

# INTERPRETER SERVICES IN WIDER HEALTHCARE

**PROVIDED BY:** MONASH HEALTH LIBRARY**DATE:** 23 JANUARY 2026

Please find following a summary of a literature search and relevant results. All articles can be provided in full - email [library@monashhealth.org](mailto:library@monashhealth.org) for a list of the articles you require.

## QUESTION

In health services or hospitals, what evidence supports the implementation of interpreter services at a service-wide level?

## RESULTS

### ONLINE RESOURCES

#### AUSTRALIAN GUIDELINES

Department of Health, Victoria. (2025). **Interim Language Service Policy**. [Link](#).

- This policy and its translations guidelines will help departmental staff and funded agencies plan and deliver language services.
- The policy and guidelines help ensure people with low English proficiency, or who use a form of sign (particularly Auslan), can take part in decision making.

The Royal Australian College of General Practitioners. (2019). **Guide for Clinicians Working with Interpreters in Healthcare Settings**. [Link](#).

- This Guide is intended to be a complementary resource to the Competency Standards Framework for Clinicians (the Framework)—Culturally responsive clinical practice: Working with people from migrant and refugee backgrounds—developed by the Migrant and Refugee Women’s Health Partnership (the Partnership).

#### UK GUIDELINES AND FRAMEWORKS

NHS England. (2025). **Improvement Framework: community language translation and interpreting services**. [Link](#).

- This framework is designed to support the provision of consistent, high-quality community language translation and interpreting services by the NHS to people with limited English proficiency.

- Community languages are defined as languages used by minority groups or communities where a majority language exists (for example, English in the UK).
- It should be used as a framework for action across the NHS, including by NHS trusts and integrated care boards (ICBs).

Public Health Scotland. (2020). **Interpreting, communication support and translation national policy.** [Link.](#)

- The purpose of this policy is to provide guidance on NHSScotland responsibilities to patients and carers who require support from interpreting or translation services. It will help to ensure that patients and carers have equal access to excellent patient care by helping staff to understand patients’ and service users’ healthcare needs. It will support staff to understand the interpreting and communication support they need to put in place to ensure that patients who do not speak or use English have equitable access to the health services they provide. This policy covers both interpreting and translation.

NHS England. (2018). **Guidance note: Commissioning Interpreting and Translating Services in Primary Care.** [Link.](#)

- This guidance aims to support local commissioners of primary care services when commissioning translation or interpreting services, or reviewing existing services. It was initially written with primary medical care services (GP surgeries) in mind but commissioners may find the contents applicable to other settings, such as other primary care settings or hospital sites.

### PEER-REVIEWED JOURNAL ARTICLES – MOST RECENT FIRST

Articles are grouped by theme:

- Benefits of interpreter services
- Implementation of interpreter services
- Interpreter perspectives
- Deaf and Heard-of-hearing experiences
- Support for marginalised groups
- Barriers in interpreter services

*Each article summary contains excerpts from the abstract and an online link.*

### BENEFITS OF INTERPRETER SERVICES

Yousaf, S., et al. (2025). **The crucial role of language interpretation services in patient safety and healthcare delivery.** *British Journal of Health Care Management*, 31(10). [Request full text.](#)

The NHS lacks adequate interpretation services, which poses a significant threat to patient safety for those with low levels of English language proficiency. Miscommunication, confidentiality breaches and clinical errors are common risks when trained interpreters are unavailable. This article argues that interpretation services should be a core element of the NHS patient safety agenda, rather than being limited to an equality, diversity and inclusion consideration. Policy recommendations and supporting evidence are provided, calling for urgent action to protect vulnerable patients from avoidable harm. Key proposals include the gold standard for interpretation services, which is an in-

house, multidisciplinary model where qualified interpreters receive a minimum of 100 hours of specific healthcare-related training. This standard prioritises face-to-face interaction to ensure accurate communication and patient safety. Safe, effective care cannot be achieved without standardised interpretation support. By integrating interpretation services into patient safety priorities, the NHS can uphold its commitment to delivering safe, dignified and equitable care for all patients.

Torresdey, P., et al. (2024). **Patient Time Spent With Professional Medical Interpreters and the Care Experiences of Patients With Limited English Proficiency**. *Journal of primary care & community health*, 15(2024): 21501319241264168. [Link to full text.](#)

More time spent with interpreters may support clinician-patient communication for patients with limited English proficiency (LEP), especially when interpreter support before and after clinical encounters is considered. We assessed whether more time spent with interpreters is associated with better patient-reported experiences of clinician-patient communication and interpreter support among patients with LEP. Longer duration of time spent with an interpreter was associated with better clinician-patient communication for patients with LEP when time spent with an interpreter before and after the clinician encounter is considered. Policymakers should consider reimbursing health care organizations for time interpreters spend providing patient navigation and other support beyond clinical encounters.

Bertram, S. C., et al. (2024). **Early use of professional interpreters improves trauma outcomes: Results of a single-center retrospective study**. *Surgery Open Science*, 21(2024): 52-57. [Link to full text.](#)

Patients with limited English proficiency (LEP) experience reduced pain assessment and treatment, less comprehensive physical exams, and fewer explanations of the next steps in care. These disparities persist in hospitals with staffed professional interpreters, raising questions about interpreter access and the impact on outcomes. A retrospective review of 1133 trauma activations at a single center Level 1 Trauma Center in 2021-2022 was conducted. There is no difference in LOS between LEP trauma patients who used an interpreter and EP patients, suggesting that early use of an interpreter may improve the length of stay in LEP trauma patients.

Heath, M., et al. (2023). **Interpreter services and effect on healthcare - a systematic review of the impact of different types of interpreters on patient outcome**. *Journal of Migration and Health*, 7(2023): 100162. [Link to full text.](#)

Utilization of interpreters to facilitate communication between health care providers and non-native speaking patients is essential to provide the best possible quality of care. Yet use and policy on the subject vary widely, as does knowledge on the effect of different types of interpreters. This paper systematically reviews the literature on use of interpreters in the medical setting to evaluate their effects on the quality of care. In-person Professional interpreter is the interpreter type resulting in greatest satisfaction and best communication outcome for the patients. This review is limited by most data originating from one country, interpretation from mainly Spanish to English and in one cultural setting.

Kwan, M., et al. (2023). **Professional Interpreter Services and the Impact on Hospital Care Outcomes: An Integrative Review of Literature.** *International journal of environmental research and public health*, 20(6). [Link to full text.](#)

Migration patterns have rapidly changed in Australia and elsewhere, which have contributed to increasingly culturally and linguistically diverse societies. This requires healthcare sectors to provide professional interpreter services for patients with a language barrier to eliminate healthcare disparities. This integrative review aimed to investigate the impact of professional interpreter services on hospital care outcomes and the associated cost of service provision. Communication quality, hospital care outcomes and hospital costs were the three main themes identified. Closing the language gap should be a primary consideration to prevent adverse events that affect patient safety and the standard of care in hospitals. The findings of this review indicate the provision of professional interpreter services can enhance hospital care for linguistically diverse patients by improving patient-provider communication. To gain insight into the changing patterns on the outcomes of medical care, further research requires efforts by the hospital administrative system to document complete records of service usage.

