



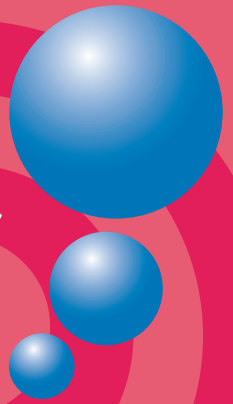
PICTOU. ANTIGONISH. GUYSBOROUGH.

# COMMUNITY ACTION PLAN 2010 KEY FINDINGS & LIMITATIONS OF THE DATA

Understanding the Early Years initiative is funded by Human Resources and Social Development Canada.  
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understanding the

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**Understanding the Early Years (UEY)** is a national initiative aimed at strengthening the capacity of communities to use quality local research to inform decisions that can enhance children's lives. Pictou Antigonish Guysborough is one of 37 UEY communities across Canada. As part of our UEY project, information was collected in 2008-2009 from parents, grade primary children, and their teachers on the development of children in the community, using the Parent Interviews and Direct Assessments of Children Survey (PIDACS) and the Early Development Instrument (EDI):

- PIDACS or the Parent Interviews and Direct Assessment of Children Survey: Uses data collected from parents and grade primary children whose parents agreed to participate in the survey. The 531 parents who were interviewed and 519 children who completed the direct assessments provide information on how grade primary children in Pictou, Antigonish and Guysborough are doing. This assessment also collects information on the availability and accessibility of programs and services and Canadian Census data (2006) describing local socio-economic characteristics.
- EDI or Early Development Instrument: A Population-Based Measure for Communities: This tool, developed by The Offord Centre for Child Studies, measures grade primary teacher assessments of children's development and presents statistical data on the results.

**This Key Findings document** summarizes the preliminary results of this data collection and is best understood when read in conjunction with the Community Action Plan for Pictou Antigonish Guysborough (2010), which is available for download at [www.kids1st.ca](http://www.kids1st.ca) or by calling (902) 752-1213.

*Project Funding*

*The UEY Pictou, Antigonish and Guyborough Counties, Nova Scotia Project is funded by the Government of Canada's Understanding the Early Years Initiative.*

*Research Disclaimer*

*The opinions and interpretations expressed in this publication are those of the author and do not necessarily reflect those of the Government of Canada.*

## PIDACS ~ Limitations of the Research

- In terms of the data presented, PIDACS cannot measure in detail all aspects of children's outcomes, primarily due to time constraints, which necessarily limit the scope of the interviews and assessments.
- It is important to note that not all families participated and it is possible that the families that agreed to participate may differ in systematic ways from those that did not participate.
- The sample size for each UEY community is not sufficiently large to accurately determine which family and community factors have the strongest relationship with the various developmental outcomes.
- PIDACS data is descriptive, not causal. UEY is a study designed to provide a rich descriptive data on the family and community factors that affect childhood outcomes. Research aimed at understanding the causal relationships between these factors and childhood outcomes requires longitudinal studies that follow children over several years and studies that involve random assignment of communities to treatment and control groups.

## PIDACS ~ Summary of Key Findings

*Variables shown to be important to developmental outcomes are: family income, education level of parents, employment status of parents and family structure (single-parent or two-parent)*

### Lower than average family income:

- > Average family income is about \$64,000—substantially lower than the Canadian average of \$82,000. Median income is also below the national average: \$54,000 c.f. \$66,000.

### Economic Families with Incomes Below \$30,000:

- > About 20% of children surveyed were living in families with annual incomes below \$30,000, c.f. 15%.

