

## Research Article

# Communication of Hospital-to-Home Transition Information for Pediatric Patients of Parents/Caregivers with Limited English Proficiency or Health Literacy Deficit: An Integrative Review

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## Abstract

**Purpose:** To comprehensively review the research evidence on communicating hospital-to-home transition information for pediatric patients of parents/caregivers with limited English proficiency or health literacy deficit.

**Design and Methods:** An integrative review was conducted following the 5-stage framework. Medline, CINAHL, and Embase (Ovid) were searched from 2013 to 30<sup>th</sup> November 2023. Key search terms included 'child/infant/adolescent/pediatric', 'limited English proficiency/health literacy', 'discharge/transition/continuity of care', 'communication'.

**Results:** Thirty-five studies met the selection criteria. Caregivers with limited language proficiency ranged from 6.9% to 60.2% and 8% to 55% had a deficit in health literacy. These families tend to have lower social-economic status. Caregivers were generally given inconsistent and incomplete verbal transition information. Only one-third of caregivers received translated written information of their preferred language and half of healthcare providers often used professional interpreters. Children of caregivers with language barriers were at significantly higher risk of medication errors, unplanned ED returned visits, and readmissions. Professional interpretation and translation of transition information are evidently improving caregivers' comprehension and satisfaction.

**Conclusion:** The finding affirmed the unique challenges when communicating hospital-to-home transition information with caregivers with limited English proficiency or health literacy deficits. Inconsistent and incomplete transitioning care information with inappropriate levels of health literacy led to overwhelmingly negative patient adverse health outcomes.

**Practice Implications:** To ensure caregivers accessing transition care information, it is recommended to provide professional translated written information and interpreter service. Transition information should also be prepared with an appropriate level of health literacy and a teach-back technique to be used to confirm caregivers' comprehension.

**Keywords:** Communication; Hospital-to-home transition information; Pediatric patients; Caregivers with limited English proficiency or health literacy deficit

## Introduction

The discharge planning process is critical to ensure a successful transition from care in the hospital to home. The transition can induce stress, especially when the person has complex needs, which require extensive preparation to enable continuity of care for a safe and successful recovery to avoid unplanned Emergency Department (ED) return visits or rehospitalization. Transitioning from hospital-to-home requires planning, education, and coordination that is deeply reliant on communication between the multidisciplinary team and the patient and family/caregiver [1].

The transition of children from hospital to home presents unique challenges, as continuity of care is dependent on the involvement of the child's family or caregivers. Caregivers is used throughout this paper to recognize the critical role of the people who provide continuity of care for the child at home. Cummings et al. (2010) [2] recommend that rather than considering referral and discharge as a singular event, the transition from hospital to home requires processes that extend beyond the health care service. This requires accurate, legible, and relevant transitioning information to be communicated with the patient, caregivers, and ongoing health service supports. Key transitioning information includes discharge medications, follow-up appointments, return precautions and seeking medical advice associated with discharge diagnoses [3].

The World Health Organisation (WHO) identifies the importance of communication to protect the health of individuals and families/caregivers. It reflects this in the principles for effective communication: accessible, relevant, timely, actionable, credible, and understandable messages. The United States Agency for Healthcare Research and Quality (AHRQ) identifies communication problems as the most frequent root cause of serious adverse events reported to the Sentinel Event Database, thereby recognising the critical role communication plays in the safe delivery of healthcare [4]. Likewise, the Australian Commission on Safety and Quality in Health Care [5] recognises transition points of care as one of three high-risk areas where communication is critical to patient safety, by reducing the risks associated with medication management, ongoing care, and readmission. Enhancing a patient's knowledge of their condition and treatment can help to ensure a safe transition at the end of a hospital stay.

A meta-analysis conducted by Hamline et al. (2018) [6] included 71 articles that examined a wide variety of discharge interventions. These interventions were grouped as provider communication (i.e., discharge letters), care coordination (i.e. pre-specified discharge criteria and post-discharge follow-up), and family/caregiver engagement (education and demonstration). The analysis found that most interventions improved parental satisfaction, and there was strong evidence that pooling of interventions improved outcomes. However, the effectiveness of the interventions varied according to different populations, and the outcomes were unable to be generalised [6].

