languages that can be found in the ordinary health centers that operate in rural communities. It should be noted that this situation is probably better than in neighboring states, such as Tlaxcala and Morelos, where Indigenous medicine is not supported by the Secretary of Health at all. However, it reveals a latent inclination to keep Indigenous languages within their "traditional" space, while continuing to exclude them from Western health care.

7 Conclusions

While comparing the two perspectives on communication between doctors and patients in Tenango, it is clear that the medical workers' view of the current situation contrasts with the evidence provided by native residents who regularly visit THC. This is despite the fact that there are currently no significant discords between public health employees and residents. Both parties try to support peaceful interactions and do care about each other's well-being, but unresolved problems still cast a shadow over this picture.

The lack of direct discrimination in rural health centers still does not place the Indigenous patients on equal footing with non-Indigenous ones. A simple measurement of patient satisfaction, similar to those commonly used in social medicine studies, would not expose the difficulties faced by elderly patients and those who help them with interpretation, knowing that no one else is available to do so. The

evidence from this study shows that native inhabitants of Tenango cannot imagine a situation in which they would not be responsible for resolving language barriers. Indeed, Indigenous participants tended to direct complaints about language barriers towards themselves, their relatives or village authorities, but not towards the public health system. The belief among elderly Nahuatl speakers that the problem lies within themselves and their language has been reinforced by years of negligence towards rural communities in Sierra Norte, where sick persons often died without receiving treatment, solely due to the fact that they did not speak Spanish.

The mindset of medical workers is also influenced by the history of relations between public health services and Indigenous people. The very idea that medical personnel should have to adapt to the needs of Indigenous populations has long been alien to health policy makers in Mexico, who have preferred to simply wait for the next, bilingual and acculturated, generation to come of age. The problem here is not the absence of a patient-centered approach in health care, but the ubiquity and persistence of a *majority*-centered approach, or, from a historical perspective, of a white-Hispanic-centered approach.

Hence, it is understandable that medics who work in Indigenous communities in Mexico do not see a need to change long-standing strategies, especially when the number of people who speak little Spanish continues to decrease. This is revealed in self-comforting statements like, "all the community speaks Spanish", which show a striking similarity to what Davies (2001) wrote about Welsh. Moreover, a similar statement, "those who speak little Spanish are already old", conceals a ruthless idea that "they will die soon anyway", implying that soon there will be no need for interpretation at all.

However, the position based on the assumption that "all the community speaks Spanish" does not take into account the other side of the coin: that Nahuatl is still heard everywhere in Tenango and people as young as 35–40 years old still prefer Nahuatl to Spanish in their daily communication. As in the quote by Dr YL, "there are many persons who understand Spanish but don't speak it, so they always talk to you in their language". The point is not that the mentioned persons are *unable* to speak Spanish (there are very few monolingual Nahuatl speakers left in the village), but that they feel more comfortable to speak their first language – if they know that they have an interlocutor who will understand them. At this point, it becomes difficult to separate the practical aspect of having a Nahuatl-speaking doctor from the psychological aspect, the one that makes the patient feel at home while visiting the clinic.

Unlike medical workers, the majority of Tenango residents are convinced that health services would become more efficient if the Nahuatl language was used more widely. In private conversations, the younger generation of villagers took a more proactive position than the generation of their parents and grandparents,

who suffered the most from the lack of health services in Nahuatl, but could not imagine that this situation could be changed. However, while answering the survey, both younger and older residents expressed a clear demand for a greater presence of their language in health care. This may be a recent development, but it reflects a crucial change in the mentality of the community. In this way, both patients and their interpreters argue that their mother tongue does matter and cannot be a reason for unequal treatment in health care.

The evidence obtained in San Miguel Tenango highlights the deficiency of the utilitarian approach to communication in health care, according to which the responsibility of removing language barriers can be imposed on the patient. If the patients are not able to provide an *ad hoc* interpreter, their issues are simply left unnoticed by the health personnel. Not only does this contradict the patient-centered paradigm, but, in the case of this study, it also contributes to the centuries-old marginalization of Indigenous cultures and languages, undermining recent attempts to promote, revalorize and revitalize them.

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