Latif, Z., et al. (2022). **Top Ten Tips Palliative Care Clinicians Should Know About Working with Medical Interpreters.** *Journal of palliative medicine*, 25(9): 1426-1430. [Request full text.](#)

Medical interpreters are the primary facilitators of effective communication between clinical providers and patients with limited English proficiency. They can assist in managing complex meetings in which patients, families, and clinicians decide on next steps in care. Palliative care (PC) clinicians inherently work in an interdisciplinary manner, which enables them to learn and model the effective integration of medical interpreters into the PC team. Rather than using an interpreter as a language tool, this article encourages PC clinicians to cultivate a partnership with the interpreter as a team member. We describe 10 tips for effective partnering with interpreters: the importance of including the interpreters in pre-encounter huddles and post-encounter debriefs, agreeing on strategies for interpreting "untranslatable" words and managing the encounters, using the "teach back" method to ensure understanding, acknowledging interpreters as cultural mediators, understanding the potential emotional impact of family meetings on interpreters, and enhancing follow-up with the PC team by providing contact information for PC staff to patients.

Theys, L., et al. (2022). **Doctors, Patients, and Interpreters' Views on the Co-Construction of Empathic Communication in Interpreter-Mediated Consultations: A Qualitative Content Analysis of Video Stimulated Recall Interviews.** *Qualitative health research*, 32(12): 1843-1857. [Request full text.](#)

Doctors and patients rely on verbal and nonverbal resources to co-construct clinical empathy. In language-discordant consultations, interpreters' communicative actions might compromise this process. We aim to explore doctors, patients, and professional interpreters' perspectives on their own and others' actions during their empathic interaction in interpreter-mediated consultations (IMCs). Doctors and patients found ways to connect with each other on the level of empathic communication (EC) that is not limited by interpreters' alterations or disengaged demeanor. Some aspects of doctors and interpreters' professional practices might jeopardize the co-construction of EC in IMCs. The co-construction of EC in IMCs is not only subject to participants' communicative (inter)actions, but also to organizational and subjective factors. These results provide evidence of the transactional process between the behavioral, cognitive, and affective components of clinical empathy in the context of IMCs.

de Crescenzo, C., et al. (2022). **Increasing Frequency of Interpreting Services is Associated With Shorter Peri-operative Length of Stay.** *The Journal of surgical research*, 270(k7b, 0376340): 178-186. [Link to full text.](#)

Patients with limited English proficiency have barriers to accessing care. Rather than a binary use or no use, this study uses granular data on frequency of interpreting services to determine if this frequency is associated with differences in peri-operative length of stay for patients with limited English proficiency. More frequent interpreting services per day during peri-operative admission are associated with shorter length of stay in adjusted analysis. The findings merit further study in an intervention to increase use of interpreting services for surgical patients with limited English proficiency to study the impact of increased frequency of culturally competent care.

## IMPLEMENTATION OF INTERPRETER SERVICES

Chauhan, A., et al. (2025). **Codesigning the iCanPlan Program to promote advance care planning among consumers from ethnic minority backgrounds in cancer care.** *Supportive Care in Cancer*, 33(12): 1111. [Link to full text.](#)

Collaboration between medical interpreters and clinicians is crucial in conducting advance care planning (ACP) with people from ethnic minority backgrounds affected by cancer who require language support; however, limited opportunities exist that foster this collaboration. We report here the co-design of a program that fosters interprofessional collaboration between interpreters and clinicians in ACP with people from ethnic minority backgrounds affected by cancer. The co-design team drew on available evidence and feasibility challenges to identify approaches to collectively create opportunities for interprofessional collaboration between clinicians and interpreters. This resulted in the co-designed iCanPlan Program which comprises (1) a didactic interprofessional education in ACP, and (2) facilitated feedback for clinicians and interpreters during practice by an attending health care staff member. Conclusion(s): The iCanPlan Program is a first of its kind program co-designed with stakeholders to promote collaboration between interpreters and cancer clinicians. Collaboration with local cancer service leaders and staff will be required to implement the program into practice.

Eltayeb, N., et al. (2025). **Evaluating utilization and satisfaction of a pilot video-interpretation service in the emergency department.** *CJEM*, 27(8): 643-652. [Link to full text.](#)

Language barriers in healthcare settings have been associated with medical errors, increased resource utilization, re-admissions, poor health outcomes, and decreased patient satisfaction. There is considerable variability in how interpretation services are delivered in emergency departments (ED) and healthcare institutions across Canada. This study is one of the first to examine healthcare providers' utilization and satisfaction of these services. This study suggests that healthcare providers were more satisfied with video-based interpretation services and utilized it more often when compared to the phone-based interpretation service available in the ED. This study will help guide effective ED interpretation programs and promote equitable outcomes for patients with limited English proficiency across Canada.

Sharfuddin, N., et al. (2024). **Advancing language concordant care: a multimodal medical interpretation intervention.** *BMJ open quality*, 13(1). [Link to full text.](#)

Ensuring language concordant care through medical interpretation services (MIS) allows for accurate information sharing and positive healthcare experiences. The COVID-19 pandemic led to a regional halt of in-person interpreters, leaving only digital MIS options, such as phone and video. Due to longstanding institutional practices, and lack of accessibility and awareness of these options, digital MIS remained underused. A Multimodal Medical Interpretation Intervention (MMII) was developed and piloted to increase digital MIS usage by 25% over an 18-month intervention period for patients with limited English proficiency. Digital MIS was used consistently from the beginning of the COVID-19 pandemic (March 2020) and over the subsequent 18 months. The total number of minutes of MIS use per month increased by 44% following implementation of our intervention. Healthcare providers indicated that digital MIS was vital in facilitating transparent communication with patients, and the MMII ensured awareness of and accessibility to the various MIS modalities. Implementation of the MMII allowed for an increase in digital MIS use in a hospital setting. Providing digital MIS access, education and training is a means to advance patient-centred and equitable care by improving accuracy of clinical assessments and communication.

Behairy, M., et al. (2023). **Increasing Language Interpreter Services Use and Documentation: A Quality Improvement Project.** *Journal for healthcare quality : official publication of the National Association for Healthcare Quality*, 45(1): 19-26. [Request full text.](#)

Based on the Civil Rights Act of 1964, hospitals receiving funding from the Department of Human and Health Services must ensure adequate language assistance via a qualified interpreter for Limited English Proficiency (LEP) patients. Despite availability at our institution, official interpreter services were underutilized with inconsistent documentation of use. Baseline data over a 6-week period revealed a median of 43% of LEP patients reported use of official interpreter services, with a median of 0% documentation of use. We aimed to improve both over a 3-month period. After multiple interventions, specifically noted after intervention period #2, improvement of official interpreter service use and documentation were identified in all inpatient units.

