
Grow Along With Me Project

Quarter 1 ~ 2009-10
(Apr. – Jun.)

Aug. 2009



Prepared for the Grow Along with Me Steering Committee

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Executive Summary

The Chinook 'Grow Along With Me' (GAWM) project is a collaborative, intersectoral, community-based initiative designed to enhance existing developmental screening services for preschool children (18-36 months of age). The purpose of this project is to bring together project partner knowledge and expertise to create an evidence-based, integrated continuum of regional services that will better serve children and their families in the communities where they live.

The goals of the 'Grow Along With Me' project are to:

1. Identify children with a developmental delay as early as possible, and;
2. Develop a comprehensive continuum of services that provides the right level of service, at the right time, by the right person as near to the child's residence as possible.

In the first quarter of 2009-10 (April 2009- June 2009) progress toward achieving these goals was evidenced by:

- Enhanced access to evidence-based screening services; Ages and Stages screening rates have climbed steadily since the Grow Along with Me project inception (Q4, 2007-08). Despite a significant increase in check-up rates, the proportion of children referred for further assessment has decreased over time;
- A 29.5% increase in developmental check-up rates was seen in comparison to the previous quarter screening rates. The annual spring regional developmental checkup blitz (March 18 and May 2, 2009) may have contributed to this increase;
- A provincially sponsored conference, "Innovative Approaches to Preschool Developmental Screening & Follow-up Services" was held in Lethbridge Apr 20-22/09;
- GAWM web site visits (n=432) increased by 39.4% in comparison to the same quarter in 2008-09. Consistent with the program's Family Centered Care philosophy, top-viewed web pages targeted parents (e.g. information for parents, upcoming parenting programs, and developmental check-ups);
- The significant role of community partners was reflected in the 27.2% of screening done by partner agencies (including Parents as Teachers, Parent Link Centres and coordinated community developmental check-ups). Nearly 2/3 of developmental check-ups were initiated at AHS Chinook Well Child clinics;
- Over half of the ASQs submitted were 18-20 month questionnaires; the gradual shift toward increased 33 and 36 month ASQs may reflect a trend toward sequential ASQs;
- The vast majority of children had no developmental delays identified through the ASQ checkup. 14.7% of children who participated in a developmental checkup were subsequently referred to Children's CARE Services for further follow-up. Highest areas of delay identified through the ASQ were in the domains of : communication (11.4%), problem-solving (5.8%) and personal-social delays (4.1%). Nearly 40% of children were referred to more than one discipline (38.0%); the vast majority of referrals (87.3%) were to speech-language pathologists followed by a 29.6% referral rate to infant preschool development practitioners.



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The 'Grow Along With Me' Project.

Q1, 2009-10 Report

I. Introduction

The Grow Along with Me (GAWM) project is a collaborative, intersectoral, community-based initiative designed to enhance existing developmental screening services for preschool children (18-36 months of age). The purpose of this project is to create an evidence-based, integrated continuum of regional services that will better serve children and their families in the communities where they live.

The goals of the 'Grow Along with Me' project are to:

- Identify children with a developmental delay as early as possible, and;
- Develop a comprehensive continuum of services that provides the right level of service, at the right time, by the right person, as near to the child's residence as possible.

This evaluation report outlines processes and outcomes achieved during the first quarter of 2009-10 (Apr. 1 – June 30, 2009). Grow Along with Me project indicators are presented under their corresponding goal and objectives.

II. G.A.W.M. Indicators

Goal 1 To identify children with a developmental delay as early as possible

Objective 1.1 To increase access to evidence-based developmental screening for children and families.

