



Llywodraeth Cymru
Welsh Government

Wales Intervention Review (WIRe)

Speech, Language
and Communication (SLC)
intervention practitioner guide



This document has been developed for those who work with children under the age of 5 years. This includes anyone working in health and education settings. It provides a summary of the research carried out to identify interventions which are likely to benefit children's speech, language and communication (SLC) development. Details of each of the interventions are outlined and summarised.



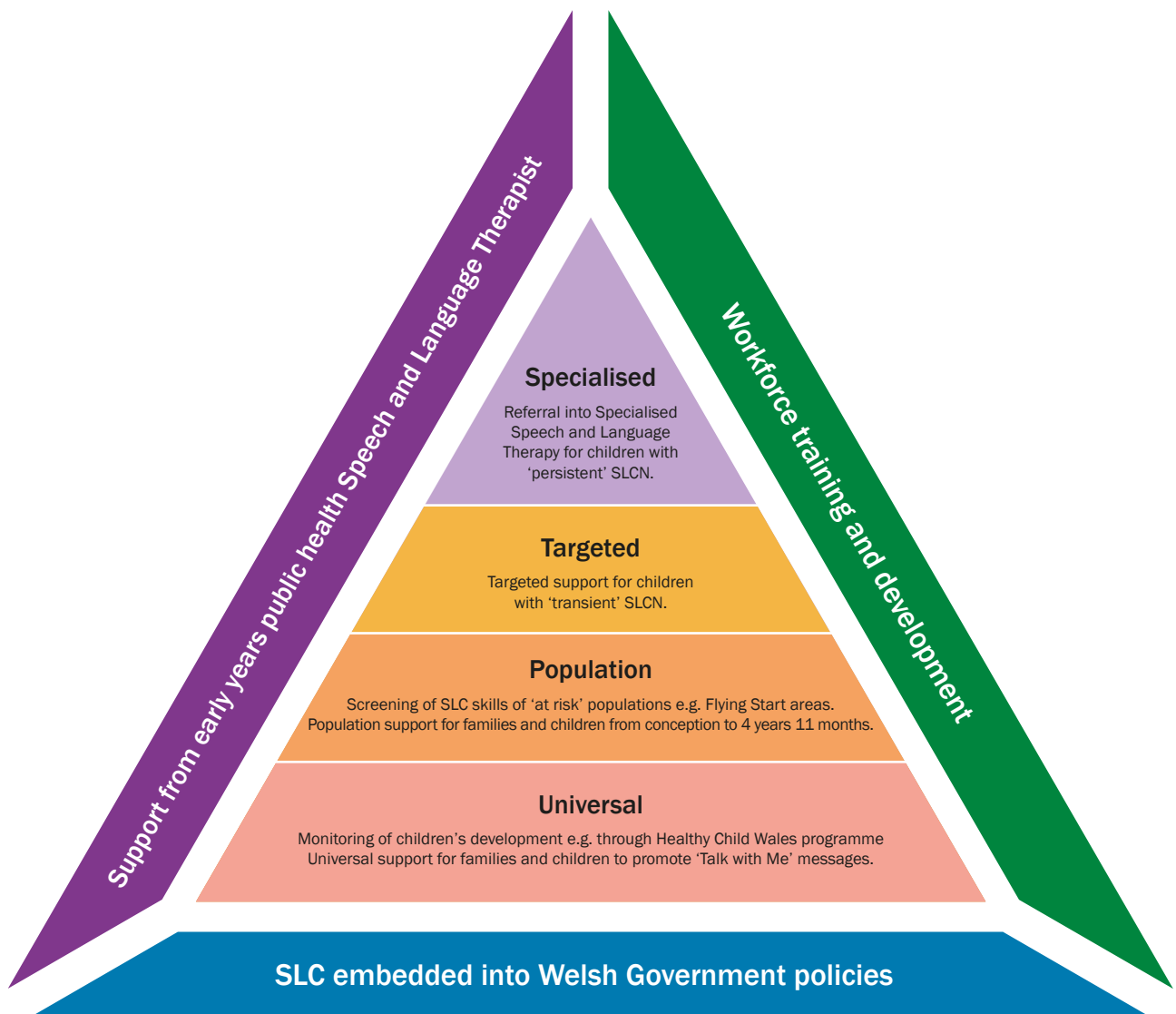
Background Information

The Welsh Government has a continuing commitment to ensuring all children have the best start in life. An important part of the 'Talk with Me' programme ([Talk with me | GOV.WALES](#)) is to ensure that all children have the best opportunity to develop strong SLC skills, leading to better outcomes in older childhood and adulthood.