Lor, M. and A. M. Hammes (2023). **Development and pilot testing a communication simulation training for interpreters to improve pain communication between primary care providers and patients with limited English proficiency.** *PEC Innovation*, 3(2023): 100217. [Link to full text.](#)

Health disparities in patients with limited English proficiency are worsened due to scarcity of interpreter-focused communication interventions and trainings. To develop a high-fidelity simulation training for interpreters to use a novel pain communication tool, i.e., Pain Assessment Information Visualization (InfoViz) Tool, and evaluate interpreters' implementation fidelity during a pilot study. The communication simulation training for interpreters is feasible, acceptable, and can ensure accurate use of the Pain InfoViz Tool during provider-patient communication. Innovation: We applied a InfoViz Tool in pain simulations and extended high-fidelity training to medical interpreting.

Morris, D., et al. (2021). **Factors associated with utilisation of health care interpreting services and the impact on length of stay and cost: A retrospective cohort analysis of audit data.** *Health promotion journal of Australia : official journal of Australian Association of Health Promotion Professionals*, 32(3): 425-432. [Link to full text.](#)

Utilisation of professional health care interpreting services improves the quality and safety of health care among patients with limited English proficiency. Health care interpreter service utilisation is inconsistent and suboptimal in Australia. Evidence of the impact of interpreter service use on patient

outcomes and costs is limited. This study aimed to identify the proportion of hospitalised patients who received a health care interpreter during admission and describe the characteristics and outcomes for those requiring interpreter services. Approximately half of those who required an interpreter received one during their hospital stay. Further investigation is needed to establish whether regular clinical audits contributed to this rate of utilisation, which is higher than reported elsewhere in the literature. A detailed understanding of regional interpreting service use with evidence from the literature provides compelling and contextual evidence for change, at the level at which the service is delivered. This supports meaningful action to increase utilisation, and improve the quality and safety of health care delivered to patients with limited English proficiency.

## INTERPRETER PERSPECTIVES

Wishlade, T., et al. (2025). **Invisible labour: A qualitative exploration of the professional identity of interpreters working in UK maternity care settings.** *Health*, (2025): 13634593251393084. [Link to full text.](#)

The work of professional interpreters is frequently misunderstood and mistrusted, leading to its underuse across healthcare settings. In UK maternity services, this failing contributes to the higher mortality and morbidity of women with limited or no English proficiency. Our study explored interpreters' professional identities and their contribution to the delivery of care in maternity services. Face-to-face interviews with a purposive sample of professional interpreters working in maternity settings were conducted and data analysed using a version of Foucauldian discourse analysis. Our interpretation of the data is that discourses of 'women's work' were used in constructing the interpreters' professional identity. Their daily working practice included affective, social and supportive behaviours; however, their subject positions were unrecognised in the voluntary professional codes of conduct for interpreting practice and their labour remained largely invisible and under-valued. Recognising professional interpreters' identity as invisible labourers suggests that they negotiate biomedical understandings of healthcare interpretation work held by healthcare professionals and women. It allows a more nuanced understanding of interpreters' practice within maternity settings. Making their work visible offers greater opportunity for regulation, monitoring and evaluation, resulting in greater confidence in its quality and promoting increased uptake.

Goler, E. and J. W. Mack (2024). **Ethical Tensions in the Role of the Medical Interpreter.** *Narrative inquiry in bioethics*, 14(3): 189-193. [Request full text.](#)

Medical interpreters play central roles in the care of patients with limited English proficiency, many of whom are vulnerable to challenges in care. Yet ethical tensions arise in the care of these patients, including tensions between translating with fidelity to spoken words versus ensuring understanding; supporting values of beneficence versus autonomy; reacting with passivity versus advocacy; and interacting with patients with neutrality versus compassion. These tensions reflect the commitment of interpreters featured in narratives to providing patient-centered care through challenging circumstances. Yet interpreters are often poorly supported, with low wages, multiple stressors, and vicarious trauma as a result of witnessing difficult medical encounters and interpreting during them in the first person. Interpreters should be recognized as valued, integral care team members who recognize patients as individuals deserving of the best care.

Gumer, J. M. (2024). **Giving Voice to the Voiceless-Stories of Medical Interpreters.** *Narrative inquiry in bioethics*, 14(3): 183-187. [Request full text.](#)

Medical interpreters are indispensable in healthcare, breaking down language barriers to restore autonomy to patients with Limited English Proficiency (LEP). By facilitating clear communication, they enable these patients to understand and make informed choices about their treatment options. However, their role extends beyond translation; medical interpreters also advocate for LEP patients within a healthcare system that can often be unjust. This advocacy can expose interpreters to the very inequities and challenges they strive to overcome on behalf of LEP patients, adversely affecting their own health and well-being. The narratives explored here shed light on these experiences, highlighting the need for systemic changes. By understanding these stories, we can better advocate for reforms that support and value medical interpreters, ultimately improving the health and well-being of both interpreters and the communities they serve.

James, H. et al. (2024). **Healthcare interpreters and difficult conversations: a survey.** *BMJ Supportive and Palliative Care*, 14(e1): E1049-E1059. [Request full text.](#)

The aims of this survey of healthcare interpreters were to assess the impacts of difficult conversations such as discussions involving explanation of a serious diagnosis, goals-of-care or death or dying and to discover interpreters' opinions on ways to improve these conversations. Interpreters surveyed were not experiencing burn-out or STS and had moderate or high CS scores. Further training and evidence-based guidelines for medical staff and healthcare interpreters in the facilitation of difficult conversations; prebriefing and debriefing for interpreters; further research to delineate the characteristics that predispose to compassion fatigue.

Allar, B. G., et al. (2024). **A Conduit for a Culturally Competent Consent: Medical Interpreters' Perspectives on Surgical Informed Consent Discussions.** *Annals of Surgery*, 280(1): 66-74. [Link to full text.](#)

To understand medical interpreters' perspectives on surgical informed consent discussions and provide feedback for surgeons on improving these conversations. Informed consent is a critical component of patient-centered surgical decision-making. For patients with limited English proficiency, this conversation may be less thorough, even with a medical interpreter, leaving patients with an inadequate understanding of their diagnosis or treatment options. Experienced interpreters highlighted multiple factors associated with effective and culturally tailored informed consent discussions. Surgeons should recognize interpreters' critical and complex roles, be cognizant of cultural variations among patients with limited English proficiency, and improve interpersonal and communication skills to facilitate effective understanding.

