Family Matters Area Based Childhood (ABC) Programme
Oral Language Evaluation Report

January 2018

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1.0 Background

1.1 The Area Based Childhood Programme (ABC)

The ABC Programme is a cross-departmental initiative targeting investment in effective services to improve the outcomes for children and families living in areas of disadvantage. It is funded by the Department of Children and Youth Affairs (DCYA) and The Atlantic Philanthropies (Atlantic) with an initial investment of 34 million Euros from 2013-2017. In line with the Government's commitment to draw on best international practice and existing services to tackle aspects of child poverty, the ABC programme focuses on the implementation of interventions and approaches that have been found to significantly improve child outcomes in an Irish setting. The overall aim of the programme is to break "the cycle of child poverty within areas where it is most deeply entrenched and where children are most disadvantaged, through integrated and effective services and interventions" in child development, child well-being, parenting and educational disadvantage.[1]

1.2 Family Matters, Ballyfermot

Ballyfermot is one of 12 ABC areas selected for inclusion in the national initiative in 2015. As an area of high disadvantage, it was clear that a focus on oral language needed to be a key feature of the programme developed in response to local need. It was already known through agencies working across services in Ballyfermot, that despite being offered access to services for support, levels of engagement were low. The multitudinous effect of disadvantage meant appointments were being missed due to issues such as home parental mental health issues, substance abuse and difficult and chaotic home circumstances, homelessness and parental capacity issues.

HSE Speech and Language Therapy engages and supports children in Primary Care Centres. If children do not attend appointments, they are sent a letter requesting contact and notice of the defaulted appointment. If no contact is made after a period of time and trying to re-engage the client, they are then discharged. Recognition of the realities experienced by families' subject to acute and chronic stress, Family Matters, Ballyfermot to develop a flexible approach of coming to children in their environment e.g. homes and schools. This was coupled with additional implementation support for parents to improve the likelihood of better and sustained SLC outcomes for their child. Criteria for referral to the Family Matters services included;

- Children/family who have had difficulties in engaging with support services / statutory services and require speech and language support.
- Children affected by Homelessness.
- Children affected by Parental/Carer Substance Misuse.
- Children affected by Parental/Carer Mental Health.

[1] http://www.effectiveservices.org/work/article/area-based-childhood-programme

- Children affected by Parental/Carer Intellectual Difficulty.
- Children who are affected by Parental/Carer involvement with the Criminal Justice System.
- Children who are at risk for Early School Leaving, poor attendance, behavioural issues, sibling history of early school leaving.
- Children who are affected by poor Parent/Child Relationship.
- Previous family difficulty of access and uptake of services.
- Family support required to enhance parental participation in speech and language

1.3 Oral Language Strand, Family Matters

Children from low-income environments are at increased risk of developing language delays which can negatively affect later academic and social outcomes. As children age, deficits between children with language delays and their typically developing peers continue to widen. In order to prevent future difficulties, efficient early language screening tools are needed to identify infants and toddlers who are at risk of language delay as the first step towards providing early intervention.[2] Effective early language screening tools should help identify children at risk for language delays and provide early intervention as soon as concerns arise. It is also acknowledged that continued efforts are needed to identify and develop screening tools for an increasingly diverse population of infants, toddlers and children.[3]

Given the evidenced link between poverty and speech, language and communication issues, intervention needs to be early. Progress in language amongst 3-5 year olds was found to strongly be predicted by language skills at 2, and that for children whose parents had no or lower qualifications, poor early communication skills were highly likely to persist through the pre-school(3-5) period and beyond.[3] Research has suggested that it is not poverty per se which matters most. The child's communication environment (the early ownership of books, trips to the library, attendance at pre-school, parents teaching a range of activities and the number of toys and books available) is a more important predictor of language development at two, and school entry 'baseline' scores at four than socio-economic background alone.[4] In this respect, programmes that should include strategies that seek to influence the child's home environment and

[2] Larson, A. (2016). Language screening for infants and toddlers: A literature review of four commercially available tools. Communication Disorders Quarterly, Vol. 38 (1) 3-12

[3] Ibid 1

[3] Parkes, a. & Wight, D. (2011) Growing Up in Scotland: Research Findings No.3/2011: Growing Up in Scotland - Parenting and Children's Health

[4] Roulstone, S. et al. (2011) Investigating the role of language in children's early educational outcomes. DfE Research Report, 134. England

parenting experiences, the quality of the parent-child relationship and frequency of home learning activities.[5] This is likely to require a multi-modal approach involving key influencers in children's lives who are connected subsequently to parents/carers. There is good evidence that co-ordinated, community-wide, interagency strategies to up-skill the children's workforce and get key messages across to parents of young children can improve language skills across the community, with a particular impact on disadvantaged children.[6]

Taking account of national and international research and placing it within the target area for ABC in Ballyfermot, the logic model for Family Matters has developed a specialised and universal targeted approach to improve speech, language and communication outcomes for children and families in the geographical boundaries of this ABC programme. This is centred around the employment of two speech and language therapists (SLT) by the Family Matters lead agency to implement an oral language service for the local community. The operational structure comprises of referrals from agencies and organisations within the geographical remit of Ballyfermot ABC to the Family Matters SLT. Referral actions are decided and supports provided if the child enters into therapy. This includes strategies and activities for home based practice with the parent/carer. Supplementary support is offered to schools or settings to further support the SLC development of the referred child. Although this represents a specialised approach that offers direct and expedited access to SLT assessment, the oral language strand of Family Matters created opportunities for professional development to strengthen the capacity, knowledge and confidence of children's educators (early years practitioners, teachers and special needs assistants).

2.0 Methodology

Children were referred to Family Matters from agencies and organisations who were supporting children and parents in the local area (Section 2.1). Each referral is cross-checked with the HSE SLT Team to check if the child is on their caseload and their levels of attendance and engagement was examined and informed decisions around actions taken were made. A background history leading up to the referral and areas of concern were provided to the SLT team at Family Matters. Appointments were arranged in settings or at schools where assessment tools were used to identify communication milestones and difficulties. Children identified as having delays in oral language and communication were supported by the SLT through a series of planned actions and/or referred to HSE SLT services. These were shared with the parents and strategies demonstrated for home practice. Where other developmental difficulties are suspected, onward referrals to other relevant primary care professionals and community services were made

[5] Ibid 3

[6] Ibid 4

2.1 Main Referrers

School

- Class teacher
- Home-School Community Liaison Coordinator
- Principals
- Deputy Principals

Creche/Preschool

- Preschool Managers
- Creche Managers
- Child Care Workers

Other Referrers

- HSE SLT
- Public Health Nurse
- Community Organisations (e.g., Familibase)
- Referral Outcomes

2.2 Methods

2.2.1 Screening and Assessment Tools

The selection of speech and language assessment measures were directly dictated by the age of children and their capacity to complete standardised tests. The tests themselves have the relevant professional credibility for clinical use with associated norms and clinical criterial to determine diagnosis by the SLT. The tests included (Table 1);

- Preschool Language Scales, Fifth Edition or (PLS-5)[7]
- Diagnostic Evaluation of Articulation and Phonology (DEAP)[8]
- Renfrew Action Picture Test (RAPT)
- Clinical Evaluation of Language Fundamentals, Fourth Edition (CELF-4)
- Clinical Evaluation of Language Fundamentals Preschool-2 (CELF-P2)
- Receptive-Expressive Emergent Language Test-Third Edition (REEL-3)

Table 1: Speech and language assessment tools by age

Age Group	Test	Purpose of Test	Components Measured
Birth to 7.11 years of age	PLS-5	An interactive assessment of developmental language skills	Total language Auditory comprehension Expressive communications

[7] Zimmerman, I., Violette G. Steiner, BS, Roberta Evatt Pond, MA. (2011). Pre School Language Scale: Fifth Edition.

[8] The Irish standardisation manual of the DEAP has recently been published.

3.0-8.0 years of age	RAPT	To stimulate children to give examples of spoken language	Information (vocabulary) Grammar (function words and word endings)
3.0-6.11 years of age	DEAP	To differentiate between disorders of articulation (functional and organic) delayed phonological development, consistent and inconsistent phonological disorder	Screening tool Articulation Oro-motor ability Phonology Inconsistency

3.0-6.0 years of age	CELF-P2	Comprehensively measures a broad range of language skills for children age 3-6 years	**Subtests** Concepts and Following Directions Word Structure Expressive Vocabulary Recalling Sentences Sentence Structure Basic Concepts Recalling Sentences in Context Word Classes Phonological Awareness **Indices** Core Language Index Receptive Language Index Expressive Language Index Language Structure Index Language Content Index

7.0-16.0 years of age	CELF-4	The CELF®-4 assessment process has the flexibility and diagnostic information to design an individualised assessment path	**Subtests** Concepts and Following Directions Word Structure Expressive Vocabulary Recalling Sentences Formulating Sentences Sentence Structure Word Classes Word Definitions Understanding Spoken Paragraphs Sentence Assembly Semantic Relationships **Indices** Core Language Index Receptive Language Index Expressive Language Index Language Structure Index Language Content Index Language Memory Index Working memory Index

2.3 Sample

2.3.1 Referrals

A total of 272 referrals were made to Family Matters SLT team during the implementation of ABC programme in Ballyfermot, Dublin. Table 2 details the potential outcome once a referral was received. These are determined by assessment outcome and appropriateness of referral to the SLT service in Family Matters. From this point an action plan was put in place from a matrix of options; Therapy block offered; Home and school programme developed; Onward referral to other primary care service; Onward referral to HSE SLT; Onward referral to community/voluntary based organisation. Taking this into account, 165 children who met the Family Matters SLT criteria for inclusion as an appropriate referral were assessed using the standardised SLT measures described previously. Table 3 outlines the referral outcome.

