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Removing Language Barriers to Improve Equity in NHS Care: The Role of Real-Time AI-Assisted Spoken and Digital Translation

A White Paper Aligned to the NHS England Improvement Framework for Community Language Translation & Interpreting Services

Healthcare technology insights

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Executive Summary

Language barriers continue to remain a significant challenge across the NHS, with **1 million people in the UK unable to speak English well, or at all** (NHS England, 2025). This population faces systemic barriers to accessing, understanding and engaging with healthcare services, resulting in **poorer outcomes, increased risk, and inequitable experiences**.

For NHS executives, this presents not only a **clinical risk** but also a **strategic operational challenge**: inconsistent interpreting provision across Trusts, which leads to delays in care and increases missed appointments (DNAs), adding unnecessary costs.

This white paper demonstrates how **AI-assisted translation technologies**, supporting **over 100 spoken languages and over 100 digital/text languages**, can extend language support efficiently, complement human interpreters and support NHS Trusts in:

- Reducing barriers at the first point of contact
- Improving patient engagement and satisfaction
- Complying with governance and safety frameworks
- Enhancing equity of access
- Increasing operational efficiencies in high-volume communications

The approach aligns with the NHS Framework principles of **safety, equity, and digital enablement**, providing a **practical, evidence-informed pathway** for addressing a complex, high-volume challenge.

1. The Problem: Evidence from the NHS Framework

1.1 Scale and Demographics

The UK has a growing population of individuals with **Limited English Proficiency (LEP)**.

Key points include:

- **1 million people in the UK cannot speak English well or at all** (NHS England, 2025)
- Older adults (75+) with LEP are **twice as likely to report poor health**
- Only **6% of NHS staff report that written materials in other languages are consistently available**

These figures indicate a significant gap between population needs and current NHS provision. For executives, this translates into operational risks, resource pressures, and **inequitable patient experiences**.

1.2 Safety, Access, and Outcomes

Language barriers contribute to clinical and operational issues, such as:

- Misinterpretation of symptoms and instructions
- Medication errors, contribute an estimated **£98 million/year** in costs
- Delays in diagnostic testing and treatment
- Missed or delayed appointments

Even minor communication gaps can **cascade into clinical risk and operational inefficiency**, making this a strategic issue for leadership.

1.3 Human Story

A case cited in the NHS Framework demonstrates the real-world consequences:

A child from a Romanian-speaking family was referred for an MRI scan requiring general anaesthetic. Verbal interpretation was provided, but letters were sent only in English. The family did not understand fasting requirements, resulting in a delayed scan, a lost referral and ultimately the child's death.

This story underscores the **critical importance of timely, reliable translation** across both spoken and written interactions. It is a powerful reminder that language barriers are not abstract and can result in safety and operational risks.

1.4 Capacity Challenges

Current NHS interpreter provision is limited:

- Current spend on interpreters is **£75.5 million/year** and it is estimated that the NHS require **£250-300 million/year. That's a big gap to fill.**
- Uneven coverage: Some ICS regions report **fewer than 10% of primary care sites with language support**

- Rising demand due to:
    - Increasing population diversity
    - Growth in outpatient and community services
    - Expansion of digital and virtual care models

These factors illustrate that **relying solely on human interpreters is insufficient** for timely and equitable access, and within the NHS budget.

2. Why Interpreter Capacity Alone Cannot Meet System Needs

Even with skilled human interpreters, the system faces three fundamental constraints:

1. **Finite supply:** Rare or high-demand languages may have no available interpreters at critical moments
2. **Cost:** High per-hour fees make scaling coverage across all routine interactions financially challenging
3. **Operational delays:** Scheduling interpreters for routine or non-clinical interactions often slows patient access

The NHS Framework emphasises that while interpreters are essential for **clinical safety**, additional scalable solutions are required to **maintain timely, equitable communication**, particularly for high-volume or digital-first interactions.

3. AI-Assisted Translation as a Complementary Layer

AI-assisted translation technologies can provide a **complementary solution**, enabling NHS Trusts to extend language support while maintaining safety and governance standards. Our NetTranslate provides the following features.