Target: December 31, 2009 ¹

Table 1 Grow Along with Me Ages and Stages Training

GAWM Access Indicators	07-08	08-09				08-09	09-10
	Q4	Q1	Q2	Q3	Q4		Q1
Ages and Stages Questionnaire (ASQ)							
Children/parents who completed the ASQ (C.A.R.E., All ages)*	367	603	396	500	515	2014	669
ASQs received with consent for evaluation (GAWM project) (including duplicate ASQs)	-	446	331	377	460	1614	488
Response rate		74.0%	83.6%	75.4%	89.3%	80.1%	72.9%
Duplicate ASQs		16			12	28	5 ^
ASQs received with consent for evaluation (GAWM project), no duplicates					448	1586	484
ASQ training							
ASQ trainers (e.g Train the Trainer)	2	0	0	0	0	2	0
Regional & partner agency staff trained to administer the ASQ**	65	0	0	0	15	80	16

Source:

* Meditech All ages, ASQ Information Summary sheets, GAWM project consent forms

** G.A.W.M. Attendance sheets **

*** Includes duplicate consents (e.g. where more than one ASQ per child per age completed)

^ one duplicate ASQ crossed quarters (Q4, 08-09 and Q1, 09-10), duplicate record from Q4, 08-09 was eliminated

Note: A child may have had more than one ASQ completed per timeframe

Developmental check-up rates for Children's CARE services increased by 29.9% in the first quarter of 2009-10 in comparison to the previous quarter (10.9% from Q1 of the previous fiscal year). Similarly, "Grow Along with Me" project Ages and Stages Questionnaire (ASQ) submission rates increased 6.1% from the previous quarter (9.4% from Q1 of the previous fiscal year).

A highlight of Q1, 2009-10 (Apr-June 2009) was the annual spring regional developmental checkup blitz where over one hundred children 18-36 months of age were screened using the Ages and Stages Questionnaire.

Developmental screening rates have continued to climb steadily each quarter since the project inception as seen in the following graph:

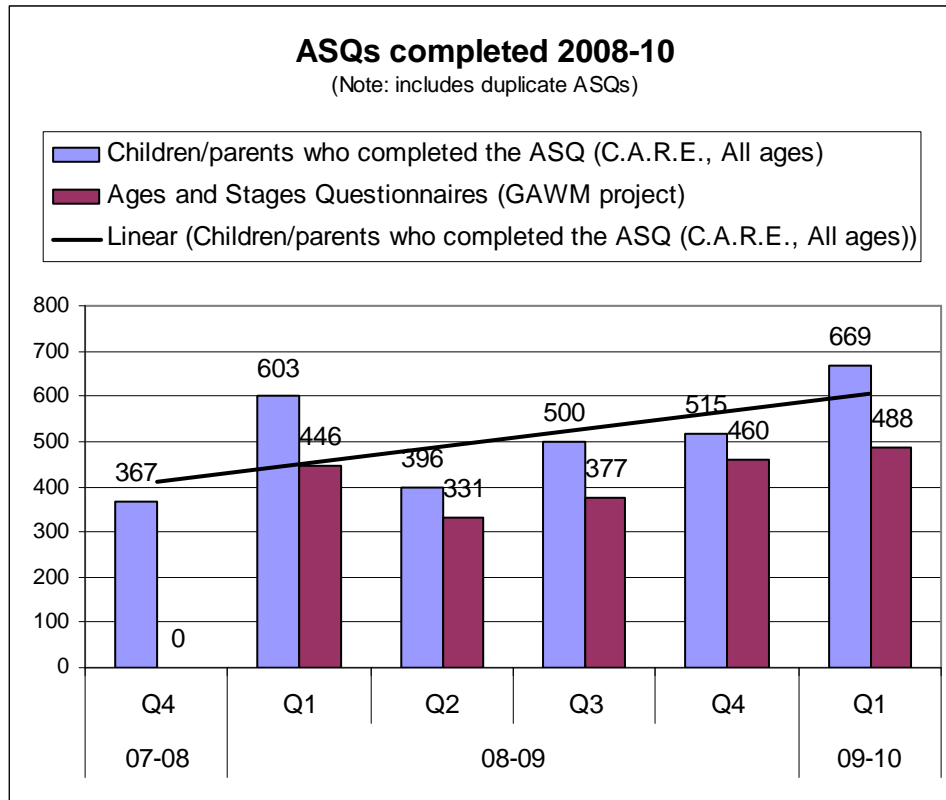


Figure 1 Developmental Checkups submitted each quarter

The 58.3%² decrease in duplicate ASQs (see Table 1) may reflect enhanced cross-program coordination and increased communication between project partners and families.