Table 2: Referral Actions

Assessment Result	Action
Within Normal Limits	Case Closed Some work may be given on any mild difficulties identified e.g. home and school programme Onward referral to other Primary Care Services if issues arise that are identified by SLT, school or parent e.g. Primary Care: Occupational Therapy, Psychology, Audiology, Physiotherapy, CAMHS, NEPS, Other Community Organisations e.g. Familibase, Daughters of Charity, Barnardos.
Not Within Normal Limits: Mild Difficulties	Onward referral to HSE SLT Home and school program given to work on difficulties Family Matters SLT to offer reviews to check child is making progress. If progress is not being made, the child may then be seen directly for therapy. If progress is made and there are no longer issues the child's case is closed. Therapy where home/school programmes were unlikely to be successful without more regular SLT support. Onward referral to other Primary Care Services if issues arise that are identified by SLT, school or parent e.g. Primary Care: Occupational Therapy, Psychology, Audiology, Physiotherapy, CAMHS, NEPS, Other Community Organisations e.g. Familibase, Daughters of Charity, Barnardos.
Not Within Normal Limits: Moderate Difficulties	Onward referral to HSE SLT Therapy block offered. Staff from school and parent to attend all sessions. In each session, SLT provides home and school program to work on between sessions. Onward referral to other Primary Care Services if issues arise that are identified by SLT, school or parent e.g. Primary Care: Occupational Therapy, Psychology, Audiology, Physiotherapy, CAMHS, NEPS, Other Community Organisations e.g. Familibase, Daughters of Charity, Barnardos.
Not Within Normal Limits: Severe Difficulties	Onward referral to HSE SLT Therapy block offered. Staff from school and parent to attend all sessions. In each session, SLT provides home and school program to work on between sessions. Language class referral for severe difficulties Onward referral to other Primary Care Services if issues arise that are identified by SLT, school or parent, e.g., Primary Care; Occupational Therapy, Psychology, Audiology, Physiotherapy, CAMHS, NEPS, Language Class, Other Community Organisations, e.g., Familibase, Daughters of Charity, Barnardos.

Table 3: Referral outcomes

Referral outcome	Details of Referral Outcome	Total
Links with HSE SLT (n=150)	Total number previously discharged from HSE SLT as did not attend and did not make contact	31
	Total number referred to FM as hard to reach families that were never referred to HSE SLT previously	84
	Total number linked with HSE SLT before referral to FM that were flagged as being at risk and not fully engaged.	16
	Total number engaging with HSE SLT (e.g. in foster care and requiring both services, inappropriate referrals)	13
	Total number waiting to engage with HSE SLT (waiting to see if they will fully engage; i.e., attend appointment and complete therapy homework)	6
Discharged (n=91)	Total number that were within normal limits at initial assessment	12
	Total number that completed therapy and discharged as within normal limits	31
	No longer suitable for therapy for other reason and most would have been referred to HSE SLT too (e.g. not in Family Matters School, Secondary school etc). All these children were referred to the most appropriate HSE service	25
	Total number that are fully engaging with HSE	22
Total number of referrals not accepted (n=31)	Now fully engaged with HSE SLT	12
	Not hard to reach and likely to engage with HSE SLT	14
	Other reason not appropriate for FM Service (e.g. not in FM School, Secondary school etc)	5
Total Referrals		**272**

2.3.2 Attendance Rates

Family Matters SLT recorded their interactions with children and adults as part of the service being delivered under the oral language strand of provision in Ballyfermot ABC. This section sets out rates of attendance in relation to SLT appointments and levels of engagement at different intervals during service delivery. Data from the two SLTs in Family Matters were aggregated and presented in Tables 4 and 5. It should be noted that Table 5 denotes home guardian and school staff attendance. This is due to the fact they represented the largest portion of adults involved in SLT sessions. Other adults including grandparents, family members (aunt, sister) and family development officers. Descriptions of the recording protocols used by each SLT are provided below;

Client (child) attendance: Total number of appointments, number of appointments attended, numbers did not attend, number of appointments cancelled. These are separated into initial assessments, review assessments and therapy appointments.

Adult Attendance at sessions: This looks at the numbers that attended sessions they were invited to. There were occasions when it was unnecessary to invite adults as it could have been a brief check in for example. Adult attendance documented included; parent, grandparent, guardian, teacher, SNA, Family Development Officers.

Consultations: These are meetings that were counted in the database for children accepted to the service. These consultations include giving programmes advice/ core group meetings for a child.

Screens: Schools asked Family Matters SLT to support them and screen children for difficulties. This screen took place where teachers describe concerns about a child and the Family Matters SLT outline the most appropriate SLT referrals for the child.

Drop Ins:[9] These were held in the school. Teachers would contact parents of children with communication difficulties. Then the parent and child/parent on their own/teacher on their own would attend and get advice or strategies to support the child as a once off support.

3.2.3.1 Children's Attendance Rates

A total of 1828 SLT sessions were attended by children referred to Family Matters SLT. A further 8% were recorded as DNA with 11% cancelled. Out of a potential 2259 sessions, this means 81% were attended (Table 4). Recorded attendance at initial and review assessment was added to therapy sessions to achieve a summative total of 2259. There is a similar attendance rate at each of these points with lowest for therapy sessions (77%). This is presented graphically in Figure 1.

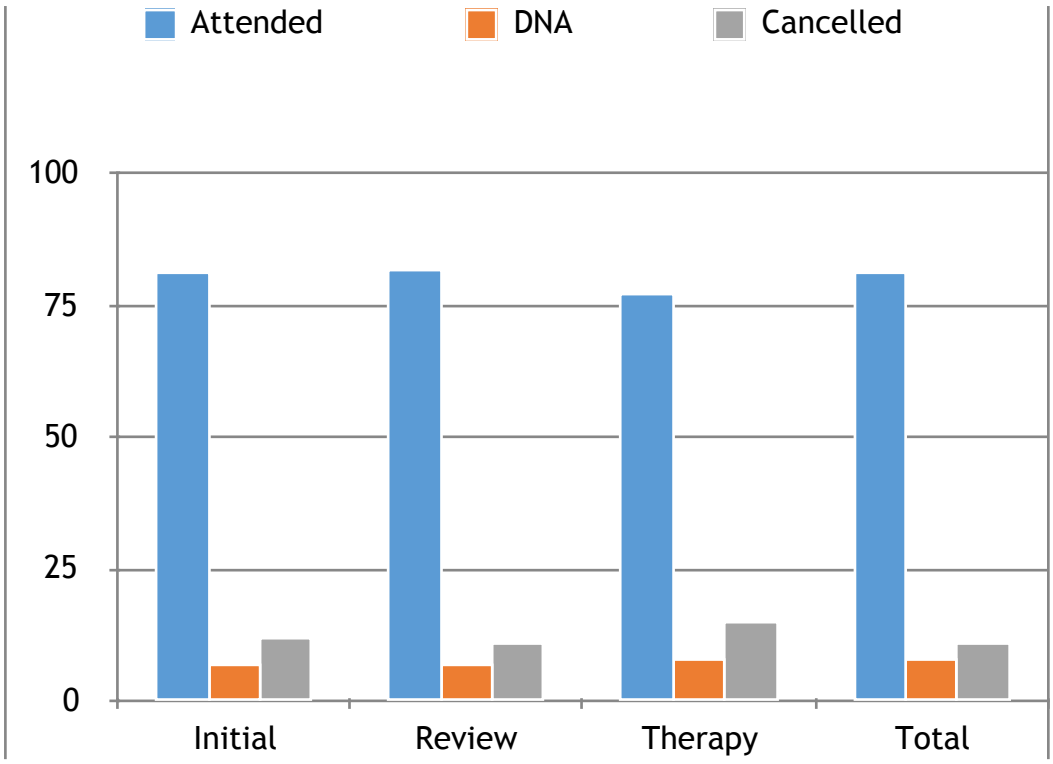
Table 4: Children's attendance rates

Appointment Type	Outcome	Number	% of Assessment Total
Initial Assessment	Attended	397	82
	Did not attend	35	7

[9] There were additional Drop Ins and Screens completed but not formally recorded as they happened in an informal and unscheduled basis

	Cancelled	56	11
	Total	488	100
Review Assessment	Attended	249	82
	Did not attend	20	7
	Cancelled	33	11
	Total	302	100
Therapy	Attended	1487	77
	Did not attend	160	8
	Cancelled	288	15
	Total	1935	100
Appointment Type	**Outcome**	**Number**	**% of Assessment Total**
All Appointment Types	Attended	1828	81
	Did not attend	187	8
	Cancelled	244	11
	Total	2259	100

Figure 1: Rates of attendance, DNA and cancellations for children referred to Family Matters SLT



3.2.3.2 Adult Attendance Rates

Children accompanied to appointments by parents or other primary carers focused on promoting oral language development and enhancement at home and in school. A smaller number of other adults, primarily other family members attended sessions. For the purposes of this report, home (parent and other family members) and school (teachers, SNAs) attendance rates were examined and are presented in Table 5. Figure 2 provides a visual depiction of the rates of attendance, compared between home and school.