Cho, J. (2023). **Interpreters as Translation Machines: Telephone Interpreting Challenges as Awareness Problems.** *Qualitative health research*, 33(12): 1037-1048. [Link to full text.](#)

Telehealth has been widely adopted during the COVID-19 pandemic, and this article examines challenges faced by telephone interpreters in working with healthcare providers in the context of the Australian healthcare system. Based on one-on-one interviews with 67 healthcare interpreters in Australia, it explores various elements which affect communication processes in telephone interpreting and interpreters' views on healthcare providers' abilities to collaborate with interpreters. Data analysis indicates that telephone interpreting is often affected by a lack of briefing, poor acoustics and the absence of visual cues. While these factors pose significant challenges to telephone interpreters, a provider's tendency to see interpreters as 'translation machines' was perceived as a deeper underlying problem by the interpreters. The mechanistic

approaches to interpreting among healthcare providers pose barriers to interpreter-provider collaboration and exacerbate communication problems caused by the external elements in telephone-interpreted encounters. The article calls for urgent need to raise awareness of interpreting among healthcare providers as a key to ensuring desirable health outcomes for patients from minority backgrounds.

Hancox, J. A., et al. (2023). **The emotional effects on professional interpreters of interpreting palliative care conversations for adult patients: A rapid review.** *Palliative medicine*, 37(7): 931-946. [Link to full text.](#)

Professional interpreters working in palliative contexts improve patient care. Whilst literature identifies psychological distress in other healthcare professionals, research into emotional effects on professional interpreters in this highly emotive setting is limited. Isolating emotional responses may enable targeted interventions to enhance interpreter use and improve wellbeing. Timely evidence is needed to urgently familiarise the profession with issues faced by these valuable colleagues, to affect practice. Professional interpreters experience myriad emotional responses to palliative conversations. Role clarity, collaborative working and formal training may alleviate negative effects.

Latif, Z., et al. (2023). **Experiences of Medical Interpreters During Palliative Care Encounters With Limited English Proficiency Patients: A Qualitative Study.** *Journal of palliative medicine*, 26(6): 784-789. [Link to full text.](#)

There are many challenges in communication and cultural barriers for patients with limited English proficiency (LEP) who suffer from serious illnesses. Palliative care utilization among this population remains limited and the experiences of medical interpreters during palliative care encounters remain understudied. Methods: We conducted semistructured video interviews with interpreters working at an academic medical center. Interview questions explored interpreters' observations and experiences during palliative care encounters with LEP patients. We performed thematic analysis of the interview contents. Results: Our study included 20 interpreters who interpret in 9 languages with a mean experience of 16.3 years. We identified four themes from the interviews that shed light on the challenges of incorporating palliative care into the care of patients with LEP: (1) lack of a verbatim interpretation for the term "palliative care," (2) poor patient understanding of their treatment goals, (3) suboptimal timing of palliative care involvement, and (4) fears and misconceptions related to palliative care. Owing to challenges in word choice, the timing of palliative care involvement, and poor understanding of palliative care, interpreters observed that many patients with LEP declined palliative care involvement in their treatment plan. Conclusions: In this study, we identified several actionable barriers interpreters noted to incorporating palliative care into care of patients with LEP. Interventions directed toward providing LEP patients with standardized culturally appropriate information on palliative care are needed.

## DEAF AND HARD-OF-HEARING EXPERIENCES

Parmar, B., et al. (2025). **"I always feel like I'm the first deaf person they have ever met:" Deaf Awareness, Accessibility and Communication in the United Kingdom's National Health Service (NHS): How can we do better?.** *PLoS ONE*, 20(5): e0322850. [Link to full text.](#)

Barriers to communication significantly reduce access to health services for people with deafness or hearing loss (PDHL). These barriers contribute to reduced healthcare-seeking behaviour, poorer access to health information, and adverse health outcomes. In response, a multidisciplinary working

group of patients, clinicians, researchers, and charity representatives was established to investigate accessibility, communication, and deaf awareness within the United Kingdom's (UK) National Health Service (NHS). This study presents the largest UK-wide dataset of its kind, and findings highlight the widespread non-compliance with the legally mandated Accessible Information Standards (AIS) within NHS services. The communication barriers identified in this study have significant and long-term implications for the well-being of PDHL patients. Utilising these findings, our working group has developed a set of 'Recommendations For Change' to improve deaf awareness and effective communication across the NHS.

Rogers, K. D., et al. (2025). **What are Deaf sign language users' experiences as patients in healthcare services? A scoping review.** *PLOS global public health*, 5(2): e0003535. [Link to full text.](#)

Deaf people who use a signed language experience poorer physical and mental health outcomes and inequalities in access and delivery of health services., OBJECTIVES: A scoping review was conducted to identify and synthesise current knowledge on the perspectives of Deaf people and their experience of healthcare. The review uniquely focused on data generated from Deaf people regarding their experience, rather than third party commentary. It confirmed a less than optimal Deaf patient experience, clinical impacts of poor experience, and negative patient and healthcare systems outcomes. This supports the case for a reliable and valid measure in a signed language to capture Deaf patients' experience in healthcare.

Hulme, C., et al. (2023). **Cultural competence in NHS hearing aid clinics: a mixed-methods case study of services for Deaf British sign language users in the UK.** *BMC Health Services Research*, 23(1): 1440. [Link to full text.](#)

This study identified and explored how National Health Service (NHS) hearing aid clinics address cultural competence concerning Deaf British Sign Language (BSL) users. This was approached by (i) investigating how organisational processes meet the needs of Deaf signers from a hospital and hearing aid clinic perspective, (ii) analysing policies and guidelines to investigate if they equip practitioners to meet the needs of Deaf signers and (iii) exploring with practitioners who work in hearing aid clinics about their experiences of working with Deaf signers. This is the first study that explores cultural competence of hearing aid clinics and its staff concerning Deaf signers in the UK. The results show both clinics require development to become an effective provider for culturally Deaf signers. Examples of how to design culturally competent practices have been provided to assist hearing aid clinics. The findings may be applicable to other underrepresented groups who are not typical users of conventional, acoustic hearing aids provided by the NHS.

## SUPPORT FOR MARGINALISED GROUPS

Biggs, L. J., et al. (2025). **Conversations about stillbirth prevention during pregnancy care from the perspectives of recent parents of refugee and migrant backgrounds, health professionals, and interpreters: A qualitative study.** *Women's Health*, 21(2025): 17455057251365726. [Link to full text.](#)

Socio-economic disparities in stillbirth persist in Australia and other high-income countries. Despite increased attention to disparities in perinatal outcomes, including stillbirth, very little is known about the way conversations about stillbirth prevention are occurring within pregnancy care. Understand how conversations about stillbirth prevention are experienced by parents of refugee and migrant backgrounds, interpreters, and healthcare professionals within public maternity services in Victoria and South Australia. Investment to make culturally safe pregnancy care possible

for women and families of refugee and migrant backgrounds is integral to reducing preventable stillbirths.