Objective 1.2
To increase parent knowledge of:
a) Early childhood development, and;
b) The importance of periodic developmental screening.
 Target: December 31, 2009

Ongoing strategies to enhance parent awareness and knowledge of early childhood development and the importance of periodic developmental screening have been incorporated into the project, including:

- The development of a “Grow Along With Me” website
<http://www.growalongwithme.ca/>;
- Print publications (such as the Spring Newsletter, Appendix A);
- Regular TV and radio segments, and;

² In some instances (e.g. screenings completed outside the 20-month window for age-specific questionnaires) ASQ authors have recommended that two questionnaires be completed – one for the earlier and one for the more advanced age group. In this instance, duplicate same-age questionnaires would be completed (Squires, Potter & Bricker, 1999)

- Advertising materials (such as poster, displays, and growth charts) (see the Community Screening Event poster, Appendix B).

A detailed description of targeted communication/knowledge translation strategies are depicted in the following table:

Table 2 Communication and Knowledge Translation

Communication and Knowledge Translation Indicators	2008-09				2008-09	2009-10 Q1
	Q1	Q2	Q3	Q4		
Website						
G.A.W.M. website visits	310	468	485	670	1933	432
Unique visitors	203	333	368	540	1444	304
% New Visits	65.5%	66.0%	69.3%	75.40%	69.0%	62.7%
Hits on the G.A.W.M. home page	268	395	418	485	1,081	405
Page views	1,703	2,601	2,359	3,277	9940	2,229
Average minutes on G.A.W.M. website	2:50	3:58	2:30	2:33	2:67	2:57
Average # pages/visit	5.5	5.6	4.9	4.9	5.2	5.2
Bounce Rate **	37.1%	39.7%	41.9%	34.8%	38%	34.3%
Visits by Country						
Canada	275	426	442	641	1,784	397
USA	21	31	29	22	103	23
Other*	13	9	13	7	42	12
Subtotal	309	466	484	670	1929	432
Print Material						
# printed publications (e.g. newsletters; magazine, etc) (TOTAL)	12	-	500	-	512	500 spring newsletter
Free news releases	6	-	-	-	6	-
Printed Advertisements	6	-	-	-	6	-
TV and Radio						
TV segments (Health Matters – 14 second segments)	2	-	-	-	2	-
Public Service Announcement Template	1	-	-	-	1	-
Public service announcements	-	-	-	-	0	-
TV campaign(s)	2	-	-	-	2	-
Radio campaign(s)	1	34	165	165	365	-
Paid radio advertising	-	34	165	165	364	~165***
Other						
Project displays, posters, brochures, growth charts, magnets ordered	15,501	0	1,000	0	16,501	-
Project displays	1	-	-	-	1	-
Posters	500	-	-	-	500	-
Brochures	7,500	-	1000	-	8,500	-
<i>Parenting the Strong-Willed Child</i>		-	500	-		-
<i>Coping with Toddler Behavior</i>		-	500	-		-
Growth charts	5,000	-	-	-	5,000	-
Magnets	2,500	-	-	-	2,500	-

Source: T. Grindle, Communications, personal communication (Aug. 23, 2009)

**Bounce rate is the percentage of single-page visits or visits in which the person left your site from the entrance (landing) page.

* Includes Australia, Libya, Ghana, Germany, Netherlands, South Africa, Turkey, Nigeria, United Kingdom, Thailand, Vietnam, Saudi Arabia, China, New Zealand Italy, Malaysia, Bulgaria, Puerto Rico, Ireland, Australia, India, Norway Argentina, Philippines

***\$680 (40 ads on CJRP) + \$1500 (12 weeks at \$125/week on the River 101.7 for radio and web advertising)

Telephone interviews and parent focus groups (planned for fall 2009) will provide an indication of the impact of these communication strategies.