According to the AHRQ [4], 8.6% of the United States population have Limited English Proficiency (LEP), which can create language barriers that significantly impact on health care and patient safety. Australian Bureau of Statistics (ABS) [7] reports 27.6% of the Australian population were born overseas, and the top three languages used at home other than English were Mandarin (2.7%), Arabic (1.4%), Vietnamese (1.3%) and

3.4% of Australian population speaks English not well or not at all in 2021 [8]. The LEP patients have been shown to have a limited comprehension of transitioning care information, which can affect the success of the transition from a healthcare facility to home. Furthermore, AHRQ lists discharge as a high-risk scenario for communication related patient safety concerns, and advocates for greater use of interpreters at discharge [4].

In the most recent narrative review, Osorio Galeano and Salazar Maya (2023) [9] recommended that the educational process of transition to home be supported by educational material such as booklets and videos, sheets, applications, and virtual contents, to consolidate information and provide a consultative resource for caregivers and families on discharge. The authors identified the importance of education and support materials that are clear, simple, 'friendly in presentation', and in a language understood by caregivers, particularly regarding the warning signs that may indicate a potential deterioration. A systematic review of parental discharge information delivery conducted by Glick et al. (2017) [3] also found that using multiple modes of information delivery was more effective in reducing errors related to discharge. Although most of these studies excluded non-English speaking participants, ELP was found to be a common risk factor associated with higher rates of management errors and lower health outcomes, and only five of the studies included in the review reported assessing low health literacy. However, the published reviews were based on the general pediatric population and healthcare delivery. There is no published review of literature focusing on hospital-to-home transitions of care for pediatric patients of caregivers with LEP or health literacy.

## Aim and Objectives

This paper aimed to provide a comprehensive review of research evidence on communicating hospital-to-home transition information for pediatric patients of caregivers with LEP or health literacy deficit. The objectives were to synthesise research evidence focussed on (1) the prevalence and characteristics of pediatric patients with LEP or health literacy deficit; (2) delivery of hospital-to-home transition information; (3) the impact of LEP or health literacy deficit on the transition process and the recovery experiences of patients/caregivers; and (4) effectiveness of interventions to improve transition information delivery.

## Design and Methods

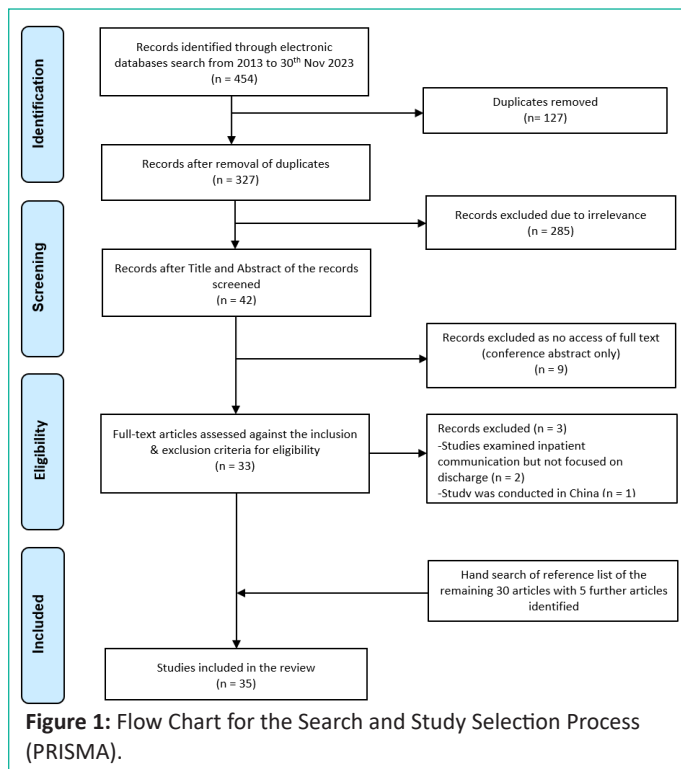
An integrative review was conducted to collate and synthesise evidence with diverse data collection methods [10,11]. The PRISMA statement was also used, in combination with the integrative review, to guide the review, minimise analysis bias and systematically present findings.

