

# AI for Health Equity: Bridging the Language Gap: Exploring the Potential of AI Translations for Multicultural Communities

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## INTRODUCTION

Health crises and pandemics require rapid translations of critical information in multiple languages. This is often costly and can be hard to produce in less common languages, especially for charity organisation with limited budgets for professional translation services. Artificial intelligence presents a potential solution with its ability to generate quick translations in a wide array of languages; however, little is known about how non-professional, citizen translators can leverage AI for translations in health.

## OBJECTIVES

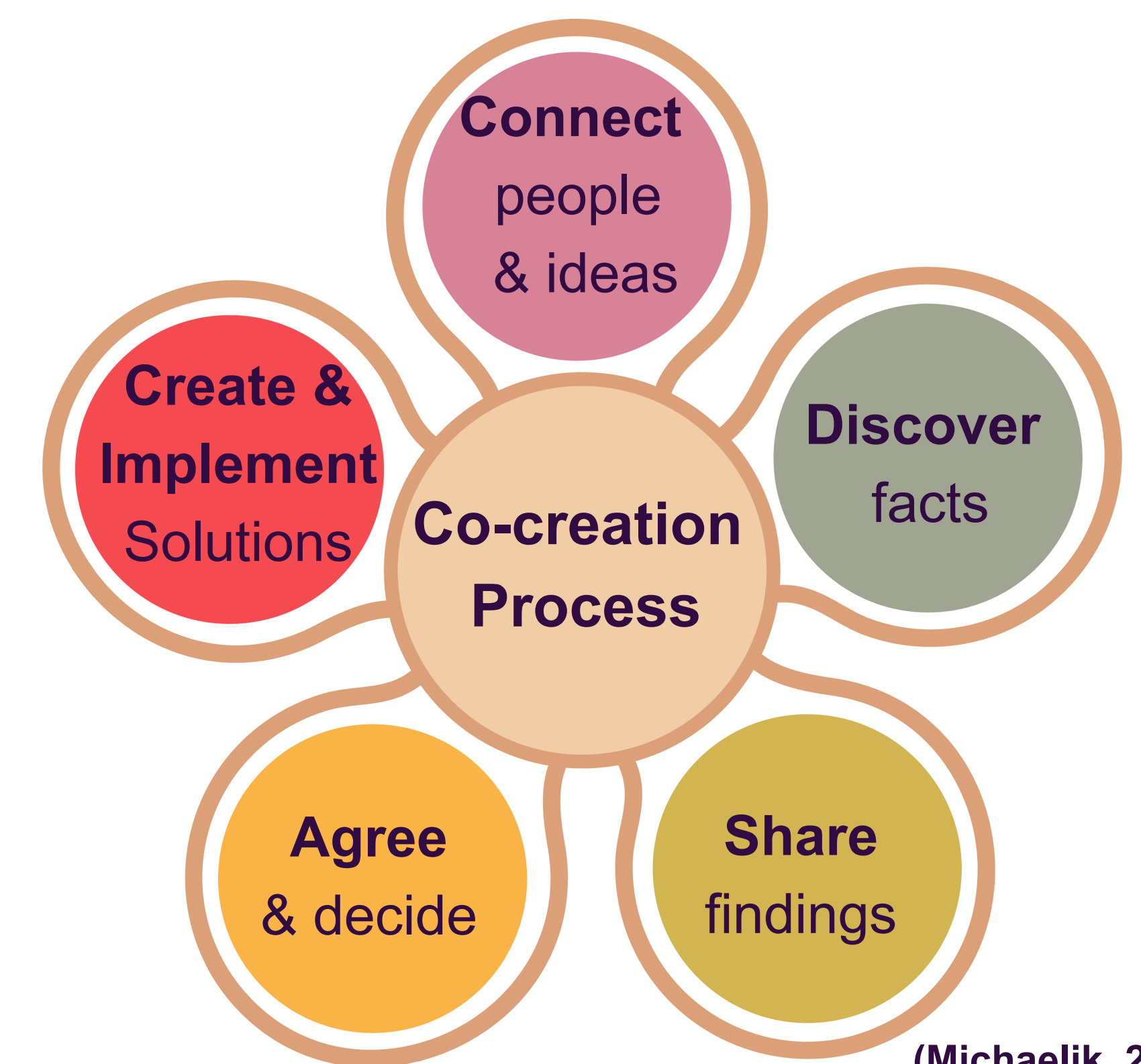
The aim of this research is to understand how AI translations by citizen translators might offer equitable, quality, evidence-based, consumer-centric resources.

This research also considered how we might leverage AI to address ethical and moral issues in balancing quality and urgent information for diverse populations.