*Studies show the relationship between family income and children's scores on receptive vocabulary is CURVILINEAR. Scores on receptive vocabulary increase steadily as family income rises from \$10,000 to \$30,000. After \$30,000 the relationship is weak.*

*Studies show the effect of living in low-income is more detrimental during the early years than during primary or secondary school years.*

*These results suggest that there are a considerable number of children in Pictou, Antigonish and Guysborough living in low-income families. Family income is not the sole determinant of children's developmental outcomes but children living in poor economic circumstances often face challenges in the behavioural and learning domains when they enter school.*

### Employment Status:

- > The unemployment at 10.1% is relatively high, c.f. 6.6%.
- > 32% of mothers and 6% of fathers were not employed, comparable to Canadian PIDACS average (33% and 6%)

*Children's level of receptive vocabulary is related to mother's employment; children whose mothers are unemployed were more likely to have low receptive vocabulary scores.*

### Parent's Level of Education:

- > Only 4% of the mothers and 9% of the fathers surveyed reported that they had not completed high school, which is comparable to Canadian PIDACS averages (5% and 7%).

*During the early years, the mother's education plays a more prominent role in children's language development than does that of the father, but the effects of the father's education become important for school achievement after the child starts school.*

**Family Structure:**

- > About 22% of children are living in single parent families, c.f., 15% Canadian PIDACS average.
- > About 10% of mothers indicated they were experiencing depression, comparable to the national average.

*Single mothers tend to be at increased risk of various physical and mental health problems and are more likely to have low levels of education. Many single-parent families also experience prolonged periods of low income.*

*It is important to understand that the negative effects on children's outcomes arise from the **associated challenges** of being a single-parent (low income, low parental education, barriers to participation in the form of resources and transportation and increased prevalence of depression)*

**Developmental Skills:**

- > PAG children are generally faring well. The average scores on receptive vocabulary, number knowledge and pre-literacy skills were all **above the Canadian average**. In fact, the pre-literacy scores were considerably higher than the Canadian PIDACS average.
- > About 9% of PAG children had low scores on the assessment of receptive vocabulary. This prevalence of vulnerability is lower than the Canadian PIDACS population. In Canada 20% of children are at risk of not making the critical transition from learning-to-read to reading-to-learn around Grade 3 or 4.
- > About 12% of PAG children had low scores on the assessment of number knowledge and about 8% had low scores on the assessment of pre-literacy skills. These are lower prevalence than the Canadian PIDACS average.

*Research shows exposure to speech and language is a stronger determinant of outcomes than heredity*

*Language and cognitive development together are key predictors of the rate at which children acquire reading skills in grades 1 and 2, critical for "school readiness".*

**Behavioural Outcomes:**

- > Based on parental reports, PAG children have scores of social behaviour, inattention, anxiety, and physical aggression that are comparable to the Canadian average.
- > The prevalence of depression was relatively low, with only 3% of children displaying symptoms, c.f., 5% Canadian PIDACS average (statistically significant).

**Health Outcomes:**

- > Only 0.5% of PAG children were considered to be in fair or poor health by their parents, this is below the Canadian PIDACS average of 1.3%.
- > The prevalence of children with asthma, allergies and other chronic health problems were 12%, 12% and 7% respectively. This data is comparable to the Canadian average.

**Inequality of Outcomes:**

- > The most prominent inequalities in outcomes are associated with low family income, the mother's level of education and the sex of the child.
- > Children living in families with incomes below \$30,000 per year were more likely to have low number knowledge scores and low pre-literacy skills. They were also more likely to exhibit problems with inattention and have asthma.
- > Children living in families in which the mother was unemployed were more likely to exhibit poor social behaviour.
- > Children living in families in which the mother had not completed secondary school were also prone to having poor scores on the three cognitive outcomes, as well as having poor general health and asthma.
- > Children whose father did not complete secondary school were more likely to have low pre-literacy skills.
- > Compared with the girls, boys were more likely to have poor number knowledge and pre-literacy skills, exhibit poor social behaviour and inattention and suffer from asthma.

**Family Functioning:**

- > Ten percent of the families report poor family functioning, comparable to the PIDACS Canadian average (10%).
- > Ten percent of mothers were displaying significant signs of depression, the same as the Canadian PIDACS average.
- > Families with girls and families in which the father was unemployed were more likely to have poor family functioning.
- > Mothers in low-income families were more likely to be experiencing depression.

