



Chapitre d'actes

2023

Published version

Open Access

This is the published version of the publication, made available in accordance with the publisher's policy.

---

## Communicating in Emergency Settings: BabelDr or Telephone Interpreting?

---

de Graaf, Céline Lucie; Bouillon, Pierrette; Spechbach, Hervé

### How to cite

DE GRAAF, Céline Lucie, BOUILLON, Pierrette, SPECHBACH, Hervé. Communicating in Emergency Settings: BabelDr or Telephone Interpreting? In: Caring is Sharing – Exploiting the Value in Data for Health and Innovation. Proceedings of MIE 2023. Hägglund, M., Blusi, M., Bonacina, S., Nilsson, L., Cort Madsen, I., Pelayo, S., Moen, A., Benis, A., Lindsköld, L. & Gallos, P. (Ed.). Göteborg, Suède. [s.l.] : IOS Press, 2023. p. 813–814. (Studies in Health Technology and Informatics) doi: 10.3233/SHTI230272

This publication URL: <https://archive-ouverte.unige.ch/unige:169127>

Publication DOI: [10.3233/SHTI230272](https://doi.org/10.3233/SHTI230272)

# Communicating in Emergency Settings: BabelDr or Telephone Interpreting?

Céline DE GRAAF <sup>a,1</sup>, Pierrette BOUILLON <sup>a</sup> and Hervé SPECHBACH <sup>b</sup>

<sup>a</sup> Faculty of Translation and Interpreting, University of Geneva, Geneva, Switzerland

<sup>b</sup> Geneva University Hospitals, Department of Community Medicine, Geneva, Switzerland

**Abstract.** In this paper, we present a study comparing two mediums that can be used to communicate with allophone patients: a speech-enabled phraselator (BabelDr) and telephone interpreting. To identify the satisfaction provided by these mediums and their pros and cons, we conducted a crossover experiment where doctors and standardized patients completed anamneses and filled in surveys. Our findings suggest that telephone interpreting offers better overall satisfaction, but both mediums presented advantages. Consequently, we argue BabelDr and telephone interpreting can be complementary.

**Keywords.** Interpreting, BabelDr, emergency, communication, satisfaction

## 1. Introduction

In healthcare settings, good communication is necessary as it impacts positively patients' recovery and emotional health [1]. In emergency departments, telephone interpreting is often used as it provides access to multiple languages and is often the most cost-effective and efficient way of communicating [2]. Phraselators can also enable medical communication while ensuring translation quality and data confidentiality. At the Geneva University Hospitals (HUG), one can use BabelDr [3]: a phraselator created specifically for triage that allows doctors to interact orally and patients to give answers using pictographs.

The primary aim of the present study was to assess patients' and doctors' satisfaction when using a phraselator or calling an interpreter. Our results highlight the mediums' features playing a role in patients' and doctors' satisfaction. It is, to the best of our knowledge, the first research comparing telephone interpreters to a medical phraselator.

## 2. Method

The experiment was conducted at the HUG in March 2022. It included sixteen participants: eight French-speaking voluntary doctors from the outpatient emergency department, and eight English-speaking standardized patients. Participants were then grouped into eight pairs, each including a doctor and a patient, who had to roleplay two anamnesis scenarios (disease – medium) following a crossover design (Table 1).

---

<sup>1</sup> Corresponding author: Céline DE GRAAF, E-mail: celine.degraaf@unige.ch

Before each scenario, patients were standardized. After each scenario, all participants had to fill in a survey. They were asked to comment on the advantages and drawbacks of the medium that was used, and to assess their agreement with sentences evaluating their satisfaction for different aspects (see first column of Table 2) on a five-point Likert scale (1, completely disagree – 5 fully agree).

**Table 1.** Crossover design.

Pair	Scenario 1	Scenario 2
1 to 4	Appendicitis – BabelDr	Cholecystitis – Interpreter
5 to 8	Appendicitis – Interpreter	Cholecystitis – BabelDr

### 3. Results

Overall satisfaction with all aspects studied was higher with telephone interpreters than with BabelDr (mean value of  $3.87 \pm 1.05$ , against  $3.26 \pm 1.26$ ). Even though no medium obtained a perfect rating, interpreters were preferred over BabelDr for all aspects but confidentiality (Table 2).

**Table 2.** Results. Average of the five-point Likert scale values (AVG), and standard deviation (SD). N=16

Satisfaction aspect	BabelDr (AVG, SD)	Interpreting (AVG, SD)
Confidentiality	4.50 $\pm$ 0.73	4.44 $\pm$ 0.81
Patient-doctor's contact	2.62 $\pm$ 1.15	3.62 $\pm$ 1.02
Problem understanding	3.12 $\pm$ 1.09	3.69 $\pm$ 1.14
Quality of communication	2.81 $\pm$ 1.17	3.75 $\pm$ 1.06

We received 88 comments on BabelDr (39 positives, 49 negatives), and 68 on phone interpreting (38 positives, 30 negatives). BabelDr's advantages are its interface, with pictographs and written translations, and that it can be used everywhere at any time. Its main drawback is that questions are limited and cannot be asked or answered freely. Phone interpreting pros are the cultural comfort it provides and the freedom of speech it offers. The cons are mainly the unavailability and the lack of trust in the translations.

### 4. Discussion and Conclusions

Our results show that, even though no medium has obtained a perfect rating, interpreting is considered more satisfactory than BabelDr. However, based on our results, we argue a tool such as BabelDr could compensate for the lack of interpreters for emergencies or simple cases.

### References

- [1] Chan Y-F, Alagappan K, Rella J, Bentley S, Soto-Greene M, Martin M. Interpreter Services in Emergency Medicine. *The Journal of Emergency Medicine*. 2010 Feb;38(2):133–9, doi: 10.1016/j.jemermed.2007.09.045.
- [2] Squires A. Health translators and interpreters in national healthcare systems. In: Ji M, Taibi M, Crezee I.H.M, editors. *Multicultural Health Translation, Interpreting and Communication*. 1<sup>st</sup> ed. Routledge; 2019. p. 25-36, doi: 10.4324/9781351000390.
- [3] [BabelDr: spoken language translation of dialogues in the medical domain](https://babeldr.unige.ch/). Available from: <https://babeldr.unige.ch/>.