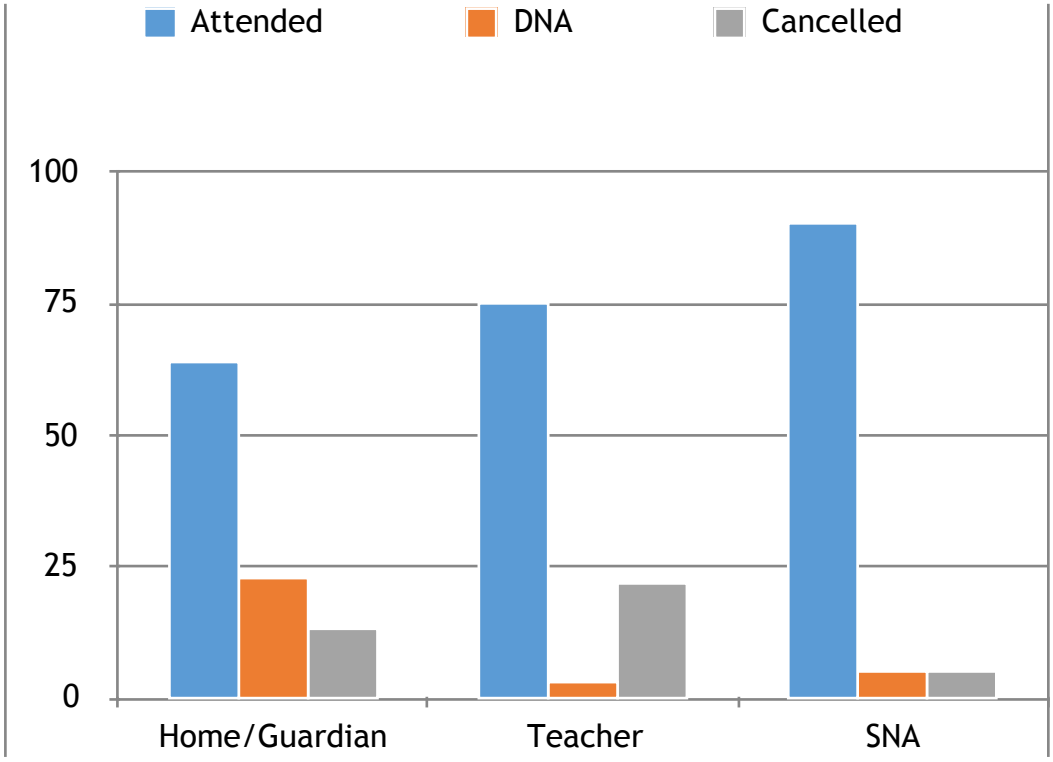
Overall, 2777 sessions were attended by an adult (parent, teacher, SNA). It should be noted that some sessions had joint attendance which therefore explains the higher number of recorded attendance across adults compared to 1828 sessions delivered by SLT to children. Taken together it represents a 73% attendance rates and a 15% DNA. A smaller number (12%) were cancelled. Inspection of attendance rates within the adult groups found that largest number of sessions were attended by adults from the child's home (1473) compared to school (1304). This accounted for 53% and 47% respectively. Teachers attendance was calculated as 14%. However, examination of parental engagement of all appointment types revealed that 64% of sessions were attended by parents, with 60% specifically attending therapy sessions during the intervention period. An expected high rate of attendance was recorded for SNA (91%) which is likely to be explained by their professional role in a child's life and structural supports in a school setting to accommodate their attendance. This equally would apply to teachers attending appointments (75%).

Table 5: Home guardian and School staff attendance rates at appointments

Appointment Type	Outcome	Home	% of total at each point	School	% of total at each point
Initial Assessment	Attended	316	79	15	52
	Did not attend	52	13	5	17
	Cancelled	31	8	9	31
	Total	399	100	29	100
Review Assessment	Attended	129	70	40	98
	Did not attend	52	28	1	2
	Cancelled	4	2	0	0
	Total	185	100	41	100
Therapy	Attended	1041	60	1249	86
	Did not attend	410	24	55	4
Appointment Type	Outcome	Home	% of total at each point	School	% of total at each point
	Cancelled	271	16	155	10
	Total	1722	100	1459	100
All Appointment Types	Attended	1473	64	1304	85
	Did not attend	514	22	61	4
	Cancelled	306	14	164	11

	Total	2293	100	1530	100

Figure 2: Rates of attendance, DNA and cancellations of adults accompanying a child to Family Matters SLT



2.3.3 Assessment Rates

Between 2015 and 2017 a total of 203 children were assessed by Family Matters SLT team. Table 4 details the breakdown across age profiles. For the purposes of the 0-3 sub study which includes the 0-6 oral language piece, the sample comprises of children up to the age of 6 years and 11 months. Older children who entered the service from a referrer could be 7-16 years of age. Mean age in the younger cohort was 5.08. In the older age group, mean age was calculated at 9.52.

Table 3: Profile of children assessed by Family Matters SLT

Measurement Interval	0-6 years of age	7-16 years of age	Total number of children
Baseline only	81	32	113
Baseline and follow up	72	18	90
Total	153	50	203

2.4 Analysis

The scoring manuals for each SLT assessment tool were followed for the purposes of data transposition and interpretation. The specific instructions for each test outlined in Section 2.2.1, transferred raw data into standard scores and percentile ranks. Coding took place at the point of data entry into excel. Transposed data for

individuals were then ordered at group level as per the clinical classifications used by the applied measures. These are presented in tabular format in Section 3 of this report. The findings reflect changes across categories or levels of classification to indicate the degree of improvement following therapy or where only baseline assessment took place, it indicates the degree of SLC difficulties being recorded at point of referral.

3.0 Findings

3.1 Birth to Six Oral Language Assessment

The separation of SLT assessments by age intervals of 0-6 and 7-16 years of age was influenced by the National Study's delineation of oral language interventions by these age profiles. In line with this, Family Matters SLT screening and diagnostic tools have been separated and described within 0-6 followed by 7-16 years of age.

Further divisions have been imposed by reporting findings where only baseline scores were taken and no intervention was required. Application of oral language strategies where intervention was required has been assessed by comparing baseline and follow up SLT assessment scores. Analysis of matched pairs took place on the basis of pre and post test scores being available within the evaluation time scale. This meant including children who had received a baseline test from August 2015 and follow up by September 2017. Where possible, a repeated measures design was employed with corresponding tests at both measurement intervals being completed. Due to ceilings on age equivalence norms for tests, it was not always possible to match measures at follow up. Where this occurred, modalities of language and communication were compared. For example, Expressive and Receptive Language Indices represented a common metric across the tools and were assessed side by side. In this regard, a moderate expressive language delay in one test would be equivocal with a moderate expressive language delay in different test.

3.1.1 Baseline collection only

SLT assessments taken at the initial point of referral have been detailed in Tables 4 to 7. These are evidenced across the CELF-P2, REEL-3, PLS-5 and DEAP. The largest proportion of children in this cohort completed the CELF-P2. Examination of the classifications across the tests suggest children between 0-6 years of age had average or below average abilities. Children in the low to severe categories ranged between 43% (LCI), 39% (RLI), 27% (CLI) to 25% (ELI). 63% were recorded as average on the Core Language Index. The lowest representation of children in the average category across the CELF Preschool Indexes was for Receptive Language (46%). A corresponding higher score for moderate difficulties in this area was calculated (28%), when compared to other sub Indexes.(Table 4).

The PLS-5 measures receptive language through the metric of auditory comprehension. Expressive comprehension is akin to expressive language used in the CELF. There is a total score calculated of both AC and EC to give a blended

output of language ability. In the Family Matters 0-6 cohort, 17 children received the PLS-5 at baseline. 59% were designated as average for AC (receptive language) while 64% had average scores for EC (expressive language). For total scores which blended both AC and EC, 54% were recorded as average and 39% as moderate (Table 5).

Table 6 outlines REEL-3 baseline results for 16 children ranging in age from 21-36 months with an average 30 months across the group. The metrics of expressive language and receptive language are also employed by this tool. A seven level classification scheme provides a framework within which the SLT will identify the ability of the child completing the test. This ranges from 'Very superior' to 'Poor'. In this small group, a divergent pattern emerged across the two sub scales. Within RL, children were equally distributed between average, poor and very poor test scores. With respect to EL, 46% were categorised as average and 40% below average. The remainder were either above average or poor in their capabilities of spoken language. Taking account of sound articulation, the DEAP test was administered alongside or in isolation to a child to assess oral language difficulties around pronunciation. Table 7 details the findings for 48 children who received the DEAP at baseline only. Differences between correct vowels, consonants and phonemes were calculated. While a larger proportion of the cohort were considered to be below average in terms of articulation of consonants and phonemes (67% and 63% respectively), a smaller number were considered to be below the norm for their age with respect to vowel pronunciation (23%). Vowel distortion is a disordered process and therefore a rarer process.

Table 4: CELF Preschool Pre Assessment Results[10]

Core Language Score and Index Scores	Classification	CLI Standard Score Pre	RLI Standard Score Pre	ELI Standard Score Pre	LCI Standard Score Pre	LSI Standard Score Pre
115+>	Above average	2	0	4	1	1
86-114	Average	40	25	29	24	29
78-85	Marginal/ Borderline/Mild	5	8	6	5	10
71-77	Low range/Moderate	10	15	7	12	10
70 +<	Very low range/ Severe	7	6	6	8	3
Total		64	54	52	47	53

[10] Scores were not available for all items on the subscales which explains the discrepancy in total count across the different subscales. This applies to all of the tests

Table 5: PLS-5 Pre Assessment Results

Language Sub Scale Scores	Classification	AC Standard Score Pre	EC Standard Score Pre	Total EC+AC Standard Score Pre
85+	Average	10	9	7
79-84	Mild	1	1	0
65-78	Moderate	4	4	6
<64	Severe	2	0	1
Total		17	14	14

Table 6: REEL Pre Assessment Results

Language Ability Scores	Classification	RL Ability Score Pre	EL Ability Score Pre	Sum RL+EL Pre
>130	Very Superior	0	0	0
121-130	Superior	0	0	0
111-120	Above Average	0	1	0
90-110	Average	6	8	6
80-89	Below Average	5	6	7
70-79	Poor	5	1	2
<70	Very Poor	0	0	1
Total		16	16	16

Table 7: DEAP Pre Assessment Results

Speech Sub Scale Scores	Classification	Consonants correct standard score pre	Vowels correct standard score pre	Phonemes correct standard score pre
>7	Below Average	32	11	30
7-13	Average	15	37	18
<13	Above Average	1	0	0
Total		48	48	48

3.1.2 Impact of Interventions

Inspection of Table 8 indicates that the scores after receiving SLT support remained within the moderate difficulty level. However there were positive shifts

in scores denoting an improvement, though slight, after the intervention. Comparisons between pre and post intervention test scores on the CELF-P2 found that all but two children improved in their core language ability, expressive and receptive language. This meant moving from mild or moderate to average and in a small number of cases, above average. The most pronounced difference was recorded for receptive language. An additional 36% of children moving into the average range in RL post intervention compared to baseline. Indices of language content
(LCI) and language structure (LSI) recorded positive shifts out of moderate level difficulties to mild or average range abilities for these modalities (Table 7 and Figure 3).