## METHODOLOGY

Co-creation in collaboration with

- Children's Tumour Foundation Staff
- Multilingual Families
- Language Community Members
- Citizen Translators (University Students) in Australia and Hong Kong
- Series of workshops focusing on principles of audience profiling, health literacy, maximising translatability, prompt engineering



## RESULTS

### Student Reflections

"We used multiple AI tools simultaneously to cross-check outputs and accuracy of the data"

"I feel like it really prompts me to want to use it more, knowing that it could actually help patients. So, I would definitely use it more often even in my future career".

"We gained a further understanding of the process for translating with GenAI, and through developing our own translations, we gained the skill set to be able to do it again more accurately".

"I can see that translating with GenAI can positively affect a lot of people from other cultural backgrounds"

### Children's Tumour Foundation (CTF)

"The CTF is a small charitable organisation supporting Australians with the genetic condition Neurofibromatosis (NF). We've relied on family members, telephone interpreters and Google translate to support non-English speaking clients. We were also conscious that our info was only available in English. We were thrilled to participate in this project and grateful for the insights from the students and lecturers. We now feel confident to generate sources independently using AI in various languages. As a result we are a more responsive and inclusive service".  
(Meredith Franelli, Children's Tumour Foundation)

### Insights from Community

Out of 39 community members survey, they trusted the GenAI translations 2.43/5 and rated the comprehensibility as 2.7/5.

"It does contain a lot of scientific and academic words and contractions that are hard to make up... and a lot of numbers as well. So, I would trust this message"  
(Chinese Community Member).

"The translation seems to be unnatural for me but still comprehensible because it uses a lot of easier words" (Indonesian Community Member).

## CONCLUSION

GenAI made students aware of difficult to translate terms that they may have originally missed but did not necessarily save them as much time as expected. Strong bilingual and biliteracy skills were beneficial.

Community members held some trust in GenAI translations despite some issues with comprehensibility, perhaps due to the knowledge that the information was sourced from a trusted partner - the Children's Tumour Foundation.

## 什麼是神經纖維瘤病?

NF 會隨著不同的生命階段而有所變化。

我們之所以叫做兒童腫瘤基金會，是因為 NF 通常在兒童時期被診斷出來，但 NF 是一種終身性疾病，我們致力於支持並為所有患有 NF 的人尋找治療方法，不論年紀。



- 神經纖維瘤病 (NF) 是指一組複雜的遺傳疾病，它會導致皮下、神經以及體內腫瘤形成。每 2000 個新生兒中，就會有 1 個患者。換句話說，全球約有 400 萬人受到影響。
- NF 包括神經纖維瘤一型 (NF1) 和所有的神經鞘瘤症 (SWN)，包括 NF2 相關的神經鞘瘤症 (NF2) (舊稱神

## NEUROFIBROMATOSIS FACTSHEET



### WHAT IS NF?

Neurofibromatosis (NF) is a set of three complex genetic conditions that cause tumours to form on nerve cells throughout the body, including the brain and spine.

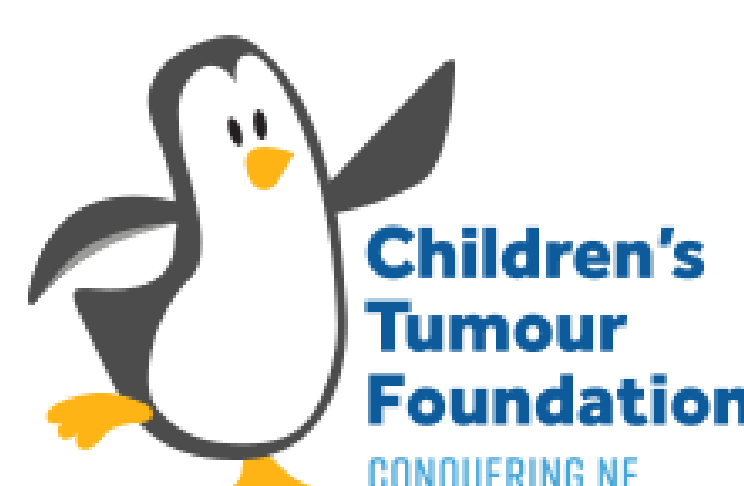
- Neurofibromatosis Type 1 (NF1)
- Neurofibromatosis Type 2 (NF2)
- Schwannomatosis

**NF can lead to** a range of significant health issues including deafness, blindness, paralysis, physical differences, bone abnormalities, cancer, learning difficulties and chronic pain.

**NF can affect anyone** regardless of age, ethnicity, gender or family history and causes tumours (known as neurofibromas) to grow around the body's nerve cells, including the spine and brain, under the surface of the skin or deep in the body.

**It is impossible to predict** how mildly or severely someone with NF will be affected and roughly half of all cases arise in families with no history of NF.

**THERE IS NO CURE AND TREATMENT OPTIONS ARE LIMITED.**



Scan to watch a video presentation

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