## Search Strategy and Search Outcomes

Three electronic databases, namely Medline, CINAHL, and Embase (Ovid), were searched from 2013 to 30<sup>th</sup> November 2023. Key search terms were 'child/infant/adolescent/pediatric' AND 'limited English proficiency/culturally and linguistically diverse/low health literacy/health literacy deficit' AND 'discharge service/program/transition/continuity of care' AND 'communication'. Search strategies focused on the inclusion of studies that examined the hospital-to-home transition process and recovery experience of both caregivers and pediatric patients discharged from the hospital to home either from the inpatient ward or the ED. Studies published in English with full-

text access were eligible for inclusion. Studies published in peer-reviewed journals with detailed descriptions of study design and methods were also included. Conference abstracts were excluded. Studies that involved transitioning patients between healthcare institutions were excluded from this review as the focus related to discharging patients from acute healthcare services to home. Studies examining communication but not focused during the transition process and time of discharge were also excluded.

The screening process used for the initial search is illustrated in Figure 1. A total of 454 records were identified. Of those 127 duplicated records were removed leaving 327 records to be screened. A further 285 records were excluded due to irrelevance. Of the remaining 42 records, nine conference abstracts were also excluded. Full text of 33 records were retrieved and reviewed against the selection criteria, a further three studies were then excluded as two [12,13] were not focused on communication during the transition process and at the time of discharge and one [14] was conducted in China regarding health literacy. Examination of the reference lists of the remaining 30 studies identified five additional studies to be included in this literature review resulting in a total of 35 studies.



### Quality Assessment of Included Studies

Assessment of the quality of each study was conducted using the Joanna Briggs Institute critical appraisal tools which examine specific study designs of all included studies [15]. In particular, the Meta-analysis of Statistics Assessment and Review Instrument (MAStARI) was used to assess quantitative studies and the Qualitative Assessment Review Instrument (QARI) was for the qualitative studies. No further studies were excluded based on the assessment outcomes.

### Results

#### Characteristics of Included Studies

A total of 35 studies were included in this integrative review. Table 1 summarizes the characteristics and main results of all the included studies. The majority of studies were conducted in the USA (n=31, 88%), followed by Canada (n=3), and Australia (n=1). There were 26 prospective and 8 retrospective studies. The main data collection methods of the majority of included studies were surveys, medical record audits, or one-on-one or focus group interviews. There were 27 included studies conducted at single-site locations and seven were multi-site. The sample size ranged from 26 new mothers of babies [16] in the neonatal intensive care unit to 119,782 children [17], who visited the ED. The main results extracted from the 35 included studies were synthesised and presented under the four objectives of this integrative review. It is worth noting that 20 of the 35 included studies addressed more than one objective.

#### Prevalence and Characteristics of Pediatric Patients with LEP or Health Literacy Deficit

Fourteen of the 35 included studies reported 6.9% [18] to 60.2% [19] caregivers with limited language proficiency. Caregivers with LEP were associated with older age (30.6±6) [19], lower income [20], lower educational background [19], public insurance [19-21], and lower level of health literacy [22]. A total of 8% [23] to 55% [24] of caregivers were reported with health literacy deficits by four included studies. Of those, 21.6% of caregivers had insufficient medication literacy [16].

Only one included study examined the processes and policies that children’s hospitals and associated language services in America utilise to facilitate communication with patients and/or their caregivers with LEP [25]. The majority of the services had a written translation policy (81%) and translated hospital-to-home transition of care information (74%). Healthcare services did however have differing policies associated with

**Table 1: Characteristics and main findings of included 35 studies.**

Reference	Research Design/ Data Collection	Study Setting	Participants	Main Findings			
				Prevalence and characteristics	Transition information delivery	Impact on health outcome	Effectiveness of interventions
[3] USA	Quantitative comparison study	An urban public hospital	192 English/Spanish speaking parents with ≥ 1 daily discharge medication	Health Literacy			
[16] USA	An exploratory descriptive design	NICU	26 New mothers of babies in the NICU	Health Literacy	Medication literacy		
[17] USA	Quantitative – Retrospective cohort study	ED of a pediatric tertiary hospital	119,782 patients over 32 months	LEP		ED visit	