Leonardo, J., et al. (2025). **A qualitative study exploring the use of interpreters in a healthcare setting for children and young people seeking asylum and refugees.** *BMC Health Services Research*, 25(1): 1547. [Link to full text.](#)

Children and Young People Seeking Asylum and Refugees (CYPSAR) are increasing in number in the UK and globally. CYPSAR have many vulnerabilities which affect access to healthcare, including an almost universal requirement for language interpretation in healthcare settings. Current UK guidelines recommend in-person interpreters, but, in practice, remote interpreters are often used for pragmatic reasons. The key themes identified include both the positive and negative roles of interpreters in the development of patient-professional relationships, and recommendations for mitigators in this context. The significance of the interpreters role as both cultural and linguistic was discussed, as was the influence of patient age and trauma (patients' own, and vicarious trauma for interpreters). Despite a lack of formal training, participants felt competent in using remote interpreters and that remote interpretation is generally acceptable when providing care to CYPSAR, albeit with some caveats and dependent on context., CONCLUSIONS: This work provides evidence for how best to address language barriers in healthcare provision to CYPSAR. We make recommendations to optimise effective interpretation in consultations with CYPSAR, including that provision is made for both remote and in-person interpretation.

Santos, C. A. K., et al. (2025). **Informed consent processes with First Nations peoples undergoing surgery or invasive procedures: a scoping review.** *BMC Medical Ethics*, 26(1): 121. [Link to full text.](#)

Informed consent is a cornerstone of medical practice, however, is not always ethically obtained. For First Nations people, this can be hindered by different worldviews and health paradigms. Although best practice entails consideration of patient's cultural beliefs and needs, the extent to which informed consent is adequately obtained from First Nations patients is unknown. We aimed to conduct a scoping review to map and analyse informed consent processes with First Nations peoples in Australia, New Zealand and North America who are undergoing surgery or an invasive medical procedure. Processes reported failed to address all the considerations stated in the respective guidelines. Participants reported feeling coerced due to racism and power imbalances. Physicians tended to prioritise what they thought was better over patient's cultural values and protocols. Inadequate processes resulted in fear, disengagement of health services and negative impact on wellbeing. Engagement of professional interpreters, use of diagrams and workforce training that fosters reflective practice were found to enhance informed consent. Conclusion(s): Evidence suggests that consent forms are often signed by patients who are not fully informed. For First Nations people, this is aggravated by language barriers, culturally different understanding of health and racism leading to coercion. Better assessment of informed consent processes with First Nations people, training and ongoing quality improvement are required to identify and address gaps. Partnership with First Nations people is required to enhance current guidelines and to develop strategies to ensure true informed consent.

Sims, M., et al. (2025). **Language as a pillar of cultural safety: evaluating hospital-based healthcare workers' knowledge of First Nations languages and interpreter services in East Arnhem Land, Australia.** *BMC Health Services Research*, 26(51). [Link to full text.](#)

Communication is a key determinant of health, yet in Australia's Northern Territory (NT), First Nations language speakers usually receive medical care in English. The NT is a region of exceptional language diversity and vitality, with approximately 50 distinct First Nations languages spoken. At

Gove District Hospital in East Arnhem Land, NT, 91% of First Nations peoples primarily speak an ancestral language, chiefly Yolngu Matha, with a smaller proportion speaking Anindilyakwa, Burarra and others. Many would benefit from access to an interpreter during healthcare encounters. This study aimed to assess healthcare provider knowledge of local languages, and their use of professional interpreters. Findings reveal substantial gaps in linguistic knowledge and interpreter utilisation in a region of major language diversity. Addressing these issues requires systemic and individual change, including accurate language documentation in health records, employing interpreters, and intercultural communication training. Recognising and respecting patients' first languages is central to culturally safe care, and essential for improving health equity for First Nations peoples.

Uwandu-uzoma, A. C., et al. (2025). **Asylum seekers' experiences of healthcare interpretation and translation services in the United Kingdom: a phenomenological study.** *Critical Public Health*, 35(1): 2579373. [Link to full text.](#)

People seeking asylum can experience poorer health outcomes than the general population and speak diverse languages which can create barriers when accessing health services. They require access to good quality interpretation and translation services to prevent an exacerbation of their poor health. This study aimed to understand how asylum seekers' living in the UK experience interpretation and translation services when accessing healthcare. Our findings highlight that asylum seekers were not satisfied with the quality of interpretation and translation services when accessing healthcare services in the UK. Service commissioners need to invest in high-quality and adequate interpretation and translation services to improve the experiences of asylum seekers while accessing healthcare services in the UK. For policy makers and service commissioners, we recommend prioritizing the training of interpreters in medical terminology, with knowledge of various dialects, and provision of written materials in participants languages. This includes ensuring language support is available for patients attempting to make initial contact with health services as well as people attending NHS appointments.

Arya, A. N., et al. (2024). **Medical Interpreting Services for Refugees in Canada: Current State of Practice and Considerations in Promoting this Essential Human Right for All.** *International journal of environmental research and public health*, 21(5): 588. [Link to full text.](#)

Language barriers, specifically among refugees, pose significant challenges to delivering quality healthcare in Canada. While the COVID-19 pandemic accelerated the emergence and development of innovative alternatives such as telephone-based and video-conferencing medical interpreting services and AI tools, access remains uneven across Canada. This comprehensive analysis highlights the absence of a cohesive national strategy, reflected in diverse funding models employed across provinces and territories, with gaps and disparities in access to medical interpreting services. Advocating for medical interpreting, both as a moral imperative and a prudent investment, this article draws from human rights principles and ethical considerations, justified in national and international guidelines, charters, codes and regulations. Substantiated by a cost-benefit analysis, it emphasizes that medical interpreting enhances healthcare quality and preserves patient autonomy. Additionally, this article illuminates decision-making processes for utilizing interpreting services; recognizing the pivotal roles of clinicians, interpreters, patients and caregivers within the care circle; appreciating intersectional considerations such as gender, culture and age, underscoring the importance of a collaborative approach. Finally, it provides recommendations at provider, organizational and system levels to ensure equitable access to this right and to promote the health and well-being of refugees and other individuals facing language barriers within Canada's healthcare system.

Ralph, A. P., et al. (2023). **Improving outcomes for hospitalised First Nations peoples through greater cultural safety and better communication: the Communicate Study Partnership study protocol.** *Implementation Science*, 18(1): 23. [Link to full text.](#)

The Communicate Study is a partnership project which aims to transform the culture of healthcare systems to achieve excellence in culturally safe care for First Nations people. It responds to the ongoing impact of colonisation which results in First Nations peoples experiencing adverse outcomes of hospitalisation in Australia's Northern Territory. In this setting, the majority of healthcare users are First Nations peoples, but the majority of healthcare providers are not. Our hypotheses are that strategies to ensure cultural safety can be effectively taught, systems can become culturally safe and that the provision of culturally safe healthcare in first languages will improve experiences and outcomes of hospitalisation. The intervention components are innovative, sustainable and have been successfully piloted. Refinement and scale-up through this project have the potential to transform First Nations patients' experiences of care and health outcomes.