- > Are the findings for Aboriginal families substantively significant? (15% and 14% respectively for poor family functioning and maternal depression),

**Parenting Practices**

Only 49% of the families displayed a positive or "authoritative" parenting style, which is defined as having an equal balance of love, support and authority. This is below the Canadian PIDACS average of 56%.

- > In contrast, 13% of the families displayed "permissive" parenting style (high on love and support, but low on authority), c.f. 9% for Canadian PIDACS average.
- > Percentages of Authoritarian and Neglectful were comparable.
- > Families in which the father was unemployed were less likely to demonstrate authoritative parenting (38%). Aboriginal families were also less likely to demonstrate authoritative parenting (35%).
- > Interestingly, single-parent families were a little more likely to be authoritative (53% vs. 48% for two-parent family).

**Engagement**

- > Seventy-nine percent of parents read to their child at least once every day, comparable to the Canadian PIDACS average (77%).
- > Children in Aboriginal families (57%), low-income families (66%) or in which the mother had not completed secondary school (57%) were less likely to be read to at least once a day.
- > In three of the eight parent-child interactive daily activities, parents in Pictou, Antigonish and Guysborough were **less engaged than Canadian parents** as a whole. These activities included taking the child out to play, teaching the child to print letters and numbers, and playing cards or board games. However, parental engagement

to teach words was **above average** (69% c.f. Canadian PIDACS average of 63%).

- > **Single Parent** families were significantly less likely to tell stories to their children
- > Interesting, those with incomes less than \$30,000 were significantly more likely to engage their children in playing games.
- > “Takes him or her outside to play”: 33% versus 47% Canadian PIDACS

### TV

- > PAG children spend 1.7 hours a day watching television or playing video games, both of which are comparable to the Canadian average of 1.6 hours.
- > The time spent watching television was higher for boys than girls (1.9 hrs) and for children in low-income families (2.2 hrs) and families in which either the mother or father was unemployed (1.9 and 2.3 hrs) or had not completed secondary school (2.9 and 2.1 hrs).

### Self-Engagement

- > In contrast, PAG children appear to be more self-engaged, with higher rates for playing with pencils/markers/doing real or pretend writing, reads or tries to read, looks at books/magazines/comics etc on his or her own.
- > **Aboriginal children** were significantly less likely to self-engage in real or pretend writing
- > **Gender:** Girls were more likely to be self-engaged in literacy activities. Parents tend to take boys outside to play (36% vs. 31% for girls)
- > **Education:** Mother did not complete high school: significantly more likely to watch TV and teach printing. Father did not

complete high school: significantly more likely to teach to read words, watch TV, teach printing and play games.

### Physical and Leisure Activity

- > Organized sports: average 1.2 times per week, c.f. 1.4 times per week for Canadian PIDACS, significantly less
- > Unorganized sports: average 4.6 times per week, c.f. 3.8 times per week for Canadian PIDACS, significantly more
- > **Gender:** boys were more likely to participate in both organized and unorganized sports than girls
- > **Single-parent, low income, mother unemployed, either parent did not complete secondary** were less likely to participate in organized sports
- > Music, art & other lessons: .3 times per week, c.f. .5 times per week for Canadian PIDACS, significantly less
- > Community groups & programs: .4 times per week, c.f. .4 times per week for Canadian PIDACS

### Use of Community Resources

- > The use of nearly all types of educational, entertainment, cultural and recreation resources was below the Canadian average, the main exception was the use of ice rinks and skiing facilities.

### Educational

- > Approximately 81% of PAG kids used libraries or bookmobiles at least once every month. Although this may seem high, this is lower than the average participation rate of Canadian children (87%)
- > Eleven percent of families access family resource centres, compared to 17% in the Canadian PIDACS sample.

- > Participation rates in book clubs and reading programs and in educational or science centres were also lower than the Canadian PIDACS participation rates.