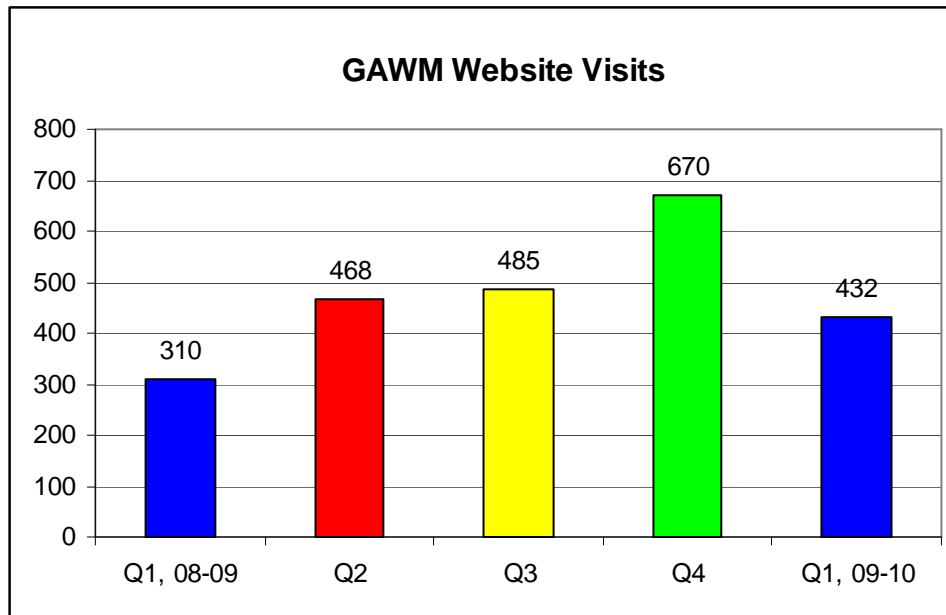


Figure 2 GAWM Website visits

Website visits have remained above 430 each quarter since July 2008. In Q1, 09-10 web site visits were 39.4% higher than the same quarter the previous fiscal year³ nearly two-thirds of the web site visits were people who accessed the web site for the first time. This may reflect a growing interest and awareness of early childhood development among local and international audiences. The spike in website activity seen in the previous quarter (Q4, 2008-09) may have been associated with the impending “Innovative Approaches to Preschool Developmental Screening & Follow-up Services” conference (Lethbridge, April 20-22, 2009) sponsored by the Alberta Centre for Child, Family and Community Research.

Top web pages viewed in Q1, 2009-10 were the:

- Home Page (18.2%);
- Information for parents and upcoming parent programs (16.8%), and;
- Developmental checkups (6.5%).

Access to web-based health and programming information for parents mirrors the strategic focus on family-centered service delivery. A detailed description of web site activity can be found in Appendix C

³ “Welcome to Grow Along With Me - Supporting Child Development in Southern Alberta” (www.growalongwithme.ca) website live date March 2008.

Objective 1.3**To adopt a consistent regional referral pathway across partnering service providers in relation to a positive screen for a developmental delay.**

Target: December 31, 2009

Client Pathway Audit***Introduction***

Coordination of services for Southern Alberta's diverse and geographically dispersed partners is essential for seamless service delivery and optimal quality of care for children and families. Exploring developmental check-ups and service "client pathways" is a significant first step in improving the services we provide.

A preliminary pathway audit was undertaken in March 2009. The audit clarified the current flow or movement of children through the system and provided the ability to identify successes, misperceptions, inconsistencies and gaps (see the Q4, 2008-09 report, p. 11). Based on audit recommendations and in conjunction with the Primary Care Project, Children's CARE teams initiated multiple tests of change aimed to enhance access, efficiency and reduce wait times. The impact of these quality improvement initiatives will be examined in the final pathway audit, scheduled for October 2009.

Pathway audit indicators highlighted in this report are grouped into a) assessment, and b) the referral process. Treatment and wait time summaries (available in the Q4, 2008-09 report) will be reported in the final Grow Along with Me Project Report.

