EVALUATION OF THE NOVA SCOTIA EARLY YEARS CENTRES
Year 2 Provincial Report
February 2017

Contents

Executive Summary

This report presents the findings of Year 2 of the four-year evaluation of the Nova Scotia Early Years Centre initiative, led by an evaluation team from Dalhousie University, Research Power Incorporated, and Mount Saint Vincent University) and funded by the Margaret and Wallace McCain Family Foundation. Key lessons learned and issues for further consideration are provided to support continuous program improvements at the local and provincial levels of the system.

Background

The Nova Scotia Early Years Centre (EYC) initiative is a collaborative effort between the Department of Education and Early Childhood Development (the Department) and the Margaret and Wallace McCain Family Foundation. The EYC model recognizes the need for integrated services to support the learning, care and wellbeing of children and their families from prenatal to age five, and brings together existing programs and services within a school setting. The implementation of the EYCs represents a joint effort of the Department and the school boards, in collaboration with community partners, service providers and families. The EYCs aim to include three core components: a play-based, no-fee Early Learning Program (ELP) for children in the year before school; family supports; and onsite regulated childcare. Eight EYCs are located across the province, one within each of the eight school boards.

Four sites were established in 2014 (Phase 1):	Another four followed in 2015 (Phase 2):
Rockingstone Heights School	*Clark Rutherford School*
Jubilee Elementary School	*West Highlands Elementary School*
Yarmouth Central School	*École Beau-Port*
East Antigonish Education Centre	*New Germany Elementary School*

This Year 2 evaluation examines how sites are developing, how services are integrating, and how sites are helping to improve outcomes for children and their families across the themes of: building capacity; collaboration and partnerships; early learning environment; and child development. For each theme, indicators were assessed using the Indicators of Change (IOC) tool to benchmark progress made towards integration[1]. A median benchmark for each Phase is provided.

EYC Model Implementation

- The *Early Learning Program* (ELP) was implemented in all eight sites during the evaluation period. A total of 179 children were enrolled across the eight sites during the 2015-16 school year, with an average attendance of 90%.
- *Family Supports* varied in frequency and diversity of programming and services with community programs such as play groups, parenting education and support groups available in all. Health services (primary care and public health) were available at some sites, as well as speech and hearing and early intervention services.
- *Onsite Regulated Childcare* was available in two sites, accommodating children in the ELP as well as school-aged children. Other sites had other arrangements including unregulated onsite, offsite regulated and offsite family home care.

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[1] Benchmarks from 1 to 5 provide a quantitative measure related to integration: 1. community co-location; 2. cooperation; 3. coordination; 4. collaboration; and 5. integration.

Building Capacity

Successes
- Many sites experienced greater coordination among team members and partners, and some movement towards collaboration (e.g. team members sharing responsibilities and blending roles).
- Cooperative efforts were emerging at many sites (e.g. developing of job descriptions and coordination of hiring).
- Partners in most sites were contributing resources to offer joint programming.
- Some sites were reviewing and sharing evaluation results and data between community partners.
- Professional development, networking and sharing opportunities offered by the Department and local opportunities were highly valued and helpful in building capacity.

Challenges
- Human resource policies and practices remained largely separate across sites.
- Staff development opportunities varied between sites.
- Finding qualified ECEs in the community, including substitute ECEs, and the need to further define the roles, salary and hiring processes continued to challenge all sites.
- These challenges were exasperated in the one francophone site due to linguistic and cultural training needs.

Collaboration and Partnerships

Successes
- Partners and team members were committed to working together, recognizing EYCs as the way to link families to the supports and services.
- Cross-sectoral structures were established in all sites, with sites engaging and strengthening local relationships with partners.
- Some sites were sharing and reviewing partner mandates, protocols and practices, while others were developing joint protocols, joint registration forms and program statements to support coordination.
- All sites were sharing information about programs and services.
- Team members felt welcome in schools and had access to school resources.
- Partners identified sharing information and expertise, promoting each other's programs and services and joint planning as some early successes towards integration.

Challenges
- Partnership development continued to challenge sites two years into operations
- More efforts were needed to coordinate planning and strengthen relationships with early elementary within the school setting.
- Organizational processes, polices and context posed challenges for moving the work forward (e.g., staff changes, changes in organizational structure, etc.).

- Competing priorities for partners made it difficult at times to contribute to the work of the EYC.

Awareness and Engagement

Successes

- Sites were working with partners to engage the community and assess community needs, ensure family input into programs, expand Site Management Teams to include more partners and communicate jointly (e.g., jointly promoting programs and services, etc.).
- Some sites had engaged family members on their Site Management Team.
- Families felt valued for their input, connected and welcomed within the EYCs and schools.
- Families were highly satisfied with the EYCs and appreciated that EYC staff took time to engage them, get to know them, and build a solid foundation for support, trust and comfort.
- Families felt that the approach taken by EYC staff when issues arose, made it easier to overcome challenges, ensured privacy when needed and exuded confidence in caring for their children.

Challenges
- Continued efforts are needed to engage families (particularly families who were not currently accessing services).
- The geographic boundaries, including different catchment areas between community organizations and the school, and the large rural area served by the EYCs, posed challenges for engaging families.
- Some families experienced barriers to accessing EYC programs and services (e.g. lack of transportation, hours of operation).
- Differences in system and organizational policies/guidelines across sites were identified as challenges, including engaging substitute ECEs, the use of volunteers, differing guidelines related to job descriptions and hiring procedures, and challenges with the regulations related to onsite regulated childcare.

Early Learning Environment

Successes
- In some Phase 1 sites, partners were developing and implementing shared program philosophies, goals and objectives including common behavior management strategies.
- Most sites were coordinating how ECEs organized the early learning environment and supported children's learning and behaviour.
- Daily routines were coordinated in Phase 1 sites.
- All Phase 2 sites were collaborating with partners to share indoor and outdoor space.
- Families felt supported by staff at the EYCs and noticed improvements in their children's development such as language, speech and communication skills.
- Families appreciated the child-directed approach to learning and open communication from staff that allowed them to know what their children did each day.

Challenges
- Partner program goals and philosophies remained separate at some sites.
- Daily routines and schedules ranged from separate for all partners to some coordination with routines and scheduling in Phase 2 sites.
- Behaviour guidance strategies remained separate among partners at most Phase 2 sites
- There were challenging discussions with community and school partners and families about the value and benefits of a play-based learning approach.

Child Development

Successes

- Most sites were partnering to offer joint activities to support child development (e.g., the school and Nova Scotia Early Childhood Development Intervention Services (NSECDIS) working together to more effectively support children in need of early intervention services, collaborating with partners to offer screening events, etc.).
- Some sites were beginning to review partner tools and approaches, and to discuss coordinating early intervention programs and services.
- Families observed progress in their children's development since they had been participating in the EYC., describing improvements in: language and speech; interactions and communications with other children and siblings (e.g. sharing); understanding and expressing their feelings; and understanding consequences of their actions and attitudes.
- Partners were able to identify children with higher needs earlier and connect them to required supports earlier.

Challenges
- Records of children's developmental progress were being maintained independently at some sites.
- Not all children in the school catchment areas were attending the ELP. Of the children enrolled in EYC schools in grade Primary in 2015-16, only an average of 53% of those children had attended the ELP in the previous school year (2014-15).
- Collection of data on attendance for EYC programs and services other than ELP was inconsistent and incomplete.

Lessons Learned and Further Considerations

It takes time to root
- Developing, implementing and sustaining all three components of the EYC model is challenging and takes time.
- There is a need to more fully understand some of the system-level challenges that impact how components of the model are implemented at the site level, so that solutions and strategies can be developed collectively between sites and the Department to advance implementation and integration.

Consistency with local flexibility
- Understanding the community context, and the need for local flexibility in how components of the EYC model are implemented and operationalized across the province is important.
- A level of consistency in how the model is implemented is needed to achieve the best outcomes for children and families based on evidence.
- The development of minimum implementation standards related to the core components - what is expected and how it is to be operationalized, would provide consistency and accountability, as well as identify areas where flexibility is needed to ensure consideration is given to local needs.