Tribe, R. and K. Thompson (2022). **Working with interpreters when working with forced migrants in mental health.** *International Review of Psychiatry*, 34(6): 613-621. [Link to full text.](#)

281 million people were recorded as having migrated across national borders by the United Nations in 2021, this equates to approximately 3.6 percent of the world's population. Forced migrants/refugees account for 12 per cent of all international migrants. A percentage of these people will not speak the language of their new country fluently. If they are to access and utilize mental health services, they will require access to an interpreter. Working effectively with interpreters should be a skill in the repertoire of every clinician. This is to ensure that equal opportunities are upheld and that certain groups (including forced migrants) are not denied access to mental health services. Interpreters may also assist with teaching clinicians about diverse cultural views surrounding mental health and well-being. They may also advise on idioms of distress, cultural meanings and expression of emotional problems across cultures, explanatory health models and contextual factors which may help extend the repertoire of clinicians. The guidelines cover key recommendations for practice, booking and finding an interpreter, preparation before the consultation/meeting, practical considerations, preparation with the interpreter, during the meeting/consultation, issues to address after the meeting, written translations, psychometric testing, working by telephone or online and other issues to consider when working with an interpreter. Commissioners of health services need to ensure that there are clear pathways to support for all members of their local community including those who do not speak the majority language.

Kerrigan, V., et al. (2021). **"The talking bit of medicine, that's the most important bit": doctors and Aboriginal interpreters collaborate to transform culturally competent hospital care.** *International Journal for Equity in Health*, 20(1): 170. [Link to full text.](#)

In hospitals globally, patient centred communication is difficult to practice, and interpreters are underused. Low uptake of interpreters is commonly attributed to limited interpreter availability, time constraints and that interpreter-mediated communication in healthcare is an aberration. In Australia's Northern Territory at Royal Darwin Hospital, it is estimated around 50% of Aboriginal patients would benefit from an interpreter, yet approximately 17% get access. Recognising this contributes to a culturally unsafe system, Royal Darwin Hospital and the NT Aboriginal Interpreter Service embedded interpreters in a renal team during medical ward rounds for 4 weeks in 2019. This paper explores the attitudinal and behavioural changes that occurred amongst non-Indigenous doctors and Aboriginal language interpreters during the pilot. Embedding Aboriginal interpreters in a hospital renal team which services predominantly Aboriginal peoples resulted in the delivery of culturally competent care. By working with interpreters, non-Indigenous doctors were prompted to

reflect on their attitudes which deepened their critical consciousness resulting in behaviour change. Scale up of learnings from this pilot to broader implementation in the health service is the current focus of ongoing implementation research.

Rayment-Jones, H., et al. (2021). **Project20: interpreter services for pregnant women with social risk factors in England: what works, for whom, in what circumstances, and how?**. *International Journal for Equity in Health*, 20(1): 233. [Link to full text.](#)

Black and minority ethnic women and those with social risk factors such as deprivation, refugee and asylum seeker status, homelessness, mental health issues and domestic violence are at a disproportionate risk of poor birth outcomes. Language barriers further exacerbate this risk, with women struggling to access, engage with maternity services and communicate concerns to healthcare professionals. To address the language barrier, many UK maternity services offer telephone interpreter services. This study explores whether or not women with social risk factors find these interpreter services acceptable, accessible and safe, and to suggest solutions to address challenges. The findings of this study contribute to concerns highlighted in previous literature around interpreter services in the wider healthcare arena, particularly around the lack of regulation and access to high-quality interpretation. This is thought to have a significant effect on pregnant women who are living socially complex lives as they are not able to communicate their concerns and access support. This not only impacts on their safety and pregnancy outcomes, but also their wider holistic needs. The refined program theory developed in this study offers insights into the mechanisms of equitable access to appropriate interpreter services for pregnant women with language barriers.

## BARRIERS IN INTERPRETING SERVICES

Irimia, M., et al. (2024). **Exploring clinicians' awareness of language line and barriers in accessing NHS interpreting services.** *Future Healthcare Journal* 11,(Supplement): 100081. [Link to full text.](#)

According to the latest 2021 Census data, 5.1 million people (8.71%) living in England and Wales do not speak English as their first language, an increase by 0.9 million compared to 2013. As part of the 2010 Equality Act, the National Health Service (NHS) has recognised the complexities of caring for a multicultural population, and has adopted several principles and legislations, including language support services, to improve the health outcomes of non-native English-speaking patients. Therefore, all NHS patients are entitled to language interpreting services, whilst healthcare professionals have to respect and promote this right. Although NHS language line services have been available for a long time, in reality they are not consistently being used, due to important limiting factors and lack of awareness. This audit highlights the importance of promoting language line services within NHS hospitals and advocating for non-native English-speaking patients' rights, as a way to improve their health outcomes and achieve health equity.

Tang, D., et al. (2024). **The use of interpreter services and its barriers faced by hospital staff when accessing interpreters for patients with low English proficiency during the COVID-19 pandemic.** *Health promotion journal of Australia : official journal of Australian Association of Health Promotion Professionals*, 35(4): 1184-1193. [Link to full text.](#)

Patients with low English proficiency (LEP) often require interpreter services in health care, however, their usage remains low. This study aimed to explore the barriers to accessing interpreter services and suggests ways services can be improved in hospitals. Some systemic barriers including an inflexible booking process and long wait times for immediate interpreter services were identified. The low use of interpreter services is attributed to the difficulties accessing the service and poor documentation in patient records. Greater availability of in-person interpreter services, an upgraded

booking system, and effective implementation the NSW Health Standard Procedures for Working with Health Care Interpreters will address some of these barriers.

Martin, F. C., et al. (2022). **Healthcare Professionals' Views of Working with Medical Interpreters in a Cancer Setting: an Exploratory Study**. *Journal of cancer education : the official journal of the American Association for Cancer Education*, 37(4): 1115-1121. [Link to full text.](#)

Australia, like many other nations, continues to become more culturally and linguistically diverse. Medical interpreters play a key role in bridging the linguistic gap between healthcare professionals (HCPs) and patients. Little research exists from the HCP's perspective about working with interpreters. This study aimed to explore the views of HCPs regarding working with interpreters in a cancer setting. This exploratory study utilised a cross-sectional, qualitative design, involving focus groups and semi-structured interviews. HCPs from the Oncology and Palliative Care units were invited to participate and were asked about their experiences of working with interpreters in a cancer setting. Interviews were audio-recorded and transcribed. An inductive thematic analysis of qualitative data derived an understanding of attitudes and beliefs which may affect the way in which HCPs interact with interpreters and patients. Twenty-five participants were recruited. Five key themes emerged from the data: (1) communication practices and preferences, (2) training and supports, (3) alternative methods for translation, (4) challenges faced by HCPs and interpreters, and (5) limitations of translation. Communication with non-English-speaking patients using interpreters could be significantly improved with further training and support for both HCPs and interpreters, and a greater appreciation for the challenges each party faces.