Most children assessed on the PLS-5 at baseline were subsequently re-assessed on the CELF-P2 with the exception of two children.

In comparison, findings from the DEAP test point to substantial changes in children's articulation capabilities for speech sounds (consonants and vowels). This is evidenced in the redistribution of children categorised as below average to average in the test scores. A 35% increase in % correct consonants was observed at follow up. In addition, an 18% improvement was recorded in % correct vowels expressed by children after the intervention combined with 17% rise in correct phonemes. Together this suggests children's speech pronunciation improved and got easier and became easier to understand compared to their entry into Family Matters at referral stage (Table 9 and Figure 4). Furthermore, distribution of the percentage of correct vowels, consonants and phonemes reduced towards the higher end of the scale with a larger number of children providing accurate or almost accurate responses to the test items.

Table 8: CELF-P2 Pre and Post Assessment Results

Core Language Score and Index Scores	Classification	CLI Pre	C L I Post	RLI Pre	R L I Post	E L I Pre	E L I Post	LCI Pre	L C I Post	L S I Pre	L S I Post
115+>	Above average	0	2	0	0	0	0	0	0	0	1
86-114	Average	14	16	5	14	12	15	5	8	10	12
78-85	Marginal/ Borderline/Mild	5	4	8	6	5	3	3	1	4	2
71-77	Low range/ Moderate	5	3	8	2	2	2	1	2	1	1

70 +<	Very low range/ Severe	1	0	2	1	1	0	2	0	1	0
Total		25	25	23	23	20	20	11	11	16	16

Table 9: PLS-5 Pre and Post Assessments Results

Language Sub Scale Scores	Classification	AC Pre	AC Post	EC Pre	EC Post	Total language score Pre	Total Language Score Post
85+	Average	0	0	0	0	0	0
79-84	Mild	0	0	0	0	0	0
65-78	Moderate	2	2	2	1	2	0
<64	Severe	0	0	0	1	0	2
Total		2	2	2	2	2	2

Table 10: DEAP Pre and Post Assessment Results

Speech Sub Scale Scores	Classification	Consonants correct standard score pre	Consonants correct standard score post	Vowels correct standard score pre	Vowels correct standard score post	Phonemes correct standard score pre	Phonemes correct standard score post
>7	Below Average	22	12	9	1	13	8
7-13	Average	7	17	20	28	16	21
<13	Above Average	0	0	0	0	0	0
Total		29	29	29	29	29	29

Figure 3: CELF-P2 Pre and Post Assessment Results

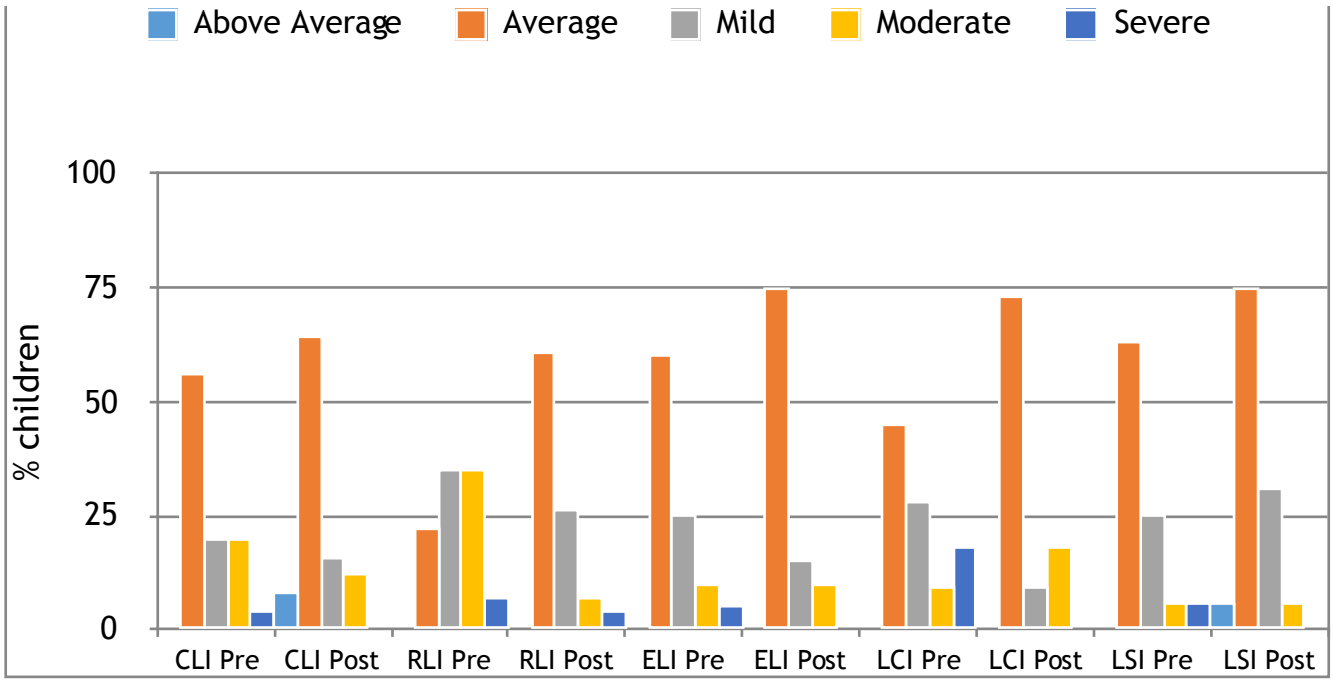
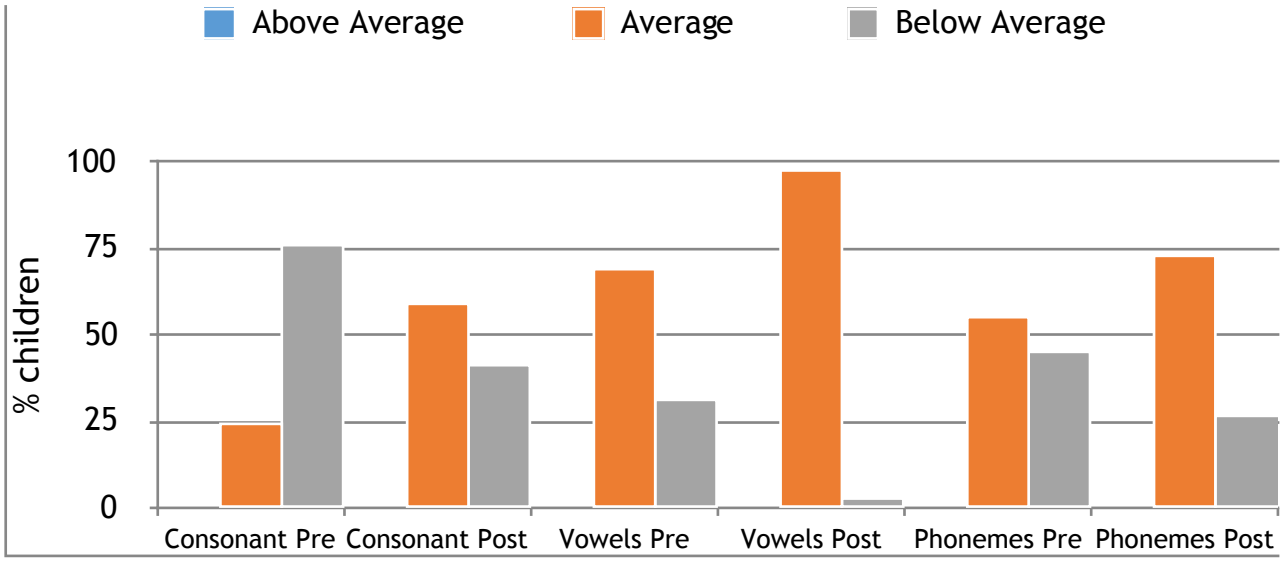


Figure 4: DEAP Pre and Post Assessment Results (% Correct)



3.1.2.1 Test variations between pre and post assessment points

Due to developmental changes in children and natural age progression over time, this required the application of age appropriate tests at assessment intervals. It resulted in different language tests being applied at follow-up points. Despite the specific standardisation of these tests, they were similar in terms of the language component being measured. Given the psychometric nuances of each test, it is important to treat direct comparisons with caution when assess the degree of change in language indices. Table 11 details the comparability of the REEL-3, PLS-5 and CELF-P2 across language areas.

Table 11: Mixed Test Measures Pre and Post Assessment Results

REEL	PLS-5	CELF-P2
Receptive Language Ability Score (RL Ability Score)	Auditory Comprehension (AC)	Receptive Language Index (RLI)
Expressive Language Ability Score (EL Ability Score)	Expressive Communication (EC)	Expressive Language Index (ELI)
Language Ability Score (LAS)	Total Language Score (LS)	Core Language Score (CLS)

Language performance identified through calculation of scores from standardised tests that changed between baseline and follow-up, applied the classification system for comparisons outlined in Table 11. The findings for children who moved from REEL to PLS-5, REEL to CELF-P2 and PLS-5 to CELF-P2 are detailed in Table 12. CELF-P2 at baseline and CELF-4 at follow up are presented in Table 13. Finally, Table 14 contains children's scores who completed at CELF-4 (5-8 years) at first session and were given CELF-4 (9-16 years) at completion of therapy. Together these account for 20 children who received SLC therapy from the FM team. Across each of these tests, a positive shift was observed towards improved language abilities for receptive, expressive and core language functions. Figures 5-6 provide visual depiction of the percentage of children with an 'average' classification as per the language test scale criteria.[11] These show the positive shift in language ability with a higher percentage of children recorded as 'average' at the completion of therapy compared to baseline scores calculated at the start of FM SLT service engagement.