**Entertainment, Cultural**

- > About 14% of the children in Pictou, Antigonish and Guysborough went to the movies at least once per month and 2% visited museums or galleries, both significantly below the Canadian PIDACS average of 20% and 8% respectively.
- > Seven percent attended musical or theatrical performances, which is comparable to the 6% Canadian PIDACS average.
- > Attending sporting events was the most frequent form of entertainment at 29%, comparable to Canadian PIDACS average.
- > Single-parent families and those with income below \$30,000: more likely to participate in movie entertainment

**Recreational**

- > Seventy-five percent of PAG kids used parks, play spaces and trails at least once per month; this rate is still below the Canadian average (85%).
- > The use of recreational and community centres was also significantly lower, 30% c.f. 43%. However, children in the tri-county area use beaches, swimming pools and provincial or national parks and campgrounds at rates comparable to other Canadian children this age.
- > Fifty-eight percent of PAG kids use ice rinks and skiing facilities, a rate, which is significantly higher than the national average (52%). But, girls were significantly less likely than boys to use these facilities.

- > Families at the lower end of the SES do not appear to be taking advantage of no cost recreation opportunities. Low income, mother unemployed, father did not complete secondary school: significantly less likely to use skating/skiing facilities. Each of these sub-populations significantly under-utilized at least one other recreational resource.

**Barriers to participation in Children’s Programs:**

The top five barriers as identified by parents:

1. programs not available at convenient times (51%)
2. programs only available to older children (50%)
3. there was not enough time to participate(42%)
4. programs not available nearby (42%)
5. 41% of parents said that they were unaware such services were available

- > Inconvenient times and not enough time were more of a barrier to employed parents.
- > Unemployed mothers had more of a challenge if programs were not available nearby.
- > Forty percent reported “too expensive” as a barrier, this is higher than the 34% in the Canadian PIDACS average.
- > Twenty-seven percent cited transportation as a barrier, also significantly higher than the comparison population (18%)

**Use of Child Care Arrangements:**

- > Forty-six percent of families cared for their children at home without any other type of arrangement, this is higher than the Canadian average of 42%. For another 24% of families, care was

provided by a relative at home or by a relative in someone else's home.

- > For those who use an alternate arrangement, the most frequent type was care by a relative in someone else's home (14%).
- > Nine percent use daycare centres or before and after school programs, this is substantially lower than the 19% in the Canadian PIDACS average.
- > Of those using child care arrangements, 38% use two or more types.
- > Children spent about 14 hours per week in child care, less than the 18 hours of the comparison population.
- > Employed parents and single-parent families were significantly more likely to use child care.

**Neighbourhood Characteristics:**

- > Only 49% of parents consider their neighbourhood to be of high quality, which is much lower than the Canadian average of 77%.
- > Unemployed mothers and fathers who did not complete secondary were more likely to feel their neighbourhood was not of high quality.
- > However, 97% consider their neighbourhood to be safe, above the Canadian PIDACS average of 90%
- > Ninety-five percent felt they lived in a cohesive neighbourhood, above the Canadian PIDACS average of 91%.
- > About 77% of the parents in Pictou, Antigonish and Guysborough indicated that they felt high levels of social support, lower than the Canadian PIDACS average of 81%.
- > All these differences were statistically significant.

**OVERVIEW**

- > PAG kids had ABOVE AVERAGE scores on receptive vocabulary, number knowledge and pre-literacy skills
- > PAG kids had COMPARABLE levels of inattention, anxiety and physical aggression
- > PAG kids had SIGNIFICANTLY LOWER levels of signs of depression
- > PAG had COMPARABLE levels of kids with low scores on positive social behaviour
- > PAG had COMPARABLE levels of kids with health problems and significantly LESS prevalence of poor general health
- > COMPARABLE levels of maternal depression and poor family functioning
- > BELOW AVERAGE positive parenting
- > PAG kids are MUCH MORE likely to be involved in unorganized sports
- > BELOW AVERAGE use of all resources, except ABOVE AVERAGE use of rinks/skiing facilities
- > Top 5 barriers: time inconvenient, programs are for older kids, not enough time, not available nearby and lack of awareness
- > 54% use some form of childcare but mostly be a relative
- > Only 49% considered their neighbourhood to be of high quality (much lower than 77% Can PIDACS)
- > PAG realities: lower levels of income, significantly more families living on less than \$30,000 per year and higher levels of unemployment.