Interventions can be delivered at a universal level which are suitable for all. Or at a population level which are suitable for particular groups of

people e.g. children born prematurely. There are also targeted levels of intervention and in the context of SLC, these are suitable for children who have been identified as having some element of speech, language or communication need (SLCN). While some children will need specialist intervention, delivered by specialist services, many children have transient needs in the development of SLC which could be eliminated with early intervention at universal, population or targeted levels. Figure 1 provides more detail regarding levels of intervention.

Figure 1: Tiers of Intervention



(Welsh Government, 2020)

The aim of this research was to identify interventions which have strong evidence of improving SLC outcomes for children aged 0 to 4 years 11 months and could be adopted or adapted for use across Wales at a universal, population and targeted level. Three rapid scoping reviews were undertaken, each one addressing a specific objective:

- 1 Review the current evidence base for perinatal/infant mental health interventions and identify the SLC elements of these interventions**
- 2 Review current evidence of parenting interventions and identify the SLC elements of these interventions**
- 3 Review current evidence regarding SLC interventions available at Universal, Population and Targeted levels.**

The three rapid, scoping reviews identified a range of interventions and the evidence for these was evaluated. To be included in the results the interventions needed to be a manualised programme i.e. it is a programme that has been produced for commercial use and comes with a manual for its use. It also needed to have level 1 evidence of its effectiveness,

as defined by the Clinical Outcomes Group of the NHS Executive (Eccles and Mason, 2001) i.e. there has been at least one randomised controlled trial where positive outcomes were reported for SLC measures. This ensures that the programme has robust, scientific evidence of how well it works. Interventions were only included where they could be delivered by people who were not SLC specialists.



Results

In total, 15 different interventions were identified. Each was categorised as universal, population or targeted. Three interventions were identified for objective 1, three for objective 2, and nine for objective 3.

Objective 1

Review the current evidence base for perinatal/infant mental health interventions and identify the SLC elements of these interventions

Each of the three interventions outlined below are parent mental health interventions which have been identified as being effective for improving SLC skills for children.

Family Nurture Intervention (FNI)

Level of Intervention: Population

Suitable for: Parents of children born between 26 to 34 weeks gestation.

Delivery: Neonatal intensive care nurses deliver training to parents on a 1:1 basis.

Summary of intervention: Aims to re-establish emotional connection and autonomic co-regulation if they are disrupted.

Outcomes: Significant improvement in communication scores using Bayley Scales of Infant Development (3rd edition) at age 18 months corrected for children included in the intervention group compared to the control group.

Learning Through Play Plus (LTP+)

Level of Intervention: Population

Suitable for: Mothers diagnosed with depression with a child aged 0 to 30 months.

Delivery: Delivered by community health workers to parents in group sessions (10 sessions, lasting 60 to 90 minutes, over 12 weeks).

Summary of intervention: Provides parents with information on the healthy growth and development of their child while simultaneously promoting attachment security.

Outcomes: Children in the intervention group scored significantly higher than children in the control group using the Ages and Stages Questionnaire.

Video Interaction Project (VIP)

Level of Intervention: Population

Suitable for: Low-income families and most effective for mothers of children aged >6 months who have been diagnosed with depression.

Delivery: Delivered by a child development specialist trained in the programme on a 1:1 basis. Up to 4 visits lasting approximately 30 minutes per session.

Summary of intervention: Parents are videoed with their child and this video is reviewed jointly by the practitioner and the parent. Positive interactions are highlighted and reinforced.

Outcomes: Increase in parent responsiveness for those in the intervention group using the StimQ Infant Measure.

Summary of perinatal/infant mental health interventions

Each of the three interventions were effective for improving SLC with different populations. LTP+ and VIP are both suitable for mothers who have been diagnosed with depression. However, there is a difference in that VIP has been demonstrated as being effective when children are aged under 6 months of age whereas LTP+ has demonstrated effectiveness for mothers where the child is aged

up to 30 months of age. FNI is effective in increasing SLC skills for children born prematurely (between 26 to 34 weeks gestation). There is evidence that focusing on interaction between mothers and their child can have a positive effect on children's SLC development (Ghazi et al., 2021; Khan et al., 2018; Letourneau et al., 2011; Ochoa et al., 2021).