Creating conditions for successful partnership development
- Some challenges have been experienced in attracting the partners necessary to offer a diverse range of services.
- The importance of time and space to cultivate and develop partnerships was identified as a key condition to enable partnership development, as well as shared values, goals and commitment of all partners in the EYC.
- More formal mechanisms such as Memoranda of Understanding or Project Charters may help to establish and ensure continued growth and sustainability of those partnerships through a shared common vision, expectations, and accountability.

Workforce development
- An appropriately skilled, qualified workforce remains crucial to support the EYC model over time.
- The hiring of qualified ECEs that fit the needs of the site was identified as time consuming and challenging process.
- Support for recruitment and hiring French-speaking ECEs, having resources for EYCs and their partners that are in French, and providing access to professional development opportunities in French is needed.
- There is a need to better understand how sites can be supported in recruitment and hiring of ECEs in the community and through training institutions.

Play-based learning is misunderstood
- Play-based learning is a new approach for many, and how it supports children's transitions, specifically school transition, is misunderstood.
- There is need to continue to support ECEs and other team members in furthering their understanding and practice of play-based learning.
- The articulation and implementation of the *Nova Scotia Early Learning Curriculum Framework* will help in addressing this need, and should include specific supports for partners and families to further their understanding of play-based learning.

Understanding who is not accessing the EYCs
- Some of the barriers to accessing the EYCs are understood to be lack of transportation, hours of operation not in sync with school hours, family needs/schedules unique to seasonal employment and fear of institutions (schools, child protection, etc.).

- The EYC model as a universal approach, has the potential to improve outcomes for all children. Without understanding and addressing barriers to access, a universal approach may unintentionally create greater differences in child outcomes between socioeconomic status ranges.
- There is a need to better understand the number of families with young children who are not accessing the EYCs, the reasons why, and what would be needed to develop a more approach to reach those families in the community.

Better understanding of improved outcomes for children and families
- The results from the EDI have the potential to offer evidence on the effectiveness of the EYC model in improving child outcomes.
- Without a significant number of children in grade Primary who have participated in EYC programs and services, such as the ELP, it will be more difficult to understand any correlation between the EYC model and the EDI results. In the meantime, an EDI baseline can be developed for each EYC site.
- Cooperation and support of teams and partners in all sites is required to collect data on attendance of EYC programs and services. Memoranda of Understanding should include expectations on data collection including attendance and how such data support a better understanding of child outcomes.

Introduction

This report is an overview of the Year 2 evaluation of the Nova Scotia Early Years Centres (EYC). The evaluation was undertaken by an evaluation team (Dalhousie University, Research Power Incorporated, Mount Saint Vincent University) in 2016. The report presents background context for the EYC initiative, and key findings related to the establishment and on-going implementation of the EYC model. The report concludes with reflections on lessons learned and issues for further consideration.

Nova Scotia Early Years Centres

In 2013, the Department of Education was expanded to include an Early Years Branch (EYB), which saw the establishment of the Department of Education and Early Childhood Development (the Department). The expanded mandate of the Department was implemented in recognition of the need for an integrated system that supports the learning, care and wellbeing of children and their families throughout the pre-natal period to age six years.

The Early Years Branch established a collaboration with the Margaret and Wallace McCain Family Foundation for the development and implementation of EYCs in Nova Scotia, bringing together existing programs and services within a public school setting. Nova Scotia follows similar models that have been implemented in Toronto (Toronto First Duty) and New Brunswick (Early Childhood Development Centres).

The EYC Model

The policy direction for the EYC model in Nova Scotia is supported by the evidence-informed understanding that an integrated approach to early years services provides positive benefits for children and families.[2] The vision for EYCs in Nova Scotia is that over time, as the integration and collaboration of key service providers become well developed and as programs and services become more aligned, families will have seamless access to the services they need, when they need them. The EYCs bring together existing community and government programs and services such as childcare, family drop-ins, early learning, parenting supports, health services, and early identification and intervention programs. EYCs use a community development approach to provide services and supports that respond to the needs of families.

The EYCs are in public schools, which as focal points in communities are mandated to provide education to school aged children, and well placed to expand and serve younger children and their families. The implementation of the EYCs represents a joint effort of the Department and the eight (8) school boards, in collaboration with community partners, service providers and families. With the establishment of the EYCs, it is expected that program quality and access to programs and services will improve which will lead to better child outcomes.

At a minimum, all EYCs in Nova Scotia aim to include three core components:

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[2] Corter, C., Janmohamed, Z., & Pelletier, J. (Eds.). (2012). Toronto First Duty Phase 3 Report. Toronto, ON: Atkinson Centre for Society and Child Development, OISE/University of Toronto.

- play-based, no-fee Early Learning Program (ELP) for children in the year before entering school;
- family supports and resources; and
- onsite regulated childcare responsive to family needs.

EYC Establishment

The initial site selection relied heavily on the involvement of the school boards and their knowledge of their communities. Each school board ranked possible sites based on an analysis of demographic and community indicators including findings from the Early Development Instrument (EDI). Decisions were made based on the sites ranked the highest in need, the readiness of the schools to accommodate the requirements for an EYC, and rural and urban considerations.

In 2014, the first four EYCs were established in four school boards:

- Rockingstone Heights School, Halifax Regional Municipality (Halifax Regional School Board)
- Jubilee Elementary School (includes the former St. Joseph School), Sydney Mines (Cape Breton-Victoria Regional School Board)
- Yarmouth Central School (includes the former South Centennial School), Yarmouth (Tri-County Regional School Board)
- East Antigonish Education Centre, Monastery (Strait Regional School Board)

In 2015, four additional EYCs were established:

- Clark Rutherford School, Cornwallis (Annapolis Valley Regional School Board)
- West Highlands Elementary School, Amherst (Chignecto-Central Regional School Board)
- École Beau-Port, Richmond (Conseil scolaire acadien provincial)
- New Germany Elementary School, New Germany (South Shore Regional School Board)

There is one site located in a francophone school (École Beau-Port).

For the purposes of this evaluation report, the four EYCs established in 2014 are referred to as *Phase 1 sites.* The four EYCs established in 2015 are referred to as *Phase 2 sites*. The Phase 1 sites were the subject of the Year 1 evaluation (2015)[3].

Purpose of this evaluation

The purpose of this evaluation is to monitor and assess the development and implementation of the eight EYCs during the second year of the EYC initiative. This evaluation has explored how sites are developing, how services are coming together to provide integrated services, and how the EYCs are helping to improve outcomes for children and families. The evaluation has also identified key lessons learned

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[3] https://www.ednet.ns.ca/docs/2015earlyyearscentreevaluationen.pdf

and issues for further consideration to support continuous program improvements at the local and provincial levels of the system.

This Year 2 evaluation builds on the learnings from the Year 1 evaluation (2015) and is part of an overall four-year evaluation of the EYC initiative in Nova Scotia funded by the Margaret and Wallace McCain Family Foundation. The four-year evaluation is grounded in an evaluation framework, including the EYC logic model, that was developed in 2015.

Evaluation governance

The EYC Steering Committee provided support, advice and recommendations on the implementation, development and refinement of the EYC model. The EYC Evaluation Subcommittee worked with the contracted evaluation team and Department staff to provide support and advice on all aspects of the evaluation. The Subcommittee was comprised of a subgroup of the EYC Steering Committee as well as representatives of the Margaret and Wallace McCain Family Foundation, staff from the Early Years Branch of the Department, and the contracted evaluation team.

Evaluation Methodology

Approach
This evaluation was conducted across components that correspond with the outcomes as identified in the EYC program logic model (Table 1). It was anticipated that this focus would provide relevant and meaningful information to inform future progress, and reflects a shift from the Year 1 evaluation which focused on the components of the logic model.