A. Assessment

- Six hundred sixty-nine ASQs were completed in the first quarter of 2009-10 by parents of children 18-36 months of age (see blue bars, Figure 1). The number of ASQs completed for this age group has climbed consistently since the initiation of the Grow Along with Me project in 2007-08 (see Figure 3).
- 72.9% of parents who completed an ASQ on behalf of their child agreed to participate in the Grow Along with Me evaluation study (488/669) (see red bars, Figure 1).

Parents completed the developmental screening questionnaire (ASQ) at various community-based service locations as seen in the following table:

Table 3 ASQ Developmental Checkups by Administering Agency

ASQ Developmental Checkups by Administering Agency	2008-09				2008-09	2009-10
	Q1	Q2	Q3	Q4		Q1
# of ASQs (GAWM project)	446	331	378	460	1615	488
ASQ administering agency	n=446	n=330	n=378	n=460		n=488
Alberta Health Service, Chinook, Wellness Services	53.1%	75.8%	73.5%	74.1%	68.5%	65.4%
	(n=237)	(n=250)	(n=278)	(n=341)	(n=1,106)	(n=319)
Community developmental checkup	28.5%	NA	NA	7.0%	9.8%	21.5%
	(n=127)	(n=0)	(n=0)	(n=32)	(n=159)	(n=105)
Alberta Health Service, Chinook, Children's C.A.R.E.	9.2%	13.9%	10.3%	5.2%	9.3%	4.5%
	(n=41)	(n=46)	(n=39)	(n=24)	(n=150)	(n=22)
Parents as Teachers (PAT)	5.4%	6.7%	4.8%	5.9%	5.6%	4.3%
	(n=24)	(n=22)	(n=18)	(n=27)	(n=91)	(n=21)
Parent Link Centres	2.5%	1.5%	4.8%	4.8%	3.5%	1.4%
	(n=11)	(n=5)	(n=18)	(n=22)	(n=56)	(n=7)
Alberta Health Service, Chinook, Home Visitation Program	1.3%	2.1%	6.6%	3.0%	3.2%	2.9%
	(n=6)	(n=7)	(n=25)	(n=14)	(n=52)	(n=14)
Duplicate records	-	-	-	-	27	5*
ASQs received in quarter (Duplicates removed)			376	449		484

Source: Ages and Stages Questionnaire Demographics

Note: A child may have received more than one ASQ per quarter

*One ASQ received was a duplicate from a previously received ASQ (Q4, 08-09)

- There was a 6.1% increase in total ASQ check-ups in comparison to the previous quarter (Q4, 2008-09) and a 9.4% increase in total ASQ completion rate in comparison to Q1 of the previous fiscal year
- In Q1, 2009-10, the annual 2009 community screening blitz accounted for nearly one quarter of check-ups completed this quarter (21.5%, 105/488). Public Health Nursing staff administered nearly 2/3 of developmental screens (65.4%, 319/488) in conjunction with Well-Child Clinic visits.
- The significant role of community partners is reflected in the 27.2% of screening done by partner agencies (Parents as Teachers [4.3%], Parent Link Centres [1.4%]) and through coordinated community developmental check-ups (21.5%). The reduction in the number of ASQs submitted by partner agencies in Q1, 2009-10 in comparison to the number of ASQs submitted by partner agencies the previous quarter may have been related to their participation in community developmental check-up activities or to reduced staffing associated with anticipated project completion.
- Database limitations restrict the ability to determine population screening rates.