[18] USA	A retrospective analysis of all discharges	A NICU of tertiary children's hospital	1,307 discharged families	LEP		Discharge readiness	
[19] USA	Quantitative – Cohort study	NICU of a tertiary pediatric, women and infants hospital	Immigrant (n = 176) and native (n = 556) mothers of preterm infants	LEP Characteristics		Discharge readiness	
[20] USA	Quantitative – Retrospective cohort study	A children's tertiary hospital	67,473 encounters of 49,002 patients	LEP Characteristics		UHR	
[21] USA	A retrospective cohort chart review	A tertiary pediatric medical centre	136 Patients underwent Adenotonsillectomy	LEP Characteristics		ED Visit Others	
[22] USA	Prospective observational study	A tertiary children's hospital ED	English vs. Spanish-speaking parents	Characteristics			Nurse-developed pictographs & discharge instruction
[23] USA	Retrospective chart review and electronic medical record query	A tertiary children's hospital	240 (4% randomised selection) Patients > 1 overnight stay	LEP Health Literacy	Written Component		Use of template and discharge service
[24] Canada	Quantitative – Prospective observational study	A tertiary care pediatric ED	145 (69%) dyads of English- & Spanish-Speaking parents of children			Medication errors	
[25] USA	Mixed-methods study Online survey Online environment scan	200 Children's Hospital Association language services	31 Children's Hospital Association language services; 22 Children's Hospital Association translation policy	Organisational perspective			
[26] Canada	Qualitative In-depth interviews on ED	Two tertiary care centres (Adult & Pediatric)	Levels of health literacy screened and balanced in the purposive sampling 31 parents & 20 patients				Teach-back technique
[27] USA	Quality improvement project	A large children's hospital	540 patients with LEP families				Translated discharge instructions of preferred language
[28] USA	Retrospective chart review	A large, urban academic children's hospital	200 charts		Written Component		
[29] USA	Retrospective analysis	A tertiary children's hospital	2,047 infants' weight <2500 g	LEP	Written	Others	
[30] USA	Qualitative – Observations	ED of a tertiary children's hospital	101 discharge communication interactions from 47 LEP patient visits		Written Component		Video-recorded ED visits/Professional interpreter use
[31] USA	Quantitative – A cross-sectional study	An urban tertiary care PICU	109 English- & 52 LEP with Spanish-Speaking parents responded the survey		Written	Engagement Comprehension	
[32] Australia	A qualitative study Direct observations Interviews Medical records review	A tertiary children's hospital	Patients < 16years 31 Discharge encounters 20 Caregivers 12 Nurses	LEP		ED Visit UHR	
[33] USA	A retrospective analysis of discharge summary	An urban non-freestanding children's hospital	Of 4,044 eligible patients selected 100/EP vs. 100/LEP		Component		

[34] USA	Qualitative focus-group-based study	A children's hospital	12 native English vs. 12 native Spanish speaking parents of children with complex medical condition		Medication literacy		
[35] USA	Cross-sectional direct observational study	A tertiary children's hospital	103 discharge encounters	LEP	Medication literacy/ Component		
[36] USA	Retrospective cohort study	21 Hospitals	608 Completed surveys (74.8%)	LEP		Engagement	
[37] USA	Mixed-methods	A tertiary hospital, NICU	27 Healthcare providers 19 Parents			Engagement Comprehension	Question prompt lists
[38] Canada	Qualitative – modified grounded theory In-depth interviews	Two tertiary care centres (Adult & Pediatric)	Levels of health literacy screened and balanced in the purposive sampling 31 parents & 20 patients		Written		
[39] USA	Quantitative – Survey	A pediatric ED	503 caregivers			ED visit	Written and video education
[40] USA	Retrospective cohort study	A tertiary pediatric ED	63,601 Index visits < 21 years	LEP		ED visit UHR	
[41] Canada	Quantitative – A secondary analysis Chart review	A tertiary care pediatric ED	202 English- & Spanish-Speaking parents of children 2–24months with fever, respiratory illness	LEP		ED visit	
[42] USA	Cross-sectional analysis of a multisite RCT	3 Urban pediatric clinics	1,126 Hispanic parents of children aged ≤8 years with LPE and health literacy data			Medication errors	
[43] USA	Quantitative – Survey	Multi-site NICU of tertiary hospital	137 participants	Heath Literacy		Discharge readiness	
[44] USA	Quantitative - An observational study	A tertiary care pediatric ED	105 English- & 105 Spanish-Speaking			Others	Implementation of EMR
[45] USA	Retrospective review of electronic data	State-wide database	18,364 Infants	LEP		UHR Others	
[46] USA	QIP	A large, urban academic children's hospital	A 42-bed unit				Discharge instruction template & visible reminders for writing readable discharge instruction
[47] USA	Prospective direct structured observations	A large children's hospital	140 discharge encounters 87 Nurses	LEP	Written Component		
[48] USA	Quantitative – RCT Quiz & Survey	A medical centre	20 LEP parents need interpreter of children				Written discharge instruction in native language
[49] USA	Quantitative – Survey	A children's hospital	Day surgery; 66 (79.5%) Parents with limited English proficiency randomly assigned to Intervention (n = 31) and Control (n = 35)				Audio recorded discharge instruction card

interpreters assisting with the translation of information verbally. Healthcare services generally used pre-translated documents (87%) or staff interpreters (81%). Other options used to improve communication included document libraries, pre-translated electronic health record templates, staff-edited machine translations, and sight translation, which refers to in-the-moment verbal translating of a written document in the target language [25].