Table 12: Diagnosis classification using mixed tests (pre and post)

Classification	Pre RL	Post RL	Pre EL	Post EL	Pre CL	Post PL
Above average	0	0	0	0	0	0
Average	1	5	2	4	1	5
Marginal/Borderline/Mild	2	3	3	3	3	3
Low range/Moderate	3	1	2	2	3	1
Very low range/Severe	3	0	2	0	2	0
Total	9	9	9	9	9	9

Table 13: Diagnosis classification using mixed tests (pre and post) (CELF-P2 pre and CELF-4 [5-8] post)

[11] Table 14 is not presented in graphical format given the small sample size in this group.

Core Language Score and Index Scores	Classification	CLI Pre	CLI Post	RLI Pre	RLI Post	ELI Pre	ELI Post	LCI Pre	LCI Post	LSI Pre	LSI Post
115+>	Above average	0	0	0	0	0	0	0	0	0	0
86-114	Average	0	3	0	3	0	4	0	3	0	3
78-85	Marginal/ Borderline/Mild	1	4	3	3	1	3	3	3	3	3
71-77	Low range/ Moderate	4	0	2	1	3	0	2	1	2	1
70 +<	Very low range/ Severe	2	0	2	0	3	0	2	0	2	0
Total		7	7	7	7	7	7	7	7	7	7

Table 14: Pre CELF-4 (5-8 years of age) and post CELF-4 (9-16 years of age)[12]

Core Language Score and Index Scores	Classification	CLI Pre	CLI Post	RLI Pre	RLI Post	ELI Pre	ELI Post	LCI Pre	LCI Post
115+>	Above average	0	0	0	0	0	0	0	0
86-114	Average	0	2	0	1	0	2	0	2
78-85	Marginal/Borderline/ Mild	0	1	0	3	0	2	1	2
71-77	Low range/Moderate	3	1	3	1	2	0	2	0
70 +<	Very low range/ Severe	1	0	1	0	2	0	1	0
Total		4	4	4	4	4	4	4	4

Figure 5: Diagnosis classification using mixed tests (pre and post)

[12] LSI is not included in this table as the indices for language structure and language memory are not comparable in these age groups

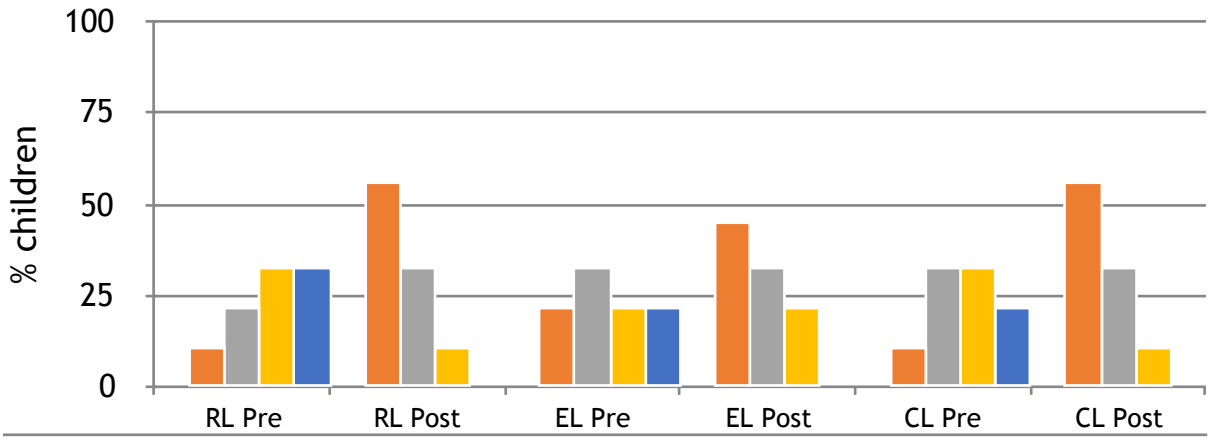
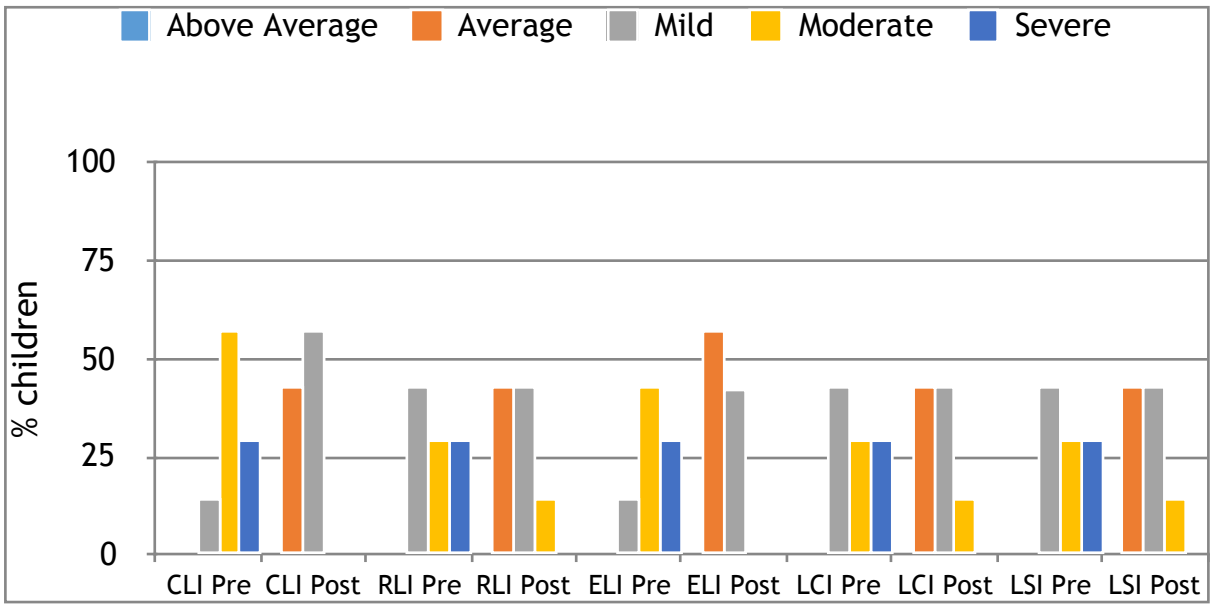


Figure 6: Diagnosis classification using mixed tests (pre and post) (CELF-P2 pre and CELF-4 [5-8] post)



3.2 Oral Language Assessment 7-16 Year Olds

3.2.1 Baseline collection only

Responding to referrals from external agencies, Family Matters SLTs were engaged to "provide oral language supports for children aged 5 upwards" oral language supports were required for children aged 5 upwards. A single test was delivered to children in the older age group which incorporated multiple sub tests and generated index scores that assisted in diagnostic screening. The CELF-4 (5-16 years of age) was administered as per its standardised instructions. Overall there were a smaller number of children in the older age bracket referred to Family Matters for oral language or communication concerns.

Table 15 outlines baseline scores only across CLI, RLI, ELI, LCI and LMI. It should be noted that children with 'low to severe range scores' accounted for a large portion of the cohort. This was calculated as 67% (CLI and ELI), 64% (LSI), 34% (RLI) and 14% (LCI). Some of the children with these scores were transferred to HSE SLT or moved outside of Family Matters jurisdiction.

Table 15: Pre Assessment Results

Core Language Score and Index Scores	Classification	CLI Pre	RLI Pre	ELI Pre	LCI Pre	LMI Pre
115+>	Above average	0	0	0	1	0
86-114	Average	4	5	5	5	4
78-85	Marginal/Borderline/ Mild	1	5	0	0	1
71-77	Low range/Moderate	3	2	5	0	2
70 +<	Very low range/Severe	7	3	5	1	7
Total		15	15	15	7	14