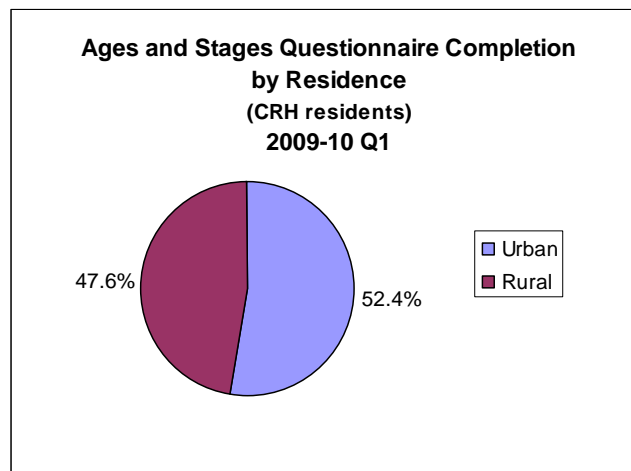


Figure 3 Ages and Stages developmental checkups by rural/urban residence, QA1, 09-10 (n=471/484)

- ASQ completion by rural and urban residence corresponds to the overall geographical makeup of the Chinook Health population, where “nearly half of the residents live in Lethbridge, its largest community, with the remaining scattered throughout more than 40 other towns, villages and surrounding rural areas” (Chinook Health, 2008). (See Appendix D for ASQ Completion by residence)

Visits to regional Well-Child clinics and partner agencies offer naturally occurring opportunities to enhance access to check-up services and early identification and treatment of delays.

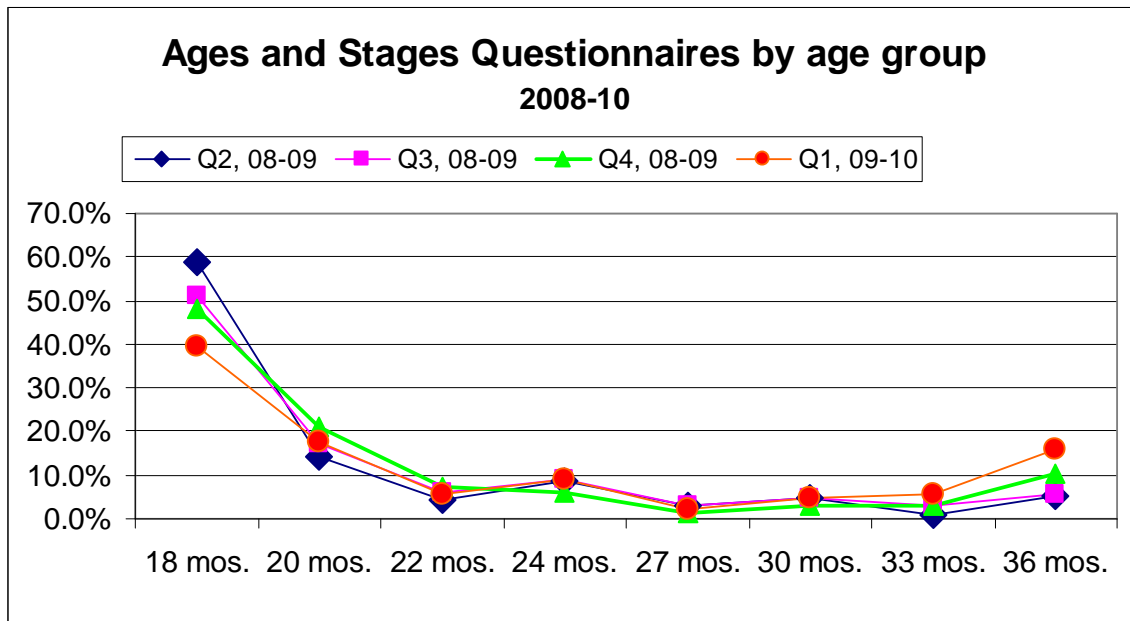


Figure 4 Ages and Stages Questionnaire by age group

- Over half of the ASQs completed in Q1 2008-09 (56.6%, n=274/484) were 18 to 20-month questionnaires. Over time there has been a gradual shift toward increased 33 and 36-month ASQs submitted. This may reflect a trend toward sequential ASQs completion, a philosophy embraced by the Grow Along with Me Steering Committee.
- The Grow Along with Me Steering Committee determined that ideally, each child would have three ASQs completed between the age of 18 and 36 months. At Q1, 2009, less than 1% of children (0.77%, n=17/2206) children achieved or exceeded this target⁴