Pathak, S., et al. (2021). **Patient Perspectives on the Quality of Professional Interpretation: Results from LASI Study**. *Journal of General Internal Medicine*, 36(8): 2386-2391. [Link to full text.](#)

The use of professional interpretation is associated with improvements in overall healthcare of patients with limited English proficiency (LEP). For these patients, it is important to understand whether quality of professional interpretation in-person is preserved using remote interpretation modalities (video-conferencing, telephone). Our results highlight that, overall, the interpretation experience among patients who used any type of professional interpretation was positive, and that the quality found with in-person interpretation is preserved for remote modalities. Health systems should consider a multimodality approach to interpreter service provision including options for accessing professional interpreters via all three modalities based on communication and access needs.

## APPENDIX

### SEARCH METHODOLOGY

A systematic search was conducted for literature. The results were screened by librarians using [Covidence](#).

### SEARCH LIMITS

- English-language
- Published within the last 5 years
- Studies based in Australia, New Zealand, Canada, and the United Kingdom

DATABASES SEARCHED

- Medline – index of peer reviewed articles across health sciences and medicine.
- Embase – index of biomed and pharmacological peer reviewed journal articles.
- Emcare – index of nursing, allied health, critical-care medicine and more.
- Grey literature – Google, Google Scholar, Trip database.

MEDLINE SEARCH STRATEGY

This search strategy was conducted on 22/01/2026 and translated to other databases, as relevant. Searches in each database were conducted on the same day.

- 1 (Health service\* or hospital service\* or healthcare service\* or health care service\* or patient service\* or hospital network\* or health network\* or healthcare network\* or health care network\* or health setting\* or hospital setting\* or healthcare setting\* or health care setting\* or health service-wide level or hospital service-wide level or healthcare service-wide level or health care service-wide level).ti,ab,kw. (277836)
- 2 exp Health Services/ (2615905)
- 3 exp Australia/ (187888)
- 4 (Australia\* or Victoria\* or Vic or Melbourne or New South Wales or NSW or Sydney or Queensland or QLD or Brisbane or Northern Territory or NT or Darwin or Western Australia\* or WA or Perth or South Australia\* or SA or Adelaide or Tasmania\* or TAS or Hobart or Australian Capital Territory or Canberra or gold coast or cairns or newcastle or wollongong or geelong or townsville or ballarat or toowoomba or sunshine coast or bendigo or launceston or rockhampton or bunbury or mackay or bundaberg).mp. (453179)
- 5 exp Canada/ (196948)
- 6 (Canada\* or Canadi\* or Alberta\* or Calgary\* or Edmonton\* or "British Columbia\*" or Vancouver\* or Victoria\* or Manitoba\* or Winnipeg\* or "New Brunswick\*" or Fredericton\* or Moncton\* or Newfoundland\* or "New Foundland\*" or Labrador\* or "St John\*" or "Saint John\*" or "Northwest Territor\*" or Yellowknife\* or "Nova Scotia\*" or Halifax\* or Dalhousie\* or Nunavut\* or Igaluit\* or Ontario\* or Ontarian\* or Toronto\* or Ottawa\* or Hamilton or Queen's or McMaster\* or Kingston\* or Sudbury\* or "Prince Edward Island\*" or Charlottetown\* or Quebec\* or Montreal\* or McGill\* or Laval\* or Sherbrooke\* or Nunavik\* or Kuujjuaq\* or Inukjuak\* or Puvirnituq\* or Saskatchewan\* or Saskatoon\* or Yukon\* or Whitehorse\*).mp. (408864)
- 7 New Zealand/ (47522)
- 8 (new zealand\* or auckland or wellington or New Plymouth or Nelson or Canterbury or Otago).mp. (95832)
- 9 exp United Kingdom/ (410715)
- 10 (national health service\* or nhs\*).ti,ab,in. (333324)
- 11 (english not ((published or publication\* or translat\* or written or language\* or speak\* or literature or citation\*) adj5 english)).ti,ab. (157307)
- 12 (gb or "g.b." or britain\* or (british\* not "british columbia") or uk or "u.k." or united kingdom\* or (england\* not "new england") or northern ireland\* or northern irish\* or scotland\* or scottish\* or ((wales or "south wales") not "new south wales") or welsh\*).ti,ab,jw,in. (2759831)
- 13 (bath or "bath's" or ((birmingham not alabama\*) or ("birmingham's" not alabama\*) or bradford or "bradford's" or brighton or "brighton's" or bristol or "bristol's" or carlisle\* or "carlisle's" or (cambridge not (massachusetts\* or boston\* or harvard\*)) or ("cambridge's" not (massachusetts\*

or boston\* or harvard\*)) or (canterbury not zealand\*) or ("canterbury's" not zealand\*) or chelmsford or "chelmsford's" or chester or "chester's" or chichester or "chichester's" or coventry or "coventry's" or derby or "derby's" or (durham not (carolina\* or nc)) or ("durham's" not (carolina\* or nc)) or ely or "ely's" or exeter or "exeter's" or gloucester or "gloucester's" or hereford or "hereford's" or hull or "hull's" or lancaster or "lancaster's" or leeds\* or leicester or "leicester's" or (lincoln not nebraska\*) or ("lincoln's" not nebraska\*) or (liverpool not (new south wales\* or nsw)) or ("liverpool's" not (new south wales\* or nsw)) or ((london not (ontario\* or ont or toronto\*)) or ("london's" not (ontario\* or ont or toronto\*)) or manchester or "manchester's" or (newcastle not (new south wales\* or nsw)) or ("newcastle's" not (new south wales\* or nsw)) or norwich or "norwich's" or nottingham or "nottingham's" or oxford or "oxford's" or peterborough or "peterborough's" or plymouth or "plymouth's" or portsmouth or "portsmouth's" or preston or "preston's" or ripon or "ripon's" or salford or "salford's" or salisbury or "salisbury's" or sheffield or "sheffield's" or southampton or "southampton's" or st albans or stoke or "stoke's" or sunderland or "sunderland's" or truro or "truro's" or wakefield or "wakefield's" or wells or westminster or "westminster's" or winchester or "winchester's" or wolverhampton or "wolverhampton's" or (worcester not (massachusetts\* or boston\* or harvard\*)) or ("worcester's" not (massachusetts\* or boston\* or harvard\*)) or (york not ("new york\*" or ny or ontario\* or ont or toronto\*)) or ("york's" not ("new york\*" or ny or ontario\* or ont or toronto\*))))).ti,ab,in. (2024264)

14 (bangor or "bangor's" or cardiff or "cardiff's;" or newport or "newport's" or st asaph or "st asaph's" or st davids or swansea or "swansea's").ti,ab,in. (82569)

15 (aberdeen or "aberdeen's" or dundee or "dundee's" or edinburgh or "edinburgh's" or glasgow or "glasgow's" or inverness or stirling or "stirling's").ti,ab,in. (295903)