### **Delivery of Hospital-to-home Transition Information for Patients and Caregivers with Limited English Language Proficiency or Low Health Literacy**

Eleven of the 35 included studies described (1) the Format and language of the written and verbal hospital-to-home transition information, and (2) the components of transition information. Samuels-Kalow, Rhodes, et al. (2016) [26] identified the main barriers to effective transition information communication as the use of medical terminology/jargon by healthcare providers, and the health literacy deficit of caregivers. More than half of the received transition information (55%) was not accessible for caregivers with LEP and/or health literacy deficits due to unmet health literacy needs and/or language needs [23]. Only 22% to 27% of caregivers with LEP received discharge instruction in their preferred language [23,27]). The median readability of written information was reported as 10th-grade reading level [23,28], which is considered as suboptimal understandability for caregivers with LEP and/or literacy deficit.

In terms of verbal communication of hospital-to-home transition information, only over half of caregivers with LEP (53%) had a record of interpreter use [29], while almost one-third of communications (31%) did not use professional interpretation [30]. On the other hand, up to 53% of physicians and 41% of nurses often used an interpreter [31]. A sum of 13% of discharge encounters included an open-ended question to assess caregiver comprehension of transition information [30].

Hospital-to-home transition care information generally include principal diagnosis, expected symptoms, when/where/who to seek help if concerns, discharge medication/equipment, and follow up arrangement [23,27,32]. Compared to caregivers with English-proficiency, nurses were 11.5 times less likely to discuss all components of transition care information with caregivers with LEP (95 CI% 4.4 to 30.1) [27]. There were 31% to 70% of caregivers with LEP who received all components of safe transition information from nurses at their child's discharge [27,30]. The association between the number of key element omission of transition information and English- was up to 340-fold higher than Spanish-speaking families (95% CI 112.4 to 1027.5) [27, 33]. In particular, transition information was provided to 65% of LEP on medication dosing [27,30], 37%-55% of LEP on when/where go to seek help [23,30], and 28% of LEP on what to try at home before seeking care [23]. Commonly omitted component of transition information were signs of worsening (21%–56%) [23,27], who to contact if worsening (25%–38%) [23,28], where to seek help (14%) [23], or medication reconciliation (3%) [23].

Of all the transition information components, three studies focused on communicating discharge medication information. Overall, nurses verbally reviewed medications in some capacity with 69% of LEP caregivers, however, the information was inconsistent and at times was incomplete [34,35]. The commonly communicated information included the medication name, frequency, size effects, and timing [16,34,35]. Medication

dosage, duration, and route of medications were communicated less often [35]. When assessed, medication dosage was understood by 92% of LEP caregivers; however, only 30% were able to correctly convert measurements [16].

### **Impact of Caregivers with Limited English Language Proficiency or Health Literacy Deficit on the Transition Process and Patients' Recovery Experience**

Eighteen included studies examined the impact of language proficiency or health literacy on patients' experiences of the hospital-to-home transition of care and recovery experience. A range of issues was associated with caregivers' limited comprehension of information including caregiver-healthcare provider engagement, unplanned ED visits and/or unplanned hospital readmission post-discharge, medication safety, and others. Compared to families with English as their first language, caregivers with LEP and lower levels of health literacy were observed with less engagement with healthcare providers in the rounds or during medical team examinations of children [31]. The caregivers with LEP were also less likely to speak up about their observations or question healthcare providers' decisions/actions [31,36,37]. Caregivers with LEP were perceived as socially isolate and not prepared to navigate the health system, for example, not asking for an interpreter despite having language barriers in communicating with healthcare providers about critical hospital-to-home transition care information [31,37].

Three of the studies identified five main factors impacting engagement between caregivers with LEP and healthcare providers. Factors included the use of medical jargon by healthcare providers when communicating with caregivers [38], limited use of translation services by both healthcare providers and caregivers [25,30], difficulties in translating the uncommon languages for immigrants [25], aligning professional interpreter service and the discharge event [25,38] and the final factor related to a lack of protected time for healthcare providers to communicate transition information due to heavy workload [38].