3.1 Spoken Translation

- Supports **100+ languages**
- Enables **real-time, fluent, grammatically accurate two-way conversation**
- Integrates with telephone and contact centre channels
- Preserves **human relational communication**, allowing empathy, nuance, and clarity

3.2 Text and Digital Translation

- Supports **100+ languages** across SMS, secure messaging, web chat, online appointment systems, portals, and email
- Supports equitable access in digital-first services:

"As digital options expand, it is essential that people are not excluded if they do not speak or read English well." - NHS England Improvement Framework, 2025

3.3 Augmentation, Not Replacement

- Extends **human interpreter capacity** for routine, high-volume interactions
- Ensures human interpreters are available for **clinical consultations, safeguarding, consent, and emotionally sensitive communications**
- Reduces reliance on family or informal interpreters, **improving confidentiality and quality**

3.4 Example Use Cases

Channel	**Use Case**	**Benefit**
Appointment booking / reminders	Reduce DNAs, clarify instructions	Immediate access, automated support
Patient access lines	First-contact triage and information	Frees interpreters for clinical interactions
Community care follow-ups	Medication, visit coordination	Improves adherence, reduces errors
Webchat / portal messages	Digital access for non-English speakers	Increases engagement, equity in digital services
Email / written communications (non-clinical)	Comprehension and compliance	Reduces miscommunication, improves satisfaction
Voice / Webchat	24x7 Availability	Removes the need to book a translator, increasing available hours for contact

Note: Tools such as NetTranslate illustrate the **type of AI-assisted technology** that can deliver these capabilities in practices.

4. Alignment with NHS Framework Domains

Framework Domain	**How AI-Assisted Translation Supports It**
Leadership & Governance	Provides usage data for accountability, planning, and standardisation
Access & Barriers	Immediate communication at first contact reduces delays and disengagement

Framework Domain	How AI-Assisted Translation Supports It
Equity, Cultural Sensitivity & Rights	Spoken (100+) and digital (100+) language support ensures inclusive access
Digital Opportunities & Challenges	Responsible deployment in voice and text channels; allows escalation to human interpreters
Safety, Confidentiality & Consent	Maintains clinical safety by reserving interpreters for high-risk interactions

5. Operational and Financial Considerations

By complementing human interpreters, AI-assisted translation can:

- **Reduce interpreter dependency** for routine, non-clinical interactions
- **Improve operational efficiency:** fewer DNAs, faster triage, smoother patient pathways
- **Support compliance and audit:** usage can be tracked and reported
- **Enhance equity and inclusion:** aligning with Core20PLUS5 and ICS objectives

For executives, this represents a **practical, scalable, and cost-effective mechanism** to mitigate risk, improve efficiency, and meet NHS governance requirements.

6. Considerations for NHS Leadership

To address language barriers strategically, NHS Trusts and ICSs may consider **evaluating AI-assisted translation technologies** as a complementary layer to human interpreters. Key points include:

1. **Exploring technologies** that provide spoken and digital/text translation across a broad range of languages
2. **Monitoring impact metrics:** appointment attendance, patient engagement, interpreter workload
3. **Ensuring clinical escalation** for high-risk or sensitive interactions
4. **Integrating insights** into ICS strategies to promote equitable, timely access

Technologies such as NetTranslate **illustrate the potential** for AI-assisted translation to extend language support efficiently while maintaining compliance, without replacing human interpreters.

7. Conclusion

Language must not impede access, safety, or equity within the NHS. AI-assisted translation technologies, supporting **100+ spoken languages and 100+ digital/text languages**, provide a **complementary, scalable, and governance-aligned solution**:

- Augments human interpreters

- Extends timely access for routine communications
- Reduces risk of DNAs, errors, and disengagement
- Preserves capacity for high-risk clinical interactions
- Strengthens compliance with NHS standards and legal obligations

The goal is **not to replace human interpreters**, but to ensure all patients are **understood and included across spoken and digital interactions**, fulfilling NHS equity, safety, and governance imperatives.

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