Table 1. Organization of short-term and intermediate outcomes with the evaluation report themes

Evaluation Themes	Short-Term Outcomes		Intermediate outcomes
Child Development	-Improved developmental outcomes for children -Strengthened capacity of family members to support their children in the early years	Improved integration of programs and services for children and their families	Improved quality of early learning and childcare options in the community for children and their families
Early Years Environment	-Integrated infrastructure to support improved access to quality early years programs and services		Improved access to quality early learning and childcare options in the community for children and families
Collaboration and Partnerships	-Increase collaboration between EYC staff, service providers and other partners to deliver programs and services		
Awareness and Engagement	-EYC programs and services based on local community context -Increased participation of families and communities in EYC programs and services		Sustainable EYC model for delivering integrated early years programs and services

	Increased community awareness of EYC programs -Increased awareness and understanding of the EYC model among EYC staff, service providers, other partners and families		Increased recognition among the public of the role and value of Early Childhood Educators Improved outcomes for children
Building Capacity	-Increased knowledge and skills among EYC staff, service providers and other partners to support the EYC model -Increased capacity (knowledge, skills, confidence) among EYCs to support program development and implementation		

Data sources

Data sources used in this evaluation included traditional evaluative tools such as interviews, document review and surveys. Participatory tools were also used to bring together groups of stakeholders to discuss progress towards integration and to share stories of EYC experiences. The Toronto First Duty Indicators of Change (IOC) tool was adapted for Nova Scotia to support the understanding and implementation of integrated service delivery. Two existing measures were used - the Early Development Instrument (EDI) and Early Childhood Environment Rating Scale (ECERS-3) and analyzed for additional context on childhood development and the early learning environment in Nova Scotia. Some of the data sources used in this evaluation are described below:

Indicators of Change: The Indicators of Change (IOC) tool, developed by the Toronto First Duty project (TFD) was adapted for the Nova Scotia context for this evaluation. IOC is a self/assisted assessment tool for reviewing and benchmarking progress towards integration of services and can assist site management teams in planning and action plan processes. Each indicator has benchmarks from 1 to 5 that provide a quantitative measure related to integration: 1. community co-location; 2. cooperation; 3. coordination; 4. collaboration; and 5. integration. This tool will be used in each year of the evaluation project. In the Year 2 evaluation, IOC was completed in a facilitated session at each site with members of the EYC Site Management Team[4].

Early Childhood Environment Rating Scale (ECERS-3): The third edition of *Early Childhood Environment Rating Scale*, or ECERS–3 is a revision of the widely used and researched *Early Childhood Environment Rating Scale*, Revised Edition (1998), designed to assess the overall quality of early childhood programs[5]. This comprehensive assessment tool measures environmental factors as well as teacher-child interactions that affect the broad developmental needs of young children. It also emphasizes the role of the teacher in creating an environment conducive to developmental gains. The scale provides a Total Environment Rating Score as well as subscale scores in each of six areas: Space and Furnishings, Personal Care Routines, Language and Literacy, Learning Activities, Interaction and Program Structure. Two

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[4] Each EYC has a Site Management Team comprised of the participating school and school board staff (principal, ECEs and School Board lead), SchoolsPlus, Early Childhood Development Consultants (Department), developmental interventionists (Nova Scotia Early Childhood Development Intervention Services), community partners (other government departments, not-for-profit) and community advisors manage each EYC.

[5] Andersson, M. (1999). The Early Childhood Environment Rating Scale (ECERS) as a tool in evaluating and improving quality in preschools. *Studies in Educational Sciences, 19.*

trained ECERS-3 administrators visited the Phase 1 sites in May 2015 (year 1) and May 2016 (year 2) to conduct the ECERS-3 in the ELP. In addition, the Phase 2 sites were visited in December 2015; a different date to perform this measure as close to the date that the sites were established). The reported scores correspond to the following scale: 1 (inadequate) 3 (minimal) 4 (adequate) 5 (good) 7 (excellent). The baseline measure of the quality of the learning environment, from ECERS-3, provides a valid and reliable measure of program quality, and thus quality experience for children.

Document Review: Department staff and key contacts at the EYC identified documents for inclusion in the document review based on a table of contents document that was provided for data organization. The contracted evaluation team reviewed all the documents, extracted information, and created written summaries to inform the findings in the report.

Administrative/Attendance Records: Templates for recording attendance at programs within the EYCs were provided by the Department. All EYCs were responsible for collecting information on family/child attendance across all programs and services offered throughout the year. Attendance for the Early Learning Program was recorded and obtained for the evaluation through PowerSchool.

The **Early Development Instrument (EDI)** is another data source that is being collected provincially and specifically for the evaluation. The EDI is a population-level tool, which is implemented for all children in grade Primary, that measures developmental change or trends in populations of children by geography. Developed at the Offord Centre for Child Studies at McMaster University, the EDI assesses developmental health across five domains: Physical Health & Well-Being, Social Competence, Emotional Maturity, Language & Cognitive Development, and Communication Skills & General knowledge. In Nova Scotia, EDI has been implemented across the province in 2013 and 2015 and in schools with an EYC in 2016.

Partner Interviews: Telephone interviews were conducted with EYC partners (generally members of the site management team), key contacts from the EYCs, and staff from the Department. An interview guide was used to help guide the discussions, which were audio-recorded and transcribed verbatim. Qualitative methods (e.g., content and thematic analysis) were used to analyze the transcripts with the findings synthesized within the report.

Family Survey and Focus Groups collected feedback from families using programs and services at the Phase 1 sites to better understand whether or not they were meeting needs and to understand accessibility, connectedness, capacity and engagement. EYC key contacts recruited families to participate in the survey and focus group. Gift cards to a grocery store were provided to incentivize participation.

Team Survey and Story Sharing collected feedback from professionals working with the children and families in the EYC community to better understand how program and service providers are working together. EYC key contacts distributed the survey to relevant professionals and recruited team members to participate in a group storytelling to learn critical success factors and outcomes.

Data collection
A data collection plan for this evaluation was developed including: data to be collected for all EYCs (Phase 1 and Phase 2 sites); data specific to Phase 1 sites only; and data specific to Phase 2 sites only, which

took into consideration the approach used for Phase 1 sites in the Year 1 evaluation, and guidance from the Evaluation Sub-Committee. The data collection plan is outlined in Table 2 below:

Table 2. Data collection for Year 2 Evaluation (2016)

Both Phases	Phase 1 Sites	Phase 2 Sites
- Indicators of Change - Early Development Instrument (EDI) - Early Childhood Environment Rating Scale (ECERS-3) - Document Review - Administrative/Attendance Records	- Family survey - Family focus group - Team Survey - Story Sharing	- Key Contact Interviews - Partner Interviews

Limitations

The EYCs in the Phase 1 and Phase 2 sites are at different stages of implementation, with some sites developing, others transitioning and adapting and others experiencing challenges which can be both unique to sites and systemic in nature. This evaluation recognizes that change and adaptation are continuous and fluid, and influenced by external factors and situations often outside of the control of the EYCs.

Improved outcomes for children and families are difficult to demonstrate within an immediate to short-term implementation timeframe and it is anticipated that such outcomes will take longer to develop and emerge over time.

Qualitative methods such as the interviews used in this evaluation are exploratory in nature and thus provide rich and valuable insight into people's views and feelings, but results are not intended to be generalized or quantified. Some issues and challenges raised in the findings may not have been raised through these methods but have been identified in response to the data findings during broader evaluation team meetings.

Attendance in the ELP was recorded through PowerSchool and provides data for the ELP. However, data on attendance in other EYC programs (e.g., family support programs) were not routinely collected across sites and therefore data on the number of children and families participating in programs and services is not available. Challenges identified in tracking attendance for these programs and services were: managing the inputting of attendance information (different across sites); sharing of attendance data by partners who are delivering the programs and services; and families can be reluctant to provide their names or complete program forms due to privacy concerns. The EYCs together with the Department are continuing to work to develop a data collection approach for attendance to address these barriers.

Evaluation Findings

This section summarizes the findings from the Year 2 evaluation across the thematic areas. The discussion seeks to understand how sites are developing, how services are coming together to offer integrated services and how sites are helping to improve outcomes for children and families. This section begins with a "take stock" on the implementation of the EYC model components.

EYC model implementation

At the time the evaluation data were collected and analyzed (spring-summer 2016), implementation and on-going operations of the three core components varied greatly across both the Phase 1 and Phase 2 sites (see Appendix 1).