3.2.2 Impact of Intervention

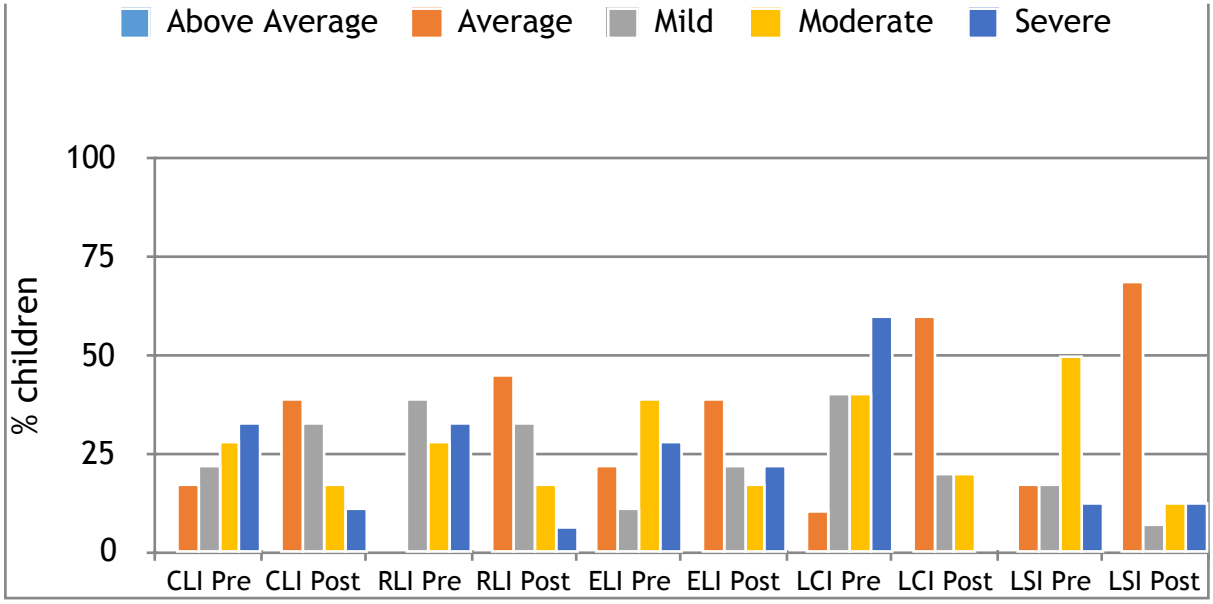
Eighteen children ranging in age between 7.5 and 12 years of age were provided with supports from the Family Matters SLT team. Following completion of the intervention, the children were asked to complete the same test to determine change in oral language capacities. Table 16 details the scores recorded at follow up. Across all of the sub scales, an increase was observed in the number of children who achieved average scores compared to baseline where they were described as having mild or moderate difficulties. There is an expected corresponding decrease in children who gave responses to test questions that suggested low or very low abilities in receptive and expressive language, language content and memory. A 33% decrease in 'low to severe range scores' was recorded for CLI; 33% for RLI; 28% for ELI and 34% for LMI. The smaller number who completed the LCI sub scale repeated the pattern with a reduction in the 'low to severe' range by end of therapy re-assessment. The changes are visually represented in Figure 6. These improvements are evidenced in higher ratings across all indices on the CELF-4. A small number completed the CELF-4 (5-8) at baseline and at follow-up were administered the CELF-4 (9-16) based on age appropriateness (n=3). These are included in the table below.

Table 16: CELF-4-Pre and Post Results

Core Language Score and Index Scores	Classification	CLI Pre	CLI Post	RLI Pre	RLI Post	ELI Pre	ELI Post	LCI Pre	LCI Post	LMI Pre	LMI Post
115+>	Above average	0	0	0	0	0	0	0	0	0	0

86-114	Average	3	7	0	8	4	7	1	6	3	11
78-85	Marginal/ Borderline/Mild	4	6	7	6	2	4	4	2	3	1
71-77	Low range/ Moderate	5	3	5	3	7	3	4	2	8	2
70 +<	Very low range/ Severe	6	2	6	1	5	4	1	0	2	2
Total		18	18	18	18	18	18	10	10	16	16

Figure 7: Language outcomes for 7+ age group in FM services (CELF-4)



3.3 Professional Capacity Development

Training with Early Years settings focused on providing information that improved the knowledge of practitioners and teachers in order to increase capacity around speech, language, communication and numeracy milestones. Workshops on the Elklan programme for under 5 year olds were attended by 33 participants. Sixty one teachers and SNAs completed the Elklan 5-11 programme.

The SLT team at Family Matters offered a portfolio of activities that provided practitioners, teachers and SNA with the following;

- Useful resources for oral language development
- Oral language activities
- Vocabulary strengthening strategies
- Elklan Programme 5-11 year olds

These were intended to increase the capacity of teachers within their own school setting to recognise language, communication difficulties and have access to strategies they could implement where relevant. Strengthening the internal system and professional efficacy of teachers around oral language meant ongoing attention could be paid to communication day to day rather than only at a set time.

Table 17: Professional Development Training and Capacity Building

Training Activity	Total attended
Early Years Training	
Identification of SLCN/ Communication Milestones	**67**
Elklan's Speech and Language Support for 3-5s	**33**
Primary School Training	
Identification of SLCN/ Communication Milestones	**10**
Useful Resources Workshop	**30**
Oral Language Activities Workshop	**23**
Vocabulary Strategies Workshop	**56**
Elklan Speech and Language Support for 5-11s (for SNA's and teachers)	**61**
Total	**280**

3.3.1 Elklan Training

Elklan is a set of evidence informed courses for education and other staff working with children that provides strategies, information and support on SLC

development for classrooms. Both SLT staff at Family Matters are accredited practitioners in Elklan programmes. For the purposes of the oral language strand of the ABC programme, Elklan training was offered to early years practitioners, primary school teachers and special needs assistants (SNAs) between 2015-2017. Eleven early years settings and 12 national schools took part in Elklan training. Learning components of the programmes for each cohort, delineated by age group, are provided below;

Elklan Speech and Language Support for Under 5s

- What is Communication
- Adult-Child Interaction
- Developing Play, Listening and Attention Skills
- Promoting The Development of Vocabulary
- Blank/Language of Learning
- Modifying Adult's Speech To Help A Child Understand
- Encouraging Expressive Language Development
- Promoting Effective Communication and Social Skills
- Supporting Children with Unclear Speech
- Stammering

Elklan Speech and Language Support for 5-11s

- What Is Involved In Communication
- Non-Verbal Communication, Listening, Attention and Skills
- Memory And Independent Learning
- Working With Information Carrying Words
- Helping Children To Understand Abstract Language
- Promoting Vocabulary Development
- Developing Expressive Language
- Promoting Social Communication and Social Interaction Skills
- Supporting Children with Unclear Speech And The Link Between Speech, Language, Reading and Writing
- Helping Children Who Stammer

3.3.1.1 Training Evaluations

Time was spent at the start of each programme which was set over a series of weeks, to explore the goals and key concerns of participants who had registered for Elklan training. There were significant overlap in what participants stated they wanted to gain from the course. This tended to focus on;

- Greater levels of knowledge and understanding about SLC development
- Identifying difficulties in SLC
- Strategies and tips to help children improve SLC development
- How to help and support children who have difficulties communicating their needs and expressing themselves

All three groups were asked to identify the main difficulty they have observed for children with SLC difficulties in their classroom. There was unanimous citing of these issues which included; • Inability to express themselves
• Interact with peers and staff
• Being understood
• Poor vocabulary
• High levels of frustration
• Difficulties with emotional regulation
• Poor parental support
• Lack of formal professional intervention
• Educational progress being affected

A second related question was asked in terms of the main difficulty practitioners, teachers, SNAs encounter in helping children with SLC needs. A correlated set of responses were provided by participants to the issues identified above. These focused on being able to address how best to support a child to be understood by peers and staff, to express their emotions around this frustration and not to feel isolated in their disconnectedness. All professionals on the training programme expressed a sense of sadness and worry about the impact SLC deficits were having on the social, emotional and educational development of children. Understanding how these children are feeling and getting tools to equip staff to support children in this situation, was the main priority in reducing or preventing the acceleration of poor outcomes.

3.3.1.2 Training Outcomes

Participants at all Elklan completed a standardised pre and post evaluation form that had two components. The first examined self reported knowledge and capacity to support children with SLC development. The second focused on the practitioner, teacher, SNA's level of confidence in this area of children's development. The same set of 10 questions were asked at the start and end of the training programme. A five point rating scale (where 1 is poor and 5 is excellent) was completed and a mean score calculated for each item within the training cohorts. The findings from Elklan training programmes delivered by Family Matters SLTs are detailed in Tables 14-19. The impact of training on self reported knowledge, capacity and confidence is presented using mean difference scores on ratings between the start and end of training. The findings are presented separately for each professional group.

Early Years Practitioners

It emerged that early years practitioners who took part in Elklan 'Speech and language support for under 5s' (n=32) rated their 'ability to adapt lesson plans to meet the needs of children with SLC difficulties' the lowest in terms of knowledge and capacity. The same mean score was recorded for early years practitioners' 'ability and confidence to related information regarding a child's oral language

development with the families/carers'. These were identified as areas of concern by practitioners at the start of the training. By completion of the programme, the largest mean shift occurred in relation to sharing information with families/carers. In this respect, the course was able to target areas of learning and improve knowledge that would impact practice. Post training rating scores found that overall practitioners gave the highest ratings to their 'ability to identify children with SLC needs' and improve their 'knowledge on the challenges faced by a child's speech and language difficulties in the classroom' (Table 18).

When asked to rate self confidence in areas of SLC in settings, practitioners indicated least confidence in their 'ability to help children develop their language skills' and 'help children who have speech sound difficulties'. By the end of the programme the highest rating on self confidence was observed in relation to 'supporting children to understand and name new vocabulary'. The largest mean shift was recorded for the same item (Table 19).