## PIDACS ~ Understanding the Assessment of Various Outcomes

### Developmental/Learning/Cognitive Outcomes

These outcomes involve direct assessments of children, which are conducted by a trained assessors to measure:

- Receptive Vocabulary: assessment of the vocabulary that children understand when they hear spoken words.
- Number Knowledge: children's intuitive knowledge of numbers by assessing their understanding of quantity (more vs. less), ability to count objects, their understanding of number sequence and their ability to do simple arithmetic (oral).
- Pre-literacy skills: copying and writing tasks to assess children's ability to conceptualize and reconstruct geometrical shapes and use symbolic representations, illustrated by their understanding and use of conventional symbols such as numbers, letters and words.

Children with very low scores on the direct assessments are at risk of experiencing slow development in their reading skills.

### Behavioural Outcomes

Parents provide their perceptions of how their grade primary child behaves at home and in the community. This includes measures of:

- positive social behaviour: more likely to try to help and comfort others, offer to help pick up objects that another child has dropped or help a child who is having trouble with a difficult task, invite peers to join in a game
- inattention: trouble sitting still, restless, easily distracted, trouble sticking with an activity or concentrating for long periods, difficulty waiting their turn in games
- anxiety: fearful, worried, nervous, high-strung, cry more
- depression: unhappy, sad, trouble enjoying activities
- physical aggression: react to accidents with anger or fighting, physically attack others, threaten others, cruel, bully

### Health Outcomes

Parental interviews included questions about the child's physical, mental or health conditions that limit their activities, including only problems that had lasted or were expected to last for at least six months. The interviews also asked if their child had respiratory problems (hay fever, asthma); food, digestive or other allergies; chronic conditions (heart problems, epilepsy, cerebral palsy, kidney condition). Aside from indicators of children's health status, this domain also includes children's gross and fine motor skill development.

## EDI ~ Summary of Key Findings

- > PAG kids score slightly lower than the Normative II Cohort across all domains, except language & cognitive development
- > Girls are more ready to learn than boys across all domains
- > Children in French Immersion do not differ significantly as a sub-population
- > Aboriginal children are less ready for school across all domains
- > Children who attended early-intervention are less ready for school across all domains
- > Children who attended language/religion classes scored higher on physical health & wellbeing, emotional maturity and communications skills & general knowledge
- > There is no statistically significant difference between the children who attended part-time pre-school and those who did not
- > There is not statistically significant difference between those in full-time and those in part-time non-parental care arrangements

### Tri-County Overview

*Results shown in this order: Vulnerable, At Risk, Ready, Very Ready*

Physical Health & Wellbeing: 16%, 12%, 45%, 27%  
= **28% NOT ON TRACK**

Social Knowledge & Competence: 14%, 22%, 48%, 16%  
= **36% NOT ON TRACK**

Emotional Health & Maturity: 16%, 20%, 50%, 14%  
= **36% NOT ON TRACK**

Language & Cognitive Development: 5%, 7%, 52%, 36%  
= **12% NOT ON TRACK**

Communication Skills & General Knowledge: 10%, 28%, 32%, 30%  
= **38% NOT ON TRACK**

### On Track, Not on Track

“On Track”— Top 75% of children

“Not on Track — Bottom 25% of children

Vulnerable are children who score low (below the 10<sup>th</sup> percentile) in one or more of the five domains. 28.2% of PAG kids score low on at least one domain and 16.6% score low on at least two; c.f. 27.2% and 13.6% Normative II Cohort, respectively.