Early Learning Program (ELP)
The Early Learning Program (ELP) is a play-based, no-fee program available to children living in the catchment area who are four years of age or will be on or before December 31 and will be entering grade Primary the following year.

At the time of this evaluation, the eight sites had established an ELP. For Phase 2 sites in this first year of operation, establishing the ELP was the focus of their work. A total of 179 children were enrolled in the ELP across the eight sites for the 2015-16 school year. It is unclear how the individual site enrollment numbers compare to the actual potential population of four-year olds who resided in the school's catchment area. The average attendance across all sites was in 2015-16 was 90%.

In two sites, early learning programs existed at the time of the EYC implementation:

- Rockingstone Heights EYC, a Phase 1 site, had an early learning program called *Early Learning Opportunities* in place for seven years prior, which was a school-readiness program offered and operated within several schools in the Halifax Regional School Board in historically vulnerable neighbourhoods.
- Ecole Beau-Port EYC, a Phase 2 site located within the Conseil scolaire acadien provincial, had an early learning program called *Grandir en francais* in place for eight years prior, which focused on building French language skills and cultural awareness.

Having an early learning presence in the school might be considered an asset when implementing the EYC model. However, transitioning from a stand-alone program with a different pedagogical focus to a component of a model grounded in service integration has challenged teams and partners.

Family Supports and Resources
Family supports and resources varied in frequency, diversity of programming and target audience. As expected, Phase 1 sites had made more progress in establishing this component than Phase 2 sites and were further along in the development of partnerships. Community programs geared towards the needs of parents and young children were offered in all sites such as play groups, story time, music, parenting education and support groups, literacy programs and meal preparation. Some sites offered primary care and public health services to families, such as access to a family physician who held clinic hours once a week, nurse practitioner providing drop-in service, flu vaccine clinic, and dental hygiene. Speech and hearing services as well as early intervention services through the Nova Scotia Early Childhood Development Intervention Services (NSECDIS) were also provided at some sites. Information gathered during the family focus groups and document review indicates that many of the programs and services offered were based on interest from families. Availability of attendance information was variable across sites.

Some families suggested more programs and services be offered along with the option for adult programs. Families expressed the need for access to more services such as Mental Health, Speech and Language Therapy, and Psychology. It was noted that, health professionals typically performed screenings in school for hearing, vision and speech, although families were not aware of advertisements or where to find more information. It was suggested that screenings in the EYC would allow the opportunity for early detection of learning or cognitive disabilities for children.

Onsite regulated childcare
At the time of the evaluation, most sites, to some degree, were either exploring or establishing partnerships to implement onsite regulated childcare. At one Phase 1 site, Yarmouth Central EYC had been offering onsite, regulated childcare through a partnership with the Boys and Girls Club to provide before school, after school and full day childcare to children in ELP and Grades P-2, but uptake was low. East Antigonish EYC had implemented an onsite before and after school care program, to serve the needs of children and families in the ELP as well as school-aged children up to 10 years of age. The program remained unregulated due to challenges in obtaining a license for regulated childcare. Jubilee EYC provides offsite childcare in four approved Family Homes through a licensed Family Home Care Agency. Rockingstone Heights EYC did not identify onsite regulated childcare as a priority for the community, however efforts were made in 2015 to assess community needs.

Among Phase 2 sites, only one EYC has established onsite regulated childcare. Beau-Port EYC had onsite regulated childcare for children 18 months to 4 years and afterschool care for children in the ELP and school aged, provided through partnership with the Richmond County Early Childhood Education Association. This was an important success for their EYC as identified in partner interviews. Efforts were made to establish onsite regulated childcare in the New Germany EYC, however it was discontinued due to lack of enrolment and cost related issues. Despite efforts to build the childcare component in this EYC, families in that community did not identify childcare as a need because of existing options and a strong informal childcare network within the community (e.g., families, "stay-at home" mothers, seasonal work). In West Highlands EYC, children in the ELP access offsite regulated childcare provided by the local YMCA. This EYC also formed a partnership with a regulated childcare centre in the community to provide childcare for EYC families. Clark Rutherford EYC provided onsite unregulated afterschool care for children in the ELP through partnership with the YMCA.

> *"One of the biggest accomplishments for the early years ... I think is actually having licensed childcare, regulated childcare on-site. So they were able to partner with an outside agency who were successful in applying for a license to provide regulated care for children 18 months to 12 years which is quite unique to this site."*
> Partner Interview Participant

The experience of establishing the onsite regulated childcare component of the model in both Phase 1 and Phase 2 sites points to the variability of family/community needs related to sustaining this component within the Nova Scotia context.

Building Capacity

Site management teams assessed integration progress using IOC on indicators related to building capacity, including integration of human resource (HR) policies and practices, team roles and responsibilities, allocation of financial resources, evaluation and monitoring, and provision of capacity building opportunities/professional development. These results were further informed by the findings from the document review, team survey and partner interviews.

Phase 1 sites were mostly at the "coordination" benchmark in terms of integration on most indicators of building capacity. All but one site either maintained separate human resource policies and practices or were beginning to review partner policies. As in the year 1 evaluation, sites felt challenged to be able to establish common HR policies and practices due to differing union membership and labour agreements, and believed it may not be a realistic objective. However, greater coordination and some movement towards collaboration in terms of team members sharing responsibilities and blending roles was achieved. Partners in most sites were contributing resources to offer joint programming and collaboratively seeking additional resources to support expanding programs and services. Sharing and reviewing evaluation and monitoring systems among partners was taking place at two sites, and partners were coordinating evaluation approaches. Staff development opportunities varied across sites, ranging from partners reviewing one another's opportunities yet not providing joint activities to partners providing or expanding joint professional development opportunities.

Professional development, networking and sharing opportunities (provided by the Department as well as local opportunities) were highly valued and team members considered these opportunities helpful in building awareness and understanding of the EYC model and on specific topics (e.g., mental health). Potential and existing supports identified as important included:

- continuing to promote and offer professional development and networking sessions, including more local sessions, and working to ensure all ECEs and partners can participate;
- development of a professional development plan based on local needs;
- continuing the regular conference calls with the Department; and
- development of more resources or tools to support the work (e.g., guidelines for committee structures and operation, action plan templates, etc.).

Partners benefitted professionally from participating in the EYC (95% of respondents) and felt joint staff development opportunities were effective (75% of respondents).

> *"Again, I see the conferences, I'm aware of what they are, the ones that the [ECEs] go to and certainly when I've spoken to them they seem to find them helpful. I think it's always good to have a plan for professional development or to have an idea of why you're choosing what you're doing, instead of just sort of plucking something out of the air. I think it's good to…say over two or three years, these are the things we're going to work on, and measure, are they having any impact, or building on some of them because a one day in-service isn't often enough to have a huge impact, but if you build on it over subsequent sessions, it can have more of an impact."*
> Partner Interview Participant

Phase 2 sites, in their first year of operations were mostly at the "cooperation" benchmark but in some cases moving towards coordination. Human resources policies and practices remained generally separate, with cooperative efforts emerging such as developing job descriptions and coordination of hiring happening in two sites. As noted above, union issues and labour agreements were seen as challenges. All sites were contributing resources to provide joint services with some sites seeking additional resources to support expanding services. Most sites were reviewing and sharing evaluation results and data between community partners, with one site undertaking a shared planning and development process. Partners at three sites discussed the importance and value of evaluation and that data collected from the IOC, ECERS-3 and EDI were helpful in supporting the planning and priority setting work at the EYC.

Supporting communication among professionals was also seen as an important component of building capacity for team members. Team members identified that formal and informal methods of communication exist among professionals, and that they are regularly communicating. However, it was indicated by some survey participants that formal procedures or processes were not in place for problem-solving or addressing conflicts. Almost one third of team members chose not to respond to questions around decision making, and those who did indicated that they were using informal procedures for problem-solving with others in the EYC, and making decisions together.

The lack of qualified ECEs in the community, including substitute ECEs, and the need to further define the roles, salary and hiring processes continue to challenge sites in both phases. For the one francophone site, these challenges are exasperated due to linguistic and cultural training needs.