Objective 2

Review current evidence of parenting interventions and identify the SLC elements of these interventions

The three interventions detailed below are parenting interventions where there is evidence that they are effective in improving SLC skills of children.

The Incredible Years Parent-Toddler Programme (IYPTP)

Level of Intervention: Population

Suitable for: Parents living within Flying Start areas with children aged between 12 to 36 months.

Delivery: Delivered by practitioners trained in the approach. There are 12, two hour per week group sessions.

Summary of intervention: A parent education programme covering eight core topics; child-directed play, promoting toddler language, coaching child social and emotional development, effective praise and encouragement, spontaneous incentives, handling separations, positive discipline and effective limit setting.

Outcomes: Moderately significant impact on child-led language interactions for those in the intervention group.

Infant Behavior Program (IBP)

Level of Intervention: Population

Suitable for: Low-income families (majority of families in the study were of Hispanic or Latino ethnicity).

Delivery: Delivered by professionals trained in the approach. One teaching session and six coaching sessions, each one hour long.

Summary of intervention: Aims to promote child-directed interactions.

Outcomes: Mothers in the intervention group increased their quantity and range of language. However, at 6 months post-intervention this was not statistically significant when compared to the control group.

Newborn Behavioral Observations System (NBOS)

Level of Intervention: Population

Suitable for: Parents of newborn children, living in low-income, underserved communities.

Delivery: Delivered by practitioners trained in the approach. At least three, one hour home visit sessions until the child is aged 12 weeks.

Summary of intervention: Designed to support caregivers in developing their relationships through interactions with their newborns using observations.

Outcomes: Newborns in the intervention group had greater gains in their communication scores on standardised measures at 6 months following intervention than those in the control group.

Summary of parenting interventions

Each of the three interventions were identified as being effective for children living within low-income families. The IYTP is delivered within a group setting while IBP and NBOS are delivered individually to families. The SLC measures for each of the interventions differed and so they

cannot be compared against each other. IYTP and IBP demonstrated improvements immediately after the intervention and NBOS demonstrated gains in SLC skills six months after the intervention had been completed.



Objective 3

Review current evidence regarding SLC interventions available at Universal, Population and Targeted levels

There were nine interventions identified as having evidence for their effectiveness of increasing SLC skills. Each of the interventions are delivered in a slightly different way and are suitable for different groups of children. Details of each of the interventions are outlined below.

Attachment and Bio-behavioral catch-up (ABC)

Level of Intervention: Population

Suitable for: Children living in foster care aged 10 to 22 months of age

Delivery: Delivered by parent coaches trained in the approach. Ten, one hour long sessions delivered to foster carers in the home.

Summary of intervention: Designed to increase parental nurturance in response to distress, increase sensitive and responsive behaviours in response to non-distress and to help parents serve as co-regulators when children are overwhelmed.

Outcomes: Significant growth in vocabulary for children in the intervention group.

Attachment and Bio-behavioral catch-up Toddler (ABC-T)

Level of Intervention: Population

Suitable for: Children living in foster care aged 24 to 36 months

Delivery: Delivered by parent coaches trained in the approach. Ten, one hour long sessions delivered to foster carers in the home.

Summary of intervention: Designed to increase parental nurturance in response to distress, increase sensitive and responsive behaviours in response to non-distress and to help parents serve as co-regulators when children are overwhelmed.

Outcomes: Significant increase in children's understanding of vocabulary in the intervention group.

Doors to Discovery

Level of Intervention: Population

Suitable for: Children living in low-income families aged between four to five years of age.

Delivery: Delivered by class teachers trained in the approach to the whole class.

Summary of intervention: A programme that builds a foundation of oral language, phonological awareness, alphabet knowledge and concepts of print and a love of books.

Outcomes: Significant gains in understanding language and use of vocabulary for children in intervention group.

Early Talk Boost

Level of Intervention: Targeted

Suitable for: Children aged three to four years identified as having an element of SLCN

Delivery: Delivered by early years practitioners trained in the approach to groups of six to eight children. Sessions delivered three times a week for up to nine weeks lasting 20 minutes each.