Six studies identified that children of LEP or health literacy deficit families were at higher risks of experiencing unplanned 72-hour ED visits following discharge from ED or inpatient ward (OR=1.15 to 7.9) [17,21,32,39-41]. As a result, there were up to 9.7% of children experienced an unplanned 30-day hospital readmission [20,32]. Unplanned hospitalization was significantly associated with LEP families, especially those with low socioeconomic status or children with complex medical conditions [20].

Children of caregivers with LEP and a lower level of health literacy were also associated with 3.7 times more likelihood of having medication errors. The most common error was related to dosing [24,42]. Three studies assessed the discharge readiness of caregivers with LEP. Caregivers' comprehension scores were found to correspond with the nurses' rating of patient readiness for discharge, but not with the caregivers' perceptions of their own readiness for discharge [43]. The other two studies found that families with LEP were less likely to be prepared with technical care skills (aOR = 0.32, 95% CI 0.13-0.81) [18] and scored poorly in the Fragile Infant parental Readiness Evaluation [19].

Other negative impacts of LEP family on the child's outcome included longer wait times to discharge following the decision

time [44], 12 times more chance of missed follow-up [21], and 26% longer LOS [29]. However, it is worth noting that the child of an LEP family was associated with 32% more chances of receiving breast milk and 17% less likelihood of being discharged home with oxygen [45].

### Effectiveness of Interventions to Improve Transition Information Delivery

In responding to the impact LEP and/or health literacy deficit has on caregivers' experiences and patients' recovery following hospital discharge, studies have explored families' needs. Caregivers with LEP expressed their desire for structured transition of care information using simplified language. They indicated they required not only verbal communication but also a physical hands-on demonstration of specific care [26].

Eleven studies examined the interventions implemented to assist caregivers with LEP or health literacy deficit. Interventions intended to improve written hospital-to-home transition information included the use of template and discharge service [23,46], translated information of preferred language [47,48], nurse-developed pictographs and transition information [22,39,49], and electronic medical record [44]. The results demonstrated improved guideline adherence [23,46], increased written discharge instructions in caregivers' preferred language [47,48], and enhanced caregivers' satisfaction with the content and engagement when seeking medical advice post-discharge [22,39,44,49].

In terms of verbal communication of transitioning care, three studies assessed the effectiveness of question prompt lists [37], professional interpreter services [30], and teach-back techniques to deliver transition of care information [26]. A total of 40.7% of healthcare providers and 52.6% of parents found the question prompt lists guided transition information delivery improved caregiver-nurse communication and transition process and valued the list to be introduced early in the NICU admission [37]. The use of professional interpreter services for families with LEP demonstrated significantly higher quality of transition of care information content and delivery (odds ratio (OR) = 7.1; 95% confidence interval (CI) [1.4–37.0]) and improved caregiver's level of comprehension (OR = 6.1; 95% CI [2.3–15.9]) [30].

A study implemented and evaluated the teach-back technique in preparing families with LEP for the delivery of hospital-to-home transition information [26]. The teach-back technique is a communication method used by healthcare providers to engage and confirm patients' and/or caregivers understanding of the information provided to them. In general, caregivers felt the technique could assist in confirming and clarifying information reducing the likelihood that key hospital-to-home transition care information is not forgotten or misunderstood. Some participants, however, felt they were being treated differently, whilst those participants with sufficient health literacy felt the technique was unnecessary. Therefore, when applying the technique, it is suggested that healthcare providers present a clear explanation of the intention of the teach-back technique to encourage parents not to take offense [26].

### Discussion

This is, to date, the first comprehensive review of research evidence on communication of hospital-to-home transitioning care information for pediatric patients of caregivers with LEP or HLD. This review identified a higher prevalence of pediatric

patients of families with insufficient English and health literacy in comparison to the AHRQ and ABS reports [4,7]. This might be due to pediatric patients within families with LEP residing across different regions and demographic groups [50]. It is well recognised that immigrant and refugee families from culturally diverse backgrounds often have insufficient comprehension of health information due to language barriers or lower levels of health literacy when seeking health care for their children [21,23,27,32]. Additionally, these families are associated with lower social-economic status, which can lead to an inability to access health care services [20,21,50]. Therefore, understanding of regions with a high prevalence of population with language proficiency and health literacy issues could facilitate stakeholders to embed policies and strategies to ensure equitable healthcare access and effective communication [25,50].