Table 18: Knowledge and capacity of early years practitioners in supporting children with SLC development

	Pre	Post	Mean difference
Current knowledge on a child's communication and oral language development	2.93	4.06	1.13
Current ability to support all children's communication skills in the classroom	2.87	4.00	1.13
	Pre	Post	Mean difference
Knowledge on the challenges faced by a child's speech and language difficulties in the classroom	2.93	4.21	1.28
Current ability to identify children with speech, language and communication (SLC) needs	3.16	4.28	1.12
Ability to know how and when to refer a child to speech and language therapy	3.09	4.25	1.16
Ability to adapt your communication style to meet the needs of children with SLC needs	3.03	4.12	1.09
Ability to adapt your lesson plans to meet the needs of children with SLC difficulties	2.81	4.06	1.25

Ability to share information and collaborate with different agencies regarding a child's communication skills (e.g., HSE Community SLT, OT, Psychology, Medical Professionals)	3.06	3.90	0.84
Ability to interpret speech and language therapy reports and programmes and implement them effectively in the classroom	2.93	3.83	0.90
Ability and confidence to relate information regarding a child's oral language development with their families/carers	2.81	4.12	1.31

Table 19: Confidence of early years practitioner in supporting children with their SLC development

	Pre	Post	Mean difference
Identifying a child's non verbal communication skills	3.30	4.18	0.88
Supporting a child's attention to a task	3.40	4.28	0.88
Supporting children to work independently	3.65	4.25	0.60
Supporting children to remember tasks and instructions in the classroom	0.65	4.25	0.60
Supporting children to understand and name new vocabulary	3.31	4.45	1.14
Helping children to understand instructions and conversation	3.46	4.31	0.85
Able to pitch/adapt your language to match the different abilities of children	3.37	4.31	0.94
	Pre	Post	Mean difference
Helping children to develop their talking skills (ability to say words and sentences)	3.25	4.25	1.00
Helping children use their communication skills in a socially skilful way (e.g., taking turns, sharing interests, asking questions, listening, initiating)	3.50	4.31	0.81
Helping children who have speech sound difficulties	2.93	3.87	0.94

Primary School Teachers

The Elklan programme focusing on 5-11 year olds was completed by 31 teachers. Matched evaluations are available for 25 of this cohort. Their self report scores on the same pre and post forms are presented in Tables 16 and 17. Inspection of mean scores for this group revealed that the lowest rating at the start of the programme was in relation to teacher's 'ability to support all children's communication skills in the classroom', followed closely by their 'knowledge on a child's communication and oral language development'. At follow-up after the programme was completed the same measure was repeated and mean score calculations found the largest increase in self reported knowledge and capacity for 'knowledge on the challenges faced by a child's speech and language difficulties in the classroom' and equally 'knowing how and when to refer to SLT'. Mean score shifts were greatest for their
'knowledge on a child's communication and oral language development' and 'knowledge on the challenges faced by a child's speech and language difficulties in the classroom' (Table 20).

Examination of self-confidence ratings at pre and post training points found that teachers were least confident in 'helping children who have speech sound difficulties' and 'identifying a child's non verbal communication skills'. Post training scores indicated that teachers reported the highest level of confidence in relation to 'supporting children to understand and name new vocabulary' and 'help children to understand instructions and conversation'. The largest improvement emerged in relation to 'helping children with speech sound difficulties' and 'identifying a child's non verbal communication skills' (Table 21).

Table 20: Knowledge and capacity of teachers in supporting children with SLC development

	Pre	Post	Mean difference
Current knowledge on a child's communication and oral language development	2.52	4.20	1.68
Current ability to support all children's communication skills in the classroom	2.44	4.00	1.56
Knowledge on the challenges faced by a child's speech and language difficulties in the classroom	2.68	4.36	1.68
Current ability to identify children with speech, language and communication (SLC) needs	2.92	4.08	1.16
Ability to know how and when to refer a child to speech and language therapy	2.76	4.36	1.60
Ability to adapt your communication style to meet the needs of children with SLC needs	2.88	4.32	1.44

Ability to adapt your lesson plans to meet the needs of children with SLC difficulties	2.68	4.04	1.36
Ability to share information and collaborate with different agencies regarding a child's communication skills (e.g., HSE Community SLT, OT, Psychology, Medical Professionals)	2.64	4.24	1.60
Ability to interpret speech and language therapy reports and programmes and implement them effectively in the classroom	2.84	4.16	1.32
Ability and confidence to relate information regarding a child's oral language development with their families/carers	2.80	4.12	1.32

Table 21: Confidence of teachers in supporting children with their SLC development

	Pre	Post	Mean difference
Identifying a child's non verbal communication skills	2.44	4.00	1.56
Supporting a child's attention to a task	3.08	4.24	1.16
Supporting children to work independently	3.16	4.24	1.08
	Pre	Post	Mean difference
Supporting children to remember tasks and instructions in the classroom	2.96	4.24	1.28
Supporting children to understand and name new vocabulary	3.16	4.40	1.24
Helping children to understand instructions and conversation	3.00	4.36	1.36
Able to pitch/adapt your language to match the different abilities of children	2.87	4.20	1.33
Helping children to develop their talking skills (ability to say words and sentences)	2.80	4.08	1.28
Helping children use their communication skills in a socially skilful way (e.g., taking turns, sharing interests, asking questions, listening, initiating)	2.80	4.12	1.32
Helping children who have speech sound difficulties	2.16	3.72	1.56

Special Needs Assistants (SNA)

Using the same measures SNAs who took part in Elklan training (n=30), ratings at the start and end of the Elklan (5-11 years) programme are detailed in Tables 18-19. Analysis of mean scores for this group found lowest self ratings of knowledge and capacity for 'ability to share information and collaborate with different agencies regarding a child's communication skills' and 'ability to interpret SLT reports and programmes and implement them effectively in the classroom'. By course completion, the highest ratings were observed in relation to SNA 'ability to identify children with SLC needs' and 'adapt their communication style to meet the needs of these children'. The largest mean shift was recored for their 'ability and confidence to relate information regarding a child's oral language development with their families/carers'. This was followed by a 1.50 point improvement in ability to 'interpret SLT reports' (Table 22). This represents a targeted increase in an area highlighted at the start as a concern by SNAs. Self confidence examined using the 10 item measure completed pre and post training revealed SNAs were least confident in 'identifying a child's non verbal communication skills' and in 'helping children with speech sound difficulties'. By completion of Elklan training, the highest rated items referred to 'supporting children to work independently' and 'supporting them to remember tasks and instructions in the classroom'. The greatest mean shift between these two time points was directly linked to an issue identified by SNAs at the start which focused on non verbal communication skills. This was closely followed by their 'ability to pitch/adapt their language to match the different abilities of children' (Table 23).

Table 22: Knowledge and capacity of special needs assistants (SNA) in supporting children with SLC development

	Pre	Post	Mean difference
Current knowledge on a child's communication and oral language development	2.51	3.86	1.35
Current ability to support all children's communication skills in the classroom	3.03	3.70	0.64
Knowledge on the challenges faced by a child's speech and language difficulties in the classroom	2.86	3.83	0.97
Current ability to identify children with speech, language and communication (SLC) needs	3.00	3.93	0.93
Ability to know how and when to refer a child to speech and language therapy	2.30	3.80	1.50
Ability to adapt your communication style to meet the needs of children with SLC needs	2.86	3.90	1.04

Ability to adapt your lesson plans to meet the needs of children with SLC difficulties	2.72	3.71	0.99
Ability to share information and collaborate with different agencies regarding a child's communication skills (e.g., HSE Community SLT, OT, Psychology, Medical Professionals)	2.07	3.53	1.46
Ability to interpret speech and language therapy reports and programmes and implement them effectively in the classroom	2.10	3.60	1.50
Ability and confidence to relate information regarding a child's oral language development with their families/carers	2.21	3.82	1.61

Table 23: Confidence of special needs assistants (SNA) in special needs assistants (SNA) in supporting children with SLC development

	Pre	Post	Mean difference
Identifying a child's non verbal communication skills	2.57	3.66	1.09
Supporting a child's attention to a task	3.41	4.13	0.72
Supporting children to work independently	3.48	4.36	0.88
Supporting children to remember tasks and instructions in the classroom	3.60	4.26	0.66
Supporting children to understand and name new vocabulary	3.20	4.03	0.83
Helping children to understand instructions and conversation	3.30	4.03	0.73
Able to pitch/adapt your language to match the different abilities of children	3.10	4.10	1.00
Helping children to develop their talking skills (ability to say words and sentences)	3.20	4.10	0.90
Helping children use their communication skills in a socially skilful way (e.g., taking turns, sharing interests, asking questions, listening, initiating)	3.63	4.26	0.63
Helping children who have speech sound difficulties	3.03	4.00	0.97

In summary, comparisons between the training cohorts highlight differences and similarities in supporting children to develop SLC. Given the age specific remit of early years practitioners (under 5 years of age) and teachers/SNA (children aged 5-

11 years old), it is unsurprising that areas requiring additional knowledge and focus, reflect the learning environments of their professions. For early years practitioners, there was an emphasis placed on improving how to communicate with families/carers about SLC development of children. Devising lesson plans and activities that could accommodate children with SLC difficulties were highlighted as requiring additional attention. The outcome of training directly addressed early years practitioner's concerns with the largest increase in knowledge/capacity recorded for 'communicating with families/carers'. This pre/post training difference was also largest for SNA, where being able to communicate more confidently with families/carers about these issues had increased the most by the end of Elklan training.

A similar pattern of direct impact on pre programme knowledge/capacity was observed for teachers. At the start they indicated their knowledge was lowest with respect to a 'child's communication and oral language development'. By programme end, the largest mean shift was calculated for this item. 'Knowledge of the challenges faced by a child's speech and language difficulties in the classroom' had received the highest rating across all 10 items. This was matched with their current knowledge (post training) to 'know how and when to refer a child to SLT'. There was greater overlap in training components to improve self confidence in supporting the SLC development of children. In particular, teachers and SNAs both recorded lowest rates of being 'able to identify a child's non verbal communication skills' at the start of Elklan training. The largest improvement was identified for this training component at programme completion. Teachers and practitioners' confidence showed additional improvement compared to other areas for 'supporting children to understand and name new vocabulary'. All three professions rated the lowest level of confidence for 'helping children who have speech sound difficulties'. By the end of Elklan training, their confidence around these issues and all other areas had improved.

3.3.1.2 Qualitative Feedback

An opportunity to give open ended feedback at programme end resulted in a consistently positive response from participants. Their feedback suggested they gained both theory and practice knowledge that has informed day to day actions around SLC development with children in their setting/classroom. Style of delivery, the professionalism and openness of the facilitators was constantly cited. The range of strategies, tips and resources shared during the training sessions was particularly welcomed. Specific examples of what practitioners, teachers and SNAs felt was going to be most helpful, were provided. Seeing the implementation of these through videos, case studies and visual presentations was reported as being a productive way to consider how best to transfer these examples to the participant's specific situation.