Percentage scoring in lowest 10<sup>th</sup> percentile on one or more scales:  
Pictou: 24.2%, Antigonish: 24.7%, Guysborough: 32.6%

County Comparisons, expressed in percentages

Physical Health	PAG	P	A	G
Very Ready	27	27.1	29.5	19.6
Ready	45	52	48.6	54.3
At Risk	12	13.7	10.5	15.2
Vulnerable	16	7.2	11.4	10.9

Language	PAG	P	A	G
Very Ready	36	36.3	34.3	34.8
Ready	52	32	36.2	37
At Risk	7	20.9	21.9	19.6
Vulnerable	5	10.7	7.6	8.7

Social Competence	PAG	P	A	G
Very Ready	16	26.6	15.2	6.7
Ready	48	49.2	54.3	68.9
At Risk	22	13.1	22.9	15.6
Vulnerable	14	11.1	7.6	8.9

Communications	PAG	P	A	G
Very Ready	30	30.7	22.9	45.7
Ready	32	32.2	38.1	19.6
At Risk	28	22.5	24.8	23.9
Vulnerable	10	14.6	14.3	10.9

Emotional Maturity	PAG	P	A	G
Very Ready	14	25.7	25.2	8.7
Ready	50	47.7	55.3	67.4
At Risk	20	17.3	12.6	13
Vulnerable	16	9.2	6.8	10.9

### A Closer look at the information in the sub-domains

- > Only 41.8% of PAG kids are ready for school in terms of their gross and fine motor skills
- > 17.3% are not on track in terms of demonstrating physical independence (have not developed one or all of independence, handedness, coordination and may also suck thumb)
- > Only 2.3% of PAG kids are not on track in terms of readiness to explore new things (good news...our kids are curious!)
- > 37.1% are not ready in terms of pro-social and helping behaviour and 24.3% are showing hyperactivity and inattention.
- > Within the language and cognitive sub-domains, PAG kids are predominantly on track. 10.7% are not on track in the area of basic numeracy (difficulty with numbers, can't count, compare or recognize numbers, may not be able to name all the shapes and may have difficulty with time concepts
- > 37.4% of PAG kids are not on track for communication skills & general knowledge: poor-average communications skills, may have difficulty participating in games involving language, may be difficult to understand/understanding others, may have difficulty with native language and may show little general knowledge
- > **Multiple Challenge Index:** 5.3% c.f. 3.9% Normative II (when a child scores low on 9 or more of the 16 sub-domains)

### An understanding of the developmental domains

Physical Health & Wellbeing: physical readiness for school, physical independence, gross and fine motor skills. On track = arrive at school well rested, energetic and appropriately dressed for school activities, rarely arrive late or hungry, display independence, established hand preference, good coordination, good performance on gross and fine motor skills (running, jumping, holding a pencil).

Social Knowledge & Competence: cooperation and the ability to get along with others and form friendships, taking responsibility, showing respect, ability to solve problems and adjust to routines. On track = get along and play with others, demonstrate respect for others, follow rules, accept responsibility, show self control, take care of materials, positive work habits, work neatly and independently and are eager to explore new things like books, toys and games.

Emotional Health & Maturity: ability to recognize and express both positive and negative emotions in ways that are healthy, respectful and appropriate to the situation, demonstrate empathy and willingness to help and comfort others. On track = helpful to others that are hurt, sick, upset; invite others to join play, seem to enjoy school, okay to be left by caregivers, don't use aggression to solve problems, few if any temper tantrums, able to settle in to school tasks, practice turn taking and think before acting/reacting.

Language & Cognitive Development: word and number recognition, counting and memory, advanced literacy (reading & writing). On track = demonstrate basic literacy skills (holding book, letter identification, attach sounds to some letters, awareness of rhyming words, knowing the direction of print), ability to write own name, interest in books, reading and numeracy, good memory, read simple/complex words or sentences, writing simple words/sentences, demonstrate basic numeracy (count to 20, recognize shapes and numbers, classify, sort compare numbers, understand simple time concepts, one-to-one matching).

Communication Skills & General Knowledge: ability to clearly communicate one's needs and understand others (talking and listening). Interest in outside world. On track = communicates effectively and easily, participates in storytelling, displays adequate levels of general knowledge and proficiency in native language.