Collaboration and Partnerships

The IOC required site management teams to explore the degree of integration related to: planning processes; policy, governance and leadership; partnerships; processes and tools, such as a common intake protocol for partner programs; and program planning. These results were further informed by the findings from the document review, team survey and partner interviews.

Phase 1 sites were mostly at the "coordination" benchmark of integration on many indicators. Some exceptions existed; benchmarks for one site were all within the coordination and collaboration benchmark of integration. Overall findings reveal that all sites had established a cross-sectoral structure that included a variety of community partners and are working to further engage partners and strengthen local relationships. Joint planning programs and services were being held as well in three of the four sites, and this joint planning expanded to a wider range of program activities and partners in year 2. More effort to coordinate planning with early elementary was identified as a need. Some sites were sharing and reviewing partner mandates, protocols and practices, while others had developed joint protocols and program statements to support coordination of activities. The creation of common processes

and tools such as establishing a common intake protocol varied with two sites experiencing greater co-operation and coordination, while one site was just beginning to review the protocols and another was using separate protocols. Team members felt welcome at the schools and had access to school resources (> 85% agreed or strongly agreed), such as access to school rooms and outdoor spaces; activities/programs with older children (book buddies, play dates); school events, assemblies, and concerts; and media and newsletters. Yet, they acknowledged lower involvement in school events and accessing school professional development opportunities.

Working together and forming partnerships continues to be a challenge two years into operations. Team members who responded to the survey agreed that working with other professionals leads to outcomes that could not be achieved alone, and see out one another's expertise. Stories shared demonstrated a commitment towards working together on ways to better support families, with EYCs seen as the way to link families to the supports and services they need. Yet, there was less affirmation that collaborating with other professionals was part of their job description or that there was a good understanding of the distinction between various roles among professionals.

Phase 2 sites were generally at the "cooperation" benchmark of integration in their first year of operations, with a few exceptions on specific indicators. All sites had established a cross-sectoral structure that included a variety of community partners and were working to further engage partners by developing processes to strengthen joint work, such as joint protocols and terms of reference to support coordination of activities. All sites were sharing information about programs and services. One site shared mandates and philosophies which resulted in a shift in decision-making to the cross-sectorial table. Most sites were engaged in joint planning to develop coordinated strategies for programs and services; planning processes remained largely separate at one site. While separate intake protocols still largely existed, one site was developing a protocol across programs for common intake and at another site, a joint registration form was in the process of being developed. Joint activities were being planned and carried out at one site to meet children's developmental needs. Discussions on how to strengthen relationships with early elementary were in the early stages. Some collaborative work including reviewing mandates, policies and practices, and developing a shared vision was underway.

Partners from Phase 2 sites identified the variety of partners who had been engaged in the EYC, particularly through the Site Management Teams and/or Community Advisory Committees. They identified sharing information and expertise, promoting each other's programs and services and joint planning as some early successes towards integration. Partners also discussed the need to continue to build partnerships and further engage organizations in the EYC (e.g., engage other organizations and support organizations to more fully participate in EYC activities).

> *"Building relationships with programs and the community all take time... It won't happen quickly but we can't give up."*
> Story Sharing Participant

Organizational processes, polices and context posed challenges for moving the work forward (e.g., staff changes, changes in organizational structure, etc.). Partners spoke of the challenges associated with competing priorities which make it difficult at times to contribute to the work of the EYC. A partner's

context including strengths and limitations, needs to be recognized to better inform effective contribution in the EYC model. Partners also emphasized the importance of flexibility within the model and the ability to adapt to local community and organization context.

> *"People have their own responsibilities, their own jobs, and it's hard to break out of that sometimes, and it does all fall [on a small number of people]. But I think we're starting to move away from that a little bit. I hope it continues with that sort of assigning responsibilities at the meetings..."*
> Partner Interview Participant

Awareness and Engagement

Site management teams assessed integration progress using IOC on indicators related to awareness and engagement, including community engagement, family engagement and communication. These results were informed by the findings from other data sources such as team survey, partner interviews, document review, story sharing, family survey and family focus groups.

Phase 1 sites were generally at the "coordination" benchmark of integration for indicators relating to awareness and engagement. Overall, partners were working together to engage the community, ensure family input into programs, and communicating jointly (e.g., jointly promoting programs and services, etc.). Developing strategies to effectively engage families to provide input into decision making was an ongoing priority for all sites. However, in one site, partners were just beginning to work together (e.g., sharing information) in planning communication and ensuring family input into programs. Some sites had engaged family members on the Site Management Team.

Most team members indicated that families and other professionals had a good knowledge about the EYCs, and that these groups were also involved with, and contributing to, the EYC programs ($\geq 75 - 80\%$ of those who responded). The views, opinions and the needs of children and families were recognized and felt to be reflected in the programs offered by the EYCs. Team members shared stories of working together to create connections for the families within the EYCs.

> *"In my opinion it is imperative the EYC staff continue to do outreach within the community. Connecting with community based resources and events, partnering and networking with programs and services. Being seen, reducing isolation and keeping relevant within the greater community."*
> Team Survey Respondent

> *"Parents weren't really connected to the school but now they make those connections and feel they are connected."*
> Story Sharing Participant

Families felt valued for their input, connected and welcomed within the schools and EYCs (over 83% of respondents agreed or strongly agreed). They considered EYC staff as warm and having a welcoming attitude, appreciating that staff took the time to engage them, get to know them, and build a solid foundation for support, trust and comfort. Families felt that the 'laid-back' approach taken by staff when

issues arose made it easier to overcome, ensured privacy or confidentially when needed, and exuded confidence in caring for their children. Families acknowledged that EYC staff deserved more recognition and appreciation, such as through a designated appreciation day for teachers, a poster or card created by children, or a Teacher of the Month award.

Phase 2 sites were approaching the "coordination" benchmark for most indicators related to awareness and engagement. Sites were working together with partners on community engagement, assessing community needs, offering joint activities (e.g. community night, clothing drive), co-facilitating programs and expanding the Site Management Team to include more community partners. In terms of family engagement, various approaches were developing such as plans to bring family engagement discussion to the Site Management Team, including a family/parent representative on the Site Management Team and engaging families though social media and parent groups. Other sites were involved in some joint communication activity (e.g. school calendar, school newsletter, parent handbook). One site maintained mostly separate communication processes.

Partners at all Phase 2 sites described the importance of investing time to build trusting relationships with families (particularly if families had past experiences with a school that were negative) and using a variety of methods to engage families (e.g., including families in school events, inviting families to participate on school structures/committees such as the Parent Teacher Association and the site-management team, contacting families directly via the telephone). While trusting relationships were developing (e.g., families opened up to staff and communicated concerns), continued effort to engage families (particularly families who were not currently accessing services) was required. The geographic boundaries, including different catchment areas between community organizations and the school, and the large rural area served by the EYCs, posed challenges to engaging families.

> *"Parents are opening up to, the Early Years Staff with concerns […] and they're trusting their Early Years staff with some really deep issues and they've started to identify with the Early Years staff about things like, the needs of the community and what gaps are there and what they need for support. So that's been, huge."*
> Partner Interview Participant

Access to EYC programs and services for families was consistently raised by partners and families across all eight sites. Lack of transportation to the EYC was a significant barrier to access for many families, especially those most vulnerable. Sites have been working to address transportation issues, however, rub up against geography and systemic barriers. Some school catchments are comprised of large and/or low density geographic areas which make transportation that much more challenging. While each school board has a student transportation policy in accordance with the *Education Act* and related provincial legislation and regional policies, if often does not align with the requirements of children registered in the ELP.

> *"….can we find a way to have the four-year-olds included in the transportation process, like in the bussing system, so we can be more accessible to more families, especially in rural areas? I think having a before and after school program attached to the Early Years Centre from the beginning is really helpful for families to be part of the program, and not have those extra barriers that may keep them from coming."*
> Partner Interview Participant

Other issues, related to a lack of consistency in approach which can be barriers to access, were raised including:

- High demand for ELP registration presents a challenge in accommodating all families. ELP is limited to children who reside in the school's catchment area. However, the other services and supports offered through the EYC are available to families and children within the broader community.
- Differences in system and organizational policies/guidelines across sites were also discussed, including engaging substitute ECEs, the use of volunteers, differing guidelines related to job descriptions and hiring procedures, and challenges with the regulations related to onsite regulated childcare.
- Working families or having schedules that conflict with ELP hours present challenges for families. Solutions discussed included having consistent opening times with the school to help families with multiple children, or offering a flexible drop off time, and allowing families to bring children in based on their needs.