Summary of intervention: A small group intervention designed to boost language skills of pre-schoolers identified with an element of SLCN.

Outcomes: Significant improvement in language scores for children in the intervention group.

Infant Health and Development Program

Level of Intervention: Population

Suitable for: Parents of infants born before 37 weeks gestation, weighing less than 2500 grams.

Delivery: Delivered by health care workers trained in the approach to parents on an individual basis weekly until the child is age one and then fortnightly until the child is aged three. Monthly parent support groups also run alongside these.

Summary of intervention: Developed to enhance the cognitive, behavioural and health status of children born with a low birth weight.

Outcomes: Children in the intervention group had a higher verbal IQ score at age five and a higher understanding of vocabulary at age eight than children in the control group. The intervention was most successful for children who were born weighing between 2000g and 2499g

Lets Begin with the Letter People

Level of Intervention: Population

Suitable for: Children aged four to five years of age living in low-income families.

Delivery: Delivered by a class teacher trained in the approach to the whole class. One week per term is devoted to one of 26 thematic units.

Summary of intervention: An early education curriculum that uses thematic units to develop children's language and early literacy skills.

Outcomes: Children in the intervention group had significantly greater scores for understanding of language and use of vocabulary.

Nuffield Early Language Intervention (NELI)

Level of Intervention: Targeted

Suitable for: Reception aged children who have been identified as having some element of SLCN.

Delivery: Delivered by a teaching assistant trained in the approach. Small group intervention for 30 minutes per week plus 15 minutes individual intervention. Delivered for 20 weeks in child's reception year at school.

Summary of intervention: A programme aiming to improve children's vocabulary, develop their narrative skills, encourage active listening and build confidence in independent speaking.

Outcomes: Greater increase in scores across a range of SLC measures for children in the intervention group.

Read, Play, Learn

Level of Intervention: Population

Suitable for: Children aged four to five years of age living in low-income families.

Delivery: Delivered by education staff trained in the approach. Delivered to a group of three children in a quiet setting, four days a week for a two month period.

Summary of intervention: Vocabulary development through an intervention teaching words through book-reading and book-play. Consists of reading books aloud followed by a play session with targeted vocabulary highlighted through definition and supported by gestures and examples.

Outcomes: Children in the intervention group had greater growth in knowledge of vocabulary for the words that had been targeted during the intervention.

Story Friends

Level of Intervention: Targeted

Suitable for: Children aged four to six identified as having an element of SLCN.

Delivery: Delivered by teachers and education staff. Children listened individually to 13 stories using headphones. Each story was listened to three times and classroom activities related to the stories were delivered to the whole class. Strategies were also provided to home.

Summary of intervention: Interactive listening sessions for children including 26 story books.

Outcomes: Vocabulary increased for children in the intervention group.

Summary of SLC interventions

Three of the SLC interventions were designed to be delivered to children who are identified as having SLCN. All of these are delivered to the children in an education setting with Early Talk Boost targeting children in their nursery year and NELI and Story Friends used with children in their reception year. Three other interventions are designed to be delivered within education settings, Doors to Discovery, Let's Begin with the Letter People and Read, Play, Learn. These

interventions have evidence of effectiveness for children living in low-income homes. The remaining interventions are also aimed at population level for specific groups of children. ABC and ABC-T have evidence of being effective at improving SLC skills of children living within foster care. Finally, Infant Health and Development Programme is effective for children born before 37 weeks gestation who weighed under 2.5kg at birth.



Conclusion

The evidence base is ever changing and this document reflects the research available at the date of publication. Each of the interventions described above are at different stages of use, with some having multiple randomised controlled trials supporting their effectiveness, and others in the early stages of their development.

Some of the interventions are designed to support and facilitate parents in developing their child's SLC skills. Others are designed to be delivered directly to children by education or health care professionals. All children have their own unique set of circumstances and, as such, will respond and benefit from a series of interventions available at universal, population

and targeted levels which can be tailored specifically to them. The recommendations from this review include developing a pathway of interventions that support families at universal, population and targeted levels.

In Wales, speech and language acquisition is in Welsh for many children (either exclusively or alongside English and/or other languages). None of the interventions have been evaluated in this context and it is important that this is taken into consideration as SLC development of bilingual or multilingual children is different to monolingual children. It is recommended that an intervention is adapted from those currently available or is developed and then trialled and validated in the Welsh context.