The most commonly cited tools/strategies listed by respondents included;

- Mind maps
- Checklists

• Tier 2 words
• Visual timetables
• Question variations

"I thought videos and activities were a useful way to make the information more concrete and relate it back from theory to practice"
"I liked finding out more about SLT and the types of skills for children they worked on"

"Excellent presenters who illuminated slides with professional experience and anecdotes"

Taking part with professionals from other services or schools was a consistent feature in the feedback received. Sharing ideas, discussing issues and offering suggestions was viewed as valuable and particularly beneficial.
"Hearing what others from different settings have to say and in fact have very similar experiences, you realise we are seeing the same issues with communication in our settings"

There were a small number of constructive comments and suggestions going forward that participants believed would improve training. Most of these centred on the timing and schedule of training. Commitment to the programme required additional hours spent immediately after work which was viewed as difficult and long. Saturday options were put forward in which the course could be offered. It was also felt that sessions could be shorter and the programme overall could be reduced with some issues around repetition being raised. Requests for more handouts given the volume of information that needed to be recalled were made.

"There is so much great tips and information to remember, having more handouts which just really help this experience"

When asked about what supports would participants need to ensure the knowledge and learning is fully implemented, the same response repeated. Practitioners, teachers and SNAs all viewed on site observations of practice as a critical part of knowledge and practice transfer. Visits by the SLT staff from Family Matters, if only once, was seen as a way to improve fidelity to the strategies outlined by Elklan and increase the likelihood of projected outcomes from Elklan training.

"The best way to embed this knowledge is to have visits so we can ask questions and get feedback from SLT, this would make such a difference"

3.3.2 Information Workshops

These were delivered with targeted topics in mind that SLT staff in Family Matters were receiving feedback about from early years practitioners, teachers and SNAs

as well as from their own interaction with children and families at appointments. Based on this knowledge, a series of workshops were developed that did not require the level of commitment needed for Elklan training. This approach was universal targeted within the ABC of Ballyfermot. The types of workshops offered included;

Identifying Speech, Language and Communication Needs

- Typical Speech, Language and Communication Development
- Speech, Language and Communication Needs
- Socio-Economic Disadvantage and Language Development
- Screening Developmental Milestones (how to check if a child has speech, language or communication needs)
- How to identify the most appropriate service for a child and then make onward referrals to the appropriate service: e.g. Primary Care Speech and Language Therapy, Occupational Therapy, Physiotherapy, Psychology, CAMHS, Assessment of Need, Early Intervention Team and 6-18 Disability Team in the Ballyfermot area.

Oral Language Development in the Classroom

- Types of vocabulary (Tier 1, 2, 3)
- Approaches to teaching vocabulary
- Explicit instruction Strategies to teach vocabulary in the classroom
- Word Investigation Strategies To Aid Vocabulary Learning And Retention
- Oral Language Classroom Activities for Junior and Senior Classes
- Resources for Supporting Oral Language In The Classroom (Book and Website Suggestions)

Teachers' Role around Oral Language Development

Oral language permeates every aspect of the primary school curriculum. Oral language skills are the building blocks on which literacy and numeracy development are based. It is known that 50% of children in areas of social disadvantage start school with poor language. Children from low income families lag behind by nearly one year in vocabulary at school entry, with gaps in language much larger than gaps in other cognitive skills.[13] Therefore, teachers play an essential role in fostering and enhancing children's oral language development in the classroom. These children are at a disadvantage from the start and without the right support from schools they don't catch up with their peers. International research conclusively reports that children with speech, language and communication needs continue to be under-identified in the school population. Therefore, it is essential that teachers are knowledgeable of children's speech, language and communication development, as well as trained to screen these skills to ensure earlier and effective identification and support.

[13] Locke, E., Ginsborg, J., and Peers, I. (2002) *Development and Disadvantage: implications for early years.* International Journal of Language & Communication Disorders. 27 (1). P.3 -15.

3.3.2.1 Workshop Feedback

Participants completed a single feedback form at the end of the workshops. It asked about how helpful the workshop was, quality and relevance of information provided and support offered by SLT. All participants who completed post workshop evaluation forms found it 'very helpful'. The information was in the main 'easy to follow' with some citing it was 'complex but could be understood'. Primarily feedback suggested that practical strategies that were accessible, translatable and applicable were provided by the facilitators. In particular, participants said the booklet and links to resources offered by the SLT would be very beneficial to their practice and in turn to the children they support. Examples of comments provided include;

"Very informative and lots of practice suggestions to implement ideas/games/ activities into the classroom"

"Getting access to the view point of a SLT and to be able to ask questions was really interesting and quite unique"

4.0 Conclusion

Family Matters SLT assessment service received 270 referrals between 2015-2017 from a range of organisations and agencies from the local Ballyfermot area. 203 met the referral criteria for assessment children and were formally assessed using clinical tools by the Family Matters SLT team. For the purposes of the 0-3 sub study which includes the 0-6 oral language piece (national evaluation focus), the sample comprises of children up to the age of 6 years and 11 months. Older children who entered the service from a referrer could be 7-16 years of age. Mean age in the younger cohort was 5.08. In the older age group, mean age was calculated at 9.52. A total of 1828 SLT sessions were attended by children referred to Family Matters
SLT. A further 8% were recorded as DNA with 11% cancelled. Out of a potential 2259 sessions (including DNA and cancelled), this means 81% were attended. Specific examination of therapy sessions found a 77% attendance rate.

Overall, 2777 sessions were attended by an adult (parent, teacher, SNA). It should be noted that some sessions had joint attendance which therefore explains the higher number of recorded attendance across adults compared to 1828 sessions delivered by SLT to children. This represents a 73% attendance rates and a 15% DNA. A smaller number (12%) were cancelled. Inspection of attendance rates within the adult groups found that largest number of sessions were attended by adults from the child's home (1473) compared to school (1304). Examination of parental engagement revealed that 64% of sessions were attended by parents, with 60% specifically attending therapy sessions during the intervention period.

Local intelligence from services and agencies about low rates of attendance and high DNA of parent from hard to engage families at service appointments, such as SLT, informed the deliberate decision to deliver a community based SLT service as a core element of Family Matters, Ballyfermot. The findings of this evaluation strongly suggests that rates of attendance by parents and children were high and DNA low for a hard to engage client group. It is particularly evident at initial and review assessment intervals where parental attendance was 79% and 71% respectively. The flexible, family focused and supportive approach adopted by Family Matters SLTs indicates that greater levels of engagement with families who are considered to need targeted support for SLC issues, has been effective.

Baseline assessment (did not continue to therapy) indicated that approximately 40% of children (0-6 years of age) were in the 'low to severe' range. This was evidenced using the CELF-P2 and DEAP standard tests. A similar number were identified as having 'average' scores in these tests. In this respect, referrals to SLT based on SLC concerns observed by referrers, included a children with clinically determined difficulties and those who did not.
Progression into therapy with Family Matters SLT resulted in clinical improvements across a number of SLC modalities. This was noted as children moving out of the

'low to severe' and achieving 'average' scores at the point of discharge. Reduction in numbers in the lowest classifications, was recorded between 33-36% in the CELF-P2 and DEAP tests.

Children in the 7+ age groups were referred to Family Matters SLT due to ongoing concerns around SLC. Initial assessment results suggested between 34-67% of children were displaying 'low to severe' language difficulties based on their CELF-4 scores. However, following therapy improvements were recorded on the same test at discharge which found a 20-28% reduction in severity. There was a corresponding shift into 'average' classification of language modalities delineated by the CELF-4. The summative findings of attendance rates and clinical outcomes for the Family Matters SLT service suggests this model of working reduced barriers to engagement for parents and children who experienced difficulty in engaging with services. By doing so, tailored supports were able to be delivered to both the child and parent with the aim of improving SLC for the individual (child), the family and the home environment. There was a definite intention in the plans created for families to promote an ethos of co-production between child-parent-school-therapist.
Recognition of the critical role of parent in a child's life and the communication environment in which they develop, led to a facilitated approach which supported parents to implement targeted strategies while also improving their own capacity and knowledge of SLC.

Evaluation of professional development training, in particular, Elklan training programmes suggest a coalescence in the knowledge, capacity and confidence gained by participants (early years practitioners, teachers and SNAs) that directly influenced practice and children's SLC development. Findings from pre and post training ratings suggest greater understanding of children's SLC development was embedded in an understanding of the difficulties experienced by children with communication difficulties. Recognising these, empathising with them, adapting communication styles in settings and classrooms and feeling confident about when and how to seek professional SLT support, contributed to higher levels of confidence across all training participants in supporting SLC development of children. A positive shift in mean scores was calculated across all 20 items rated by participants.

The demands from child/teacher or child/practitioner ratios were major barriers to implementing evidenced strategies to improve SLC development and attenuate frustrations expressed by children with communication difficulties and delays. This was strongly presented by teachers when discussing implementation of the learning gained from FM training. Not having enough one to one focused interactions due to high ratios and subsequent time pressures, led teachers in particular to worry about how to reduce poor outcomes for children with communication difficulties. The cumulative and potentially exponential impact on overall development of a child was a continuous feature in implementation

discussions, in summation this means; ‘a child is not understood, cannot communicate with peers or staff, is unable to follow instructions or keep up with class curriculum, starts to fall behind, feels excluded, self esteem is eroded and cycle continues to be reinforced’.

The emphasis on non verbal communication skills and supporting children to gain and understand new vocabulary suggests practitioners, teachers and SNAs are committed to finding ways to improve children’s interaction with others and self expression. By doing so, participants’ initial goals recorded at the start of training have been directly addressed. These were to reduce the social isolation felt by children with communication difficulties, the emotional impact of this and improve SLC capacity in settings, classrooms, playground and home.