These discussions highlighted some of the challenges that occur when different systems are required to work together but are not necessarily designed to function that way.

> *"My husband went to the school and grew up here, and I find a huge difference because with our oldest, we didn't have the Centre. We didn't have – so he had to travel with me for daycare wherever I was working, that's where he would go for daycare. And so now that it's here, the kids make connections…. You learn about their children and then you learn about the parents, and it's just really nice."*
> Family Focus Group Participant

Early Learning Environment

Site management teams assessed the integration progress using IOC on indicators related to the early learning environment, including:

- onsite resources/supports for families;
- onsite regulated child care programs;
- curriculum framework;
- pedagogical approach;
- daily routines and schedules;
- use of space;
- program quality; and
- behavior guidance/ child management.

These results were informed by the findings from the document review, family focus groups, partner interviews, story sharing and ECERS-3. Onsite regulated child care programs were benchmarked in this grouping, however findings and discussion can be found in the previous section on EYC model implementation.

Phase 1 sites for the most part were at the "coordination" benchmark of integration for the early learning environment, with one site benchmarked at collaboration moving to integration. Sites had generally expanded joint programs to build parenting capacity. In two sites, partners were developing and implementing shared program philosophies, goals and objectives. These two sites were also developing or had common behaviour management strategies. In terms of pedagogy, three sites were coordinating how educators organized the early learning environment and supported children's learning and behaviour, with one site establishing common practices consistently across programs. All sites were coordinating daily routines and sharing indoor and outdoor space. In all but one site, partners were monitoring program quality separately, while at one site partners were coordinating approaches.

Phase 2 sites were generally at the "cooperation" benchmark of integration for early learning environment. Two sites were exploring options for joint programming to support building families' parenting capacity as programs were currently being offered independently. Some sites were working with partners to coordinate joint programming to support families. Partner program goals and philosophies remained separate at two sites while others were undertaking collaborative work to review partners' philosophies, goals and objectives. Behaviour guidance strategies remained separate among partners at three sites; there is a coordinated approach to behaviour guidance at one site that has been facilitated through a partnership with the school. Daily routines and schedules ranged from separate for all partners to some coordination with routines and scheduling. One site was making changes to limit transitions. All sites were collaborating with partners to share indoor and outdoor space. Partners were monitoring program quality separately at all sites. More work is needed cooperate and eventually collaborate with early elementary. There were challenging discussions with community and school partners about pedagogy.

The value of play-based learning within the EYC model was recognized by partners and families in varying degrees. Some school staff, partners and families felt that play-based learning would not provide enough opportunities for children to learn the skills they would need for transitioning into the school system (e.g., numbers and letters). For example, in the story sharing sessions, participants spoke of the need to include components such as letter awareness, sitting and attending, promotion of independence and self-dressing. Partners and ELP and school staff expressed concern that multiple challenging behaviours and/or high numbers of children with special needs within the ELP posed challenges for fully implementing a play-based curriculum, and that more structure might be needed to effectively support all children. Differences in pedagogical approaches, and experiences with a "theme-based" program compared with a play-based approach, revealed a tension among some ECEs and school staff. However, some families shared that their perspective on play-based learning had changed because they saw positive changes in their child's development after attending the ELP. On-going support and discussions with partners, ECEs, school staff and families about the purpose and value of play-based learning was identified as a priority through the Indicators of Change process.

The Early Childhood Environmental Rating Scale (ECERS) was designed to assess process quality in early childhood settings. Process quality is what children directly experience in their programs (e.g. staff/child interactions, peer interactions, child/environment interactions) which have a direct influence on a child's development. Process quality is assessed primarily through direct observation and has been found to be more predictive of child outcomes than structural indicators (e.g. staff/child ratio, group size, cost).

ECERS has good inter-rated reliability and validity and has also been shown as useful in research and program evaluation. ECERS have also been shown as useful in program improvement efforts and are used with the ELPs in this manner.

The Third Edition of the Early Childhood Environmental Ratings Scale (ECERS 3) was used to assess the global quality of the ELP component of the EYC model. ECERS-3 is a major revision that introduces innovations in both the content and administration of the scale while retaining the continuity of the two principal characteristics of the ECERS, namely its comprehensive or global definition of quality and the reliance on observation as the primary source of information on which to base assessment of classroom quality.   It has six subscales (Space and Furnishings, Personal Care Routines, Language and Literacy, Learning Activities, Interactions, Program Structure) further divided into 35 items and indicators. Each item is scored based on a seven-point Likert Scale with four quality levels (Inadequate (1), Minimal (3), Good (5), Excellent (7)). The average score of the Environmental Rating Scales is related to positive child development for any given program and not the score on an individual item.

ECERS-3 observations for Phase 1 sites were completed initially in May 2015 and again in May 2016. All sites experienced some improvement between the initial and second observation, with an average Total Environment Rating score of 4.82 compared with 4.31 in 2015. Improvements were evident in all subscales. However, Space and Furnishings remained the lowest subscale score due to physical conditions of the physical space similar in each location. There was noted improvement in the Learning Activities subscale score which may be reflective of support and professional development opportunities provided to Phase 1 sites between the two observations.
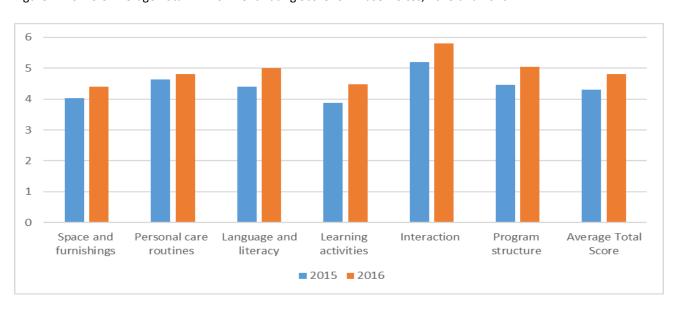
Figure 1: ECERS-3 Average Total Environment Rating Score for Phase 1 Sites, 2015 and 2016

Three of the four individual ELPs improved in their average ECERS-3 scores between 2015 and 2016. One ELP experienced a decrease in their average score. This program experienced structural changes, including a re-location of their physical space, which may have impacted the results.

The initial ECERS-3 observations for Phase 2 sites were collected in December 2015. Phase 2 sites had an average Total Environment Rating score in the Minimal range of 3.82. Subscale scores achieved in Space and Furnishings, Personal Care Routines, Language and Literacy and Program Structure were all in the Minimal range. These initial ECERS-3 observations for Phase 2 sites provide guidance for program improvement planning and identification of professional development needs.
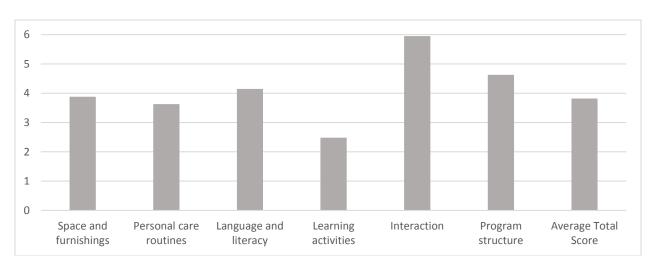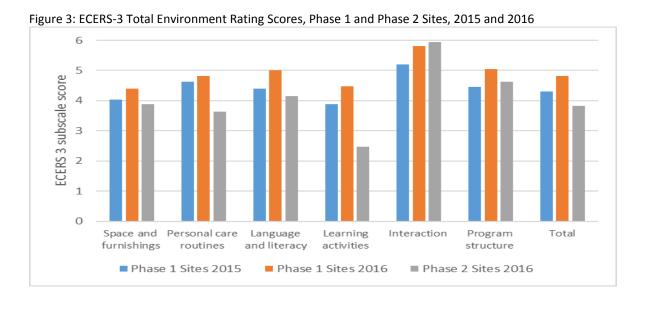
Figure 2: ECERS-3 Average Total Environment Rating Score for Phase 2 Sites, 2016

Figure 3 provides an overview of ECERS-3 observations with subscale scores for both Phase 1 and Phase 2 sites for three observations over two years, and with the addition of continuing ECERS-3 observations, offers some preliminary insight on how the early learning environment is developing. The lowest sub-scale score is learning activities which suggests continued efforts needed to ensure intentional learning experiences are offered within the play-based approach to pedagogy. This may explain some of the concerns raised about play-based learning versus school-readiness.