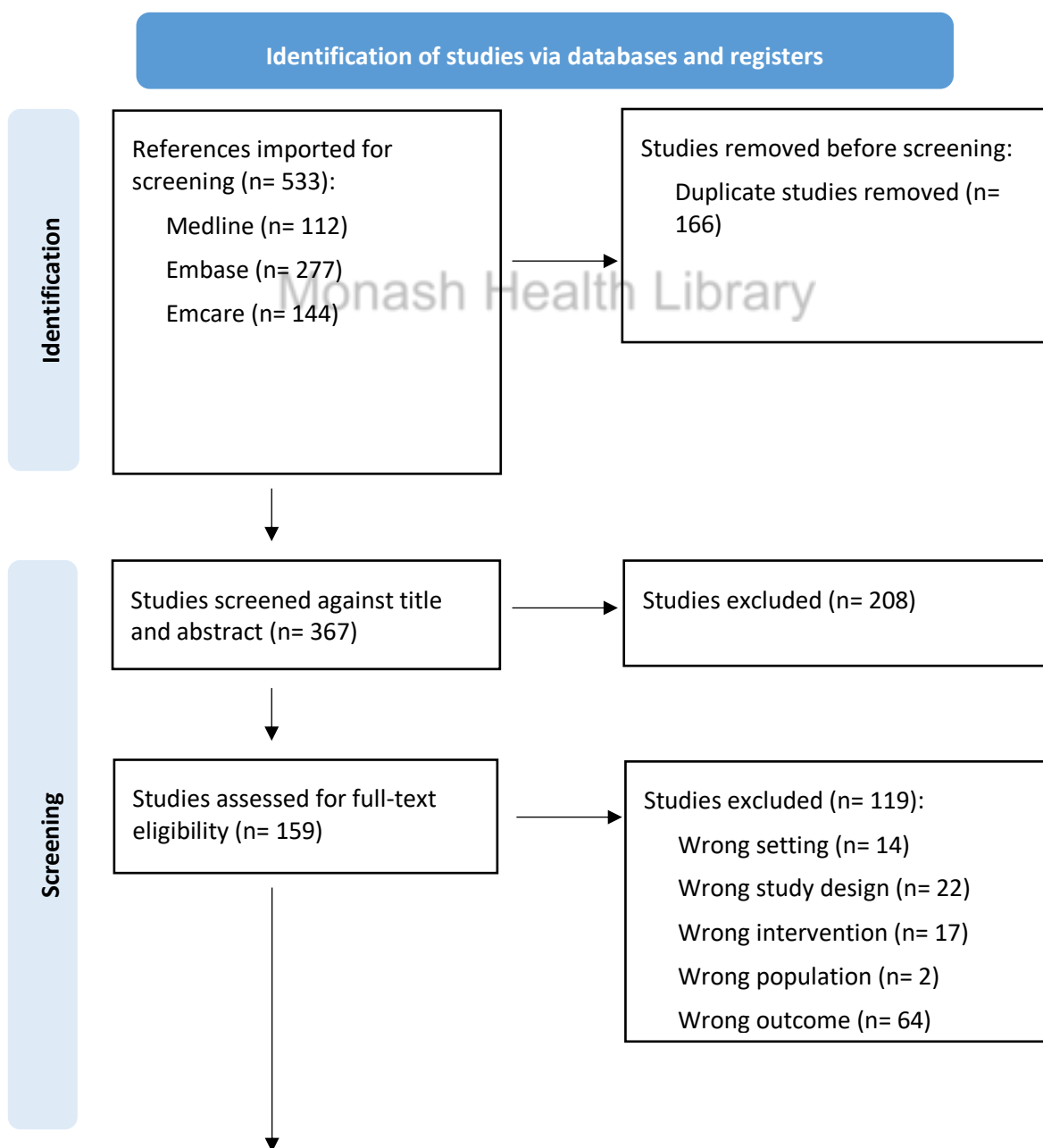
16 (armagh or "armagh's" or belfast or "belfast's" or lisburn or "lisburn's" or londonderry or "londonderry's" or derry or "derry's" or newry or "newry's").ti,ab,in. (40324)

17 (sign language\* or Auslan or Australian sign language or Auslan-English interpret\* or Auslan English Interpret\* or deaf interpreter\* or hard of hearing interpreter\* or hard-of-hearing interpreter\* or hoh interpreter\* or (sign language adj3 interpreter\*) or ASLIA or Australian Sign Language Interpreters? Association or deafblind interpret\* or deaf-blind interpret\* or deaf blind interpret\* or (New Zealand sign language adj3 interpret\*) or (NZSL adj3 interpret\*) or (te reo Rotarota o Aotearoa adj3 interpret\*) or (te reo Turi o Aotearoa adj3 interpret\*) or SLIANZ or sign language interpreters association of New Zealand or ((British Australian and New Zealand sign language) adj3 interpret\*) or (BANZL adj3 interpret\*) or (british sign language adj3 interpret\*) or (BSL adj3 interpret\*) or british deaf association or BDA or (Breetish Sign Leid adj3 interpret\*) or (Iaith Arwyddion Prydain adj3 interpret\*) or (Canan Soidhnidh Bhreatainn adj3 interpret\*) or (Teanga Chomharthaiochta na Breataine adj3 interpret\*) or (Irish sign language adj3 interpret\*) or (ISL adj3 interpret\*) or (Northern Ireland Sign Language adj3 interpret\*) or (NISL adj3 interpret\*) or (American sign language adj3 interpret\*) or (asl adj3 interpret\*) or (LSQ adj3 interpret\*) or (Langue des Signes Quebecoise adj3 interpret\*) or (Quebec Sign Language adj3 interpret\*) or (Oneida Sign Language adj3 interpret\*)).ti,kw. (1823)

18 (Interpret\* service\* or professional interpret\* or NAATI or (National accreditation authority for translators and interpreters) or medical interpret\* or hospital interpret\* or healthcare interpret\* or health care interpret\* or on-site interpret\* or onsite interpret\* or on site interpret\* or face-to-face interpret\* or face to face interpret\* or video interpret\* or telehealth interpret\* or telephone interpret\* or mobile interpret\* or phone interpret\* or (interpret\* adj3 service) or language service\* or (Translating and interpreting service) or TIS or health specialist interpret\*).ti,kw. (929)

- 19 sign language/ (2806)
- 20 limited english proficiency/ (401)
- 21 1 or 2 (2782845)
- 22 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 (4314851)
- 23 17 or 18 or 19 or 20 (4853)
- 24 21 and 22 and 23 (272)
- 25 limit 24 to (english language and yr="2021 -Current")

**PRISMA CHART**



**Included**

Studies included (n= 40)

This report contains curated literature results against a unique set of criteria at a particular point in time. Users of this service are responsible for independently appraising the quality, reliability, and applicability of the evidence cited. We strongly recommend consulting the original sources and seeking further expert advice.

Monash Health Library