In collaboration with previous research which has directly observed the delivery of transition to home information [32,35], this review found that caregivers with LEP were generally provided with inconsistent and incomplete verbal communication of transitioning care information. Transition information that was provided to the majority of LEP caregivers was found to be not in their preferred language, and only up to half of healthcare providers were found to use professional interpreters [30]. This further highlights the challenges caregivers with LEP experience in understanding transition information [9], increasing the stress of transition of care from hospital to home [1], and placing children of caregivers with LEP at greater risk to safety during the transitional period [4]. The overwhelming notion from this review was the negative impact on patient's health outcomes and recovery experience following hospital discharge, which is associated with caregivers' limited comprehension of transition information due to their language proficiency and level of health literacy. Patients were found to be at higher risk of minimum engagement with healthcare providers, medication errors, unplanned ED visits related to the initial index admission and unplanned readmissions of patients. Caregivers with language barriers experienced challenges associated with parental role shift, care for patients requiring ongoing use of medical equipment, and adherence to provider advice [51]. A qualitative study interviewing 31 caregivers of 20 children, who presented to an ED in America, also identified receiving conflicting information due to limited health literacy or being judged when they presented to ED [38].

This integrative review suggests that for caregivers with LEP or health literature deficit, translation of written transition information to the caregiver's preferred language and usage of professional interpreter services were effective in improving the transition process and child health outcomes [6,52]. This aligns with broader recommendations for improving healthcare safety for ethnic minorities. A systematic review by Chauhan et al. (2020) [53] found that identifying LEP is essential for providing interpreting services, however caregivers preferred language is not always recorded at admission, or may be recorded incorrectly. Furthermore, the use of carers, family members, and other non-professional interpreters can decrease the patient safety risk when a professional interpreter is not available, however can compromise patient confidentiality and potentially double the errors of clinical consequence compared to using professional interpreters. In the paediatric care setting, caregivers are already acting as the translators of care to their children, therefore their comprehension of the information is essential to enable them to continue to provide safe and effective care with confidence.

One of the 35 included studies in this integrative review demonstrated that the teach-back technique is critical to ensure that caregivers comprehend and apply transition information [26]. The use of teach-back is well supported in the wider health care literature to improve communication and therefore health outcomes, especially in those with LEP [54]. A systematic review by Shersher et al. (2021) defined teach-back as requesting the patient to demonstrate their comprehension, to assess their understanding and enable supplementary information to be provided. Although limited by health care provider time constraints and beliefs, found evidence that teach-back enhances patient knowledge and health outcomes, patients were mostly appreciative, and the technique was improved by training of the health care provider [54].

### Practice Implications

Assessment of all pediatric patients and their caregivers' language spoken at home and level of health literacy should be added to the routine ED presentation and hospital admission process. Translation of written hospital-to-home transition care information, depending on the country, into the most common languages spoken is required.

For uncommon spoken languages, the arrangement of a translation service needs to be commenced as early as a child's initial presentation of ED or hospital admission. In terms of verbal communication, interpreter services should be arranged for families with LEP. Timing of transition information delivery should be aligned with the main caregiver's availability and readiness to learn, and does not need to wait till the last minute of the ED visit or hospital stay. It would be appropriate to commence communication of information once the child is medically stable [32].

The contents of transition information need be prepared at an appropriate level of literacy to accommodate caregivers' language and health literacy needs. All nurses should receive education on the teach-back technique to confirm caregivers' comprehension and ensure caregivers provide continuity of care for children at home post-hospital discharge [26,54]. Health care services should enable nurses to be supported with the time and resources to implement teach-back effectively [54].

### Limitation

This integrative review only included studies that examined English proficiency in countries with English as their official language, therefore, caution should be taken into consideration when applying the results of this review to healthcare services of countries where official language is not English.

### Conclusion

A total of 35 included studies were synthesised in this integrative review. The finding affirmed the unique challenges when communicating hospital-to-home transition information with caregivers with LEP and health literacy deficits. Inconsistent and incomplete transitioning care information with inappropriate levels of health literacy led to overwhelmingly negative patients' adverse health outcomes. To ensure caregivers access transition care information, it is recommended to provide translated written information and interpreter services. Transition information should also be prepared with an appropriate level of health literacy and teach-back technique to be used to confirm caregivers' comprehension.

## Author Statements

### Declaration of Interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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