Figure 3: ECERS-3 Total Environment Rating Scores, Phase 1 and Phase 2 Sites, 2015 and 2016

Team members had positive views toward the early learning environment. They supported statements about the EYC model and play-based learning, and indicated that they would like to see the EYC continue at their school (90% of respondents). There was strong acknowledgment that the EYC and play-based learning supported child development in the areas of physical, social, emotional, cognition, and language development. Story sharing feedback suggested an increased understanding of play-based learning. Approximately 82% of team members who responded agreed or strongly agreed to statements regarding the inclusion of regulated childcare in schools.

When families were asked which programs and services they or their children had taken part in, most families responded with the ELP (80%), followed by childcare, before and after school (41%), Individual Series for children (40%), and Group Programs for adults and children (40%). Families who participated in the survey and focus groups expressed satisfaction with the EYC model, felt supported by staff at the centres and noticed improvements in their children's development such as language, speech and communication skills. Families appreciated the child-directed approach to learning and open communication from staff that allowed them to know what their children did each day. They acknowledged the benefits of the EYC over a typical "daycare" environment for their children. They liked that the children played outdoors as much as possible, although expressed some concerns about appropriate weather and the possibility of providing weather appropriate clothing. Specifically, over 95% of participants in the family survey felt very or extremely comfortable discussing concerns about their children with EYC staff. Approximately 68% of parents agreed or strongly agreed that they understand the impact the EYC has on their children's ability to learn and grow, make good decisions, connect with their communities and cope with challenges as a family.

> *"I was pleasantly surprised at how child-focused all the learning is. There was one day in particular that I came in, and my son had bought a super bouncy ball to school, and he lost it. But he just came home and explained to me that he lost it, where six months before it would have been a national disaster. And then I come into the classroom and I realize why. They had created an entire learning experience about it, and they had- have you seen this ball? There was a whole placard on the wall all about the day that they were playing, and they told the story and the kids interviewed each other, and they tried to find it.* Family Focus Group Participant

Child Development

The impact of the EYCs on children and their development has been considered in terms of integration progress related to monitoring child development (Indicators of Change), the Early Development Instrument, parent/family perceptions and/or observations, and partner observations.

Site Management Teams used the Indicators of Change (IOC) tool to reflect on the degree of integration related to child development including the monitoring and tracking children's developmental progress, and implementation of early identification and intervention activities. The degree to which these services and programs are integrated, can impact child development and overtime, improve child development outcomes.

Phase 1 sites achieved varying degrees of integration towards this indicator. Overall, sites were approaching the "coordination" benchmark on the integration continuum. Individually, the range of results was from approaching cooperation to approaching integration. Two sites were further along the continuum using combined approaches to monitor child development and partnering to offer joint activities (e.g., the school and Nova Scotia Early Childhood Development Intervention Services (NSECDIS) working together to more effectively support children in need of early intervention services, collaborating with partners to offer screening events, etc.). The other sites were beginning to review partner tools and approaches, and to discuss coordinating early intervention programs and services.

Phase 2 sites were in the early stages of integration, mostly at the "cooperation" benchmark. Two sites maintained independent records of children's developmental progress while another site was using portfolios and sharing as an approach to monitoring child development and identifying developmental challenges. All the Phase 2 sites but one had begun partnering to support children's development (e.g. NSECDIS and other partners coming together to better support children in need of early intervention services, collaborating with community partners for screening event, etc.). Partners at one site were beginning to work together to review tools and approaches to facilitate practices that would better support child development.

Early Development Instrument
The Early Development Instrument (EDI) provides an understanding of children's developmental health at the community level across five developmental domains: physical health and well-being; social knowledge and competence; emotional health; language and cognitive development; communication skills and general knowledge. The EDI provides a measure of the vulnerability in a population of children who are in grade Primary across the developmental domains.

The EDI has been collected across the province in 2013 and 2015, as well as in schools with EYCs for 2016. In 2015, the Offord Centre developed a NS baseline based on the first full provincial collection in 2013 which is used as a reference for all subsequent EDI collections in NS. The vulnerability rate is based on cut-offs from this population. The 2016 EDI results represent the first group of children exposed to the EYC model, however, only an *average of 53% of those children* attended the ELP in the four Phase 1 sites during the previous school year (2014-15).

The effectiveness of EYCs in improving child development outcomes can be measured through child/family participation in EYC programs and services– "dose of exposure", and has been evidenced[6] by comparing the population of children who have had exposure to the programs and services of the EYCs and EDI results. However, at this stage of EYC implementation, the evaluation can only use EDI results to establish a contextual *baseline* population measure for children attending schools that have an EYC, for two reasons. First, yearly EDI results may not be reliable or stable in the small populations in the eight individual schools; the data presented needs to be interpreted with caution. Secondly, the establishment of two components of the EYC model - family supports and resources and onsite regulated

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[6] Patel, S., Corter, C., Pelletier, J., & Bertrand, J. (2016). 'Dose-response' relations between participation in integrated early childhood services and children's early development. Early Childhood Research Quarterly, 35, 49-62.

childcare across the eight EYCs is spotty and varied. Attendance data for ELP program is available; however, attendance data for other existing programming and services is unreliable. With a combined larger population in the future, the potential impact of the EYC based on participation by children and their families may be further explored. This highlights the importance of supporting the sites to track attendance information.

While child development outcomes cannot be measured directly as outlined above, families, team members and partners can shed light on how children are engaging in and benefitting from programs and services in the EYCs. For example, the EYC model was widely viewed by partners and team members as supporting children in social and emotional learning. Families noted they observed progress in their children's development since they had been participating in the EYC, describing improvements in: language and speech; interactions and communications with other children and siblings (e.g. sharing); understanding and expressing their feelings; and understanding consequences of their actions and attitudes. Children were seen by their families as more outgoing. Some families noticed improvement in their children's cognitive abilities, for example counting and problem solving. A particular benefit of children engaging in programs and services, was the ability of partners to identify children with higher needs earlier and connect them to required supports earlier. Many partners believed that the ELP is preparing children for school.

Lessons Learned and Further Considerations

Lessons learned and issues that have emerged for further consideration from the Year 2 are in response to the understanding how EYC sites are developing, how services are coming together and the impacts on children and families.

It takes time to root
The findings from this evaluation, which provide baseline information for Phase 2 sites and a second year of evaluation for Phase 1 sites demonstrate that two years into the establishment of an EYC, developing, implementing and sustaining all three components of the model is challenging and takes time. The establishment and implementation of the ELP across sites has been the most successful accomplishment. A secured space, trained staff and registered children allowed for sites to work on the other aspects required to provide a quality early learning environment. The other components of the model, family supports and onsite regulated childcare have been more difficult to implement, grow and sustain. There is a need to better understand some of the system-level challenges that impact how components of the model are implemented at the site level, so that strategies can be developed collectively between sites and the Department to advance implementation and integration. This includes a better understanding of how regulations or practices developed within different systems (e.g., transportation policies, licensing for regulated childcare) interact to support or hinder progress towards EYC implementation and integration.

As with the implementation of the three core components of the model, the horizontal and vertical flow towards integration also takes time. Focusing on the common challenges to integration of programs and

services that exist across all sites may help to develop some solutions or approaches for the benefit of all. Consideration also needs to be given where sites have made progress to determine the full extent of that success and to understand if there are aspects within the core components related to the operations that is unique to the site.

Consistency with local flexibility
The evaluation findings highlight the importance of understanding the community context, and the need for local flexibility in how components of the EYC model are implemented and operationalized across the province. Partners pointed out that establishing onsite regulated childcare was complex and takes time. The needs of rural sites will likely be quite different to urban sites and a "one-size-fits-all" approach is unlikely to offer sufficient flexibility for these variable contexts. However, a level of consistency in how the model is implemented is needed to achieve the best outcomes for children and families based on evidence. The development of minimum implementation standards related to the core components - what is expected and how it is to be operationalized would provide consistency and accountability, as well as identifying areas where flexibility is needed to ensure consideration is given to local needs. This represents a systems-level support to ensure the model is applied consistently despite these variable contexts.

Creating conditions for successful partnership development
Sites have made progress in developing partnerships in the community and across sectors. Some challenges have been experienced in attracting the partners necessary to offer a diverse range of services. Challenges include a lack of funding, incompatible policy/regulation or ineffective approaches, such as seeking a partnership within a level of a sector that has no decision-making ability. The importance of time and space to cultivate and develop partnerships was identified as a key condition to enable partnership development, as well as shared values, goals and commitment of all partners in the EYC. Partners identified other success factors or ways to create conditions, such as:

- Develop an overarching shared vision for the work of the EYC
- Identify and discuss roles and responsibilities, and continually work to clarify how partners can contribute to the EYC model
- Develop accountability mechanisms (e.g., action plans, meeting notes with actions)
- Set priorities to help manage the workload (e.g., initial focus on establishing the ELP)
- Using many strategies to communicate with partners and continually working to foster effective communication
- Create a welcoming and safe space for participation at meetings
- Recognize prior history of working together and expertise in the early years among some partners
- Align organizational mandates with the EYC model
- Identify champions to build understanding within their organizations about the EYC model and how it can further their work

More formal mechanisms such as Memoranda of Understanding or Project Charters may help to ensure continued growth and sustainability of those partnerships through a shared common vision, expectations, and accountability. However, findings from the Year 1 evaluation suggest that the willingness to enter such formal agreements may not always be available or appropriate.

Workforce development
The EYCs illustrate the complex workforce requirements of the integrated service delivery model. Recruitment, retention and appropriate skills and capacity have been reported as a challenge across all EYCs throughout establishment. An appropriately skilled, qualified workforce remains crucial to continue to support the EYC model over time. The hiring of qualified ECEs that fit the needs of the site was identified as time consuming and challenging process. This was particularly noted by the Francophone site, which struggled to recruit French-speaking and trained staff. It was further expressed that support for recruitment and hiring French-speaking ECEs, having resources for EYCs and their partners that are in French, and providing access to professional development opportunities in French would be helpful. There is a need to better understand how sites can be supported in recruitment and hiring of Early Childhood Educators in the community and through training institutions.

Play-based learning is misunderstood
Play-based learning is a new approach for many, and how it supports children's transitions, specifically school transition, is misunderstood. Some partners and families expressed concerns that children would not gain the knowledge and skills needed for transitioning to school (e.g. letter awareness, sitting and attending, self-dressing, etc.) through play-based learning.   How play supports child development in terms of emotional, social, physical, language and cognitive development is grounded in evidence; children's brains are influenced and advanced through the interactions that occur during play. The educator-guided aspect of play-based learning intentionally creates learning situations that encourage children to become active and engaged partners in learning. ECEs leverage these learning opportunities that emerge from children's play, and introduce new learning experiences. Drawing from a wide repertoire of pedagogical strategies and techniques, their interactions with children include questions to understand and extend children's ideas, questions to challenge children, direct instruction to introduce skills and concepts, and reinforcement and practice of emerging learning and skills. There is need to continue to support ECEs and other team members in furthering their understanding and practice of play-based learning.   The articulation and implementation of the *Nova Scotia Early Learning Curriculum Framework* will help in addressing this need, and should include specific supports for partners and families to further their understanding of play-based learning.

Understanding who is not accessing the EYCs
This evaluation and the Year 1 evaluation focused on hearing from those who are involved in the implementation of the sites, partners and the families who are accessing the programs and services. Some of the potential barriers to access were raised such as transportation, hours of operation not in sync with school hours, family needs/schedules unique to seasonal employment as well as fear of institutions (schools, child protection, etc.). The EYC model as a universal approach (within its current limited geography) has the potential to improve outcomes for all children. In practice, children in higher SES ranges tend to access these more than those in lower socio-economic status (SES) ranges, because lower SES families are more likely to face obstacles to accessing services – physical, cultural, or social. Without

understanding and then addressing barriers to access, a universal approach can steepen the gradient, and create greater differences in child outcomes between SES ranges. Even though EYC sites were selected based on identified need in the community, it is not clear as to the number of families with young children who are not being reached and why. If barriers to access have been identified by partners who know the community and by families who have experienced some barriers but are accessing services and programs, it can be assumed that there are more families who require a more targeted approach to reach.

Better understanding of improved outcomes for children and families
Families and partners reported how children who are participating in EYC programs and services experienced positive benefits. Families observed changes in their children's development. The EDI data have the potential to offer evidence on the effectiveness of programming and services of the EYCs in improving child outcomes, particularly if complemented with other documentation from the ELP including ECERS-3 observations. However, unless a significant number of children in grade Primary participate in the ELP, it will be more difficult to understand any correlation between the EYC model and EDI results. In the meantime, an EDI baseline is needed for each site. As well, data collection needs to be focused on program and service attendance reporting requirements which requires the cooperation and support of teams and partners in all sites. Mechanisms for formalizing partnerships, such as Memoranda of Understanding and Project Charters should include expectations on data collection and how different data sources support a better understanding of child outcomes.

Appendix

Appendix 1: Core Components of the EYC Model by Site, 2016

EYC Components	PHASE 1 SITES				PHASE 2 SITES			
	Rockingstone Heights	Jubilee	Yarmouth Central	East Antigonish	Clark Rutherford	West Highlands	Beau-Port	New Germany
ELP	✓ (pre-existing Early Learning Opportunities (HRSB 4 yo program))	✓	✓	✓	✓	✓	✓ (pre-existing 4 yo program *Grandir en francais*)	✓
Family supports/services	✓ Family Support "Classroom" provides a variety of programming, drop-ins for parents and infants, toddlers and preschoolers. Dalhousie Family Medical Clinic provides clinic hours once a week.	✓ Cape Breton Family Places Resource Centre provides community programming including playgroups, parenting education and support groups	✓ Resource Room provides community programs provided by the Parent's Place (community outreach – meal preparation, literacy, support groups), Tri-County Women's Centre – social and information support for parents and young children	✓ Partners include Kids First Family Resource Centre, Antigonish-Guysborough Early Childhood Intervention, Public Health (Nova Scotia Health Authority). Family Resource Room offer community programs such as positive parenting, parent and toddler/preschool reading time, music, physical activity. Nurse Practitioner drop in and other health services such as vision and dental checks, speech and hearing, flu shots and car safety checks	✓ Supports and resources for families being offered by a few partners. Working towards a more coordinated effort among partners (e.g. working group established to plan safe and effective use of space to support children's play outdoors)	✓ Programs and services provided in collaboration with partners – Maggie's Place, West Highlands Parent Group and Schoolsplus such as program for parents and preschoolers, outreach program for preschoolers through play, and other one-off events	✓ Pre-existing community family resource centre, established in the school offers services and programs in collaboration with community partners	✓ Community Room provides access to some community programs for parents and young children.
Onsite Regulated childcare	Not identified as a priority	Offsite 4 approved family home care through licensed Family Home Care Agency	✓ Onsite, regulated. Boys and Girls Club offers before school, after school and full day childcare to children in ELP and Grades P-2	Onsite, unregulated Before and after school care for ages 4-10	Onsite, unregulated. After school child care was provided by the YMCA for children in the ELP. Community partnership formed to move forward with developing onsite regulated childcare.	Off site, regulated After school care by the Cumberland YMCA. Partnership with a regulated child care centre established to provide childcare	✓ Onsite, regulated. La Garderie des Petites Etoiles 18 mos-4 years; ELP (3-5); afterschool (4-12) provided by the Richmond County Early Childhood Educ Association.	Onsite regulated childcare was initially established; discontinued.