Consent Process & File Review

In April 2009, based on three concurrent reviews (two evaluation studies [Bricker, 2009, Jensen-Ross & Gregory, 2009] and the Primary Care quality improvement initiative) the CARE assessment process was revised as follows:

- Rather than wait for a completed consent prior to accepting the child into CARE Services, consents are now completed at the first parent visit;
- The START Assessment Team was eliminated, replaced by direct referrals for further assessment/treatment (as required) initiated upon referral; and
- GAWM educator and CARE staff roles were more clearly defined (e.g. GAWM Educator, CORE Group leads, intake service coordinator, CARE receptionist).

As a result of these changes it is projected that wait lists and wait times for treatment will be reduced and clinicians will be encouraged to work to their full scope of practice (e.g. the "right person doing the right work at the right time").

⁴ Duplicate ASQs completed for child for a common age group excluded

ASQ Summary

“Each Ages and Stages questionnaire [2nd Edition] contains 30 items that cover five developmental areas [communication, gross motor, fine motor, problem-solving and personal-social] and an additional set of general questions about the child’s overall health and development. Each developmental area contains six items [of enquiry]” (Squires, Potter & Bricker, 1999, p. 66).

Specific criteria guide the scoring and calculation of each questionnaire. Pre-determined cutoff points flag areas where a more “in-depth evaluation is required” (Squires, Potter & Bricker, p. 73). Cutoff points (pre-determined by the authors) have been calculated by subtracting two standard deviations from the mean for each age-specific developmental domain (with the exception of the communications domain where 10 points were added). Mild-moderate and severe criteria (unique to the Alberta Health Services, Chinook GAWM project), have been determined as follows:

- No delay [<2 Standard Deviations from the mean(SD)],
- Mild-moderate delay [$2-3$ SD], and
- Severe delay [>3 SD]” (Mark Moland, Personal communication, 09/10/2008), (See Appendix E-1).

To date, severity rates have not been adjusted to accommodate revised mean, SD and cutoff points for selected ASQ intervals (18, 22, 27, and 33 months) (Bricker & Squires, n.d., Retrieved July 3, 2009 from the Brookes Publishing Web site: <http://www.brookespublishing.com/asqupdates/cutoff.htm>, see Appendix E-2).

Parent-completed ASQs are tabulated by agency staff and forwarded to Children’s CARE for data entry. Where indicated⁵, referral for further assessment by Children’s CARE staff is initiated. An audit of data validity and reliability is currently underway.

ASQ domains and delay classification are presented in the following table:

⁵ (scores falling outside of determined cut-offs),

Table 4 Developmental domains requiring further evaluation (based on Ages and Stages Questionnaire cutoff scores, ASQ version 2, 1999).

Developmental Domain % Delay (Below ASQ Cutoff)	2008-09								2009-10	
	Q1, 08-09		Q2		Q3		Q4		Q1, 09-10	
	N=446		N=331		N=376		N=448		N=484	
	#	%	#	%	#	%	#	%	#	%
Communication delay*	63/444	14.2	38/331	11.4	43/376	11.4	49/448	10.9	55/484	11.4
Gross motor delay*	26/446	5.8	11/331	3.3	13/376	3.5	16/448	3.5	18/484	3.7
Problem-solving delay*	20/442	4.5	21/328	6.4	14/375	3.7	19/448	4.3	28/481	5.8
Fine motor delay*	19/445	4.3	19/331	5.7	14/373	3.8	15/449	3.3	18/483	3.8
Personal social delay*	18/445	4.0	22/330	6.6	14/376	3.7	16/448	3.5	20/481	4.1
Other										
Do you think your child has hearing concerns? (% yes)	5/431	1.4	0/327	0	4/373	1.1	6/445	1.3	10/473	2.1
You have concerns that your child may not walk, run or climb like others his/her age? (% yes)	14/434	3.2	16/330	4.8	10/374	2.7	11/445	2.5	21/474	4.4
Do you have difficulty understanding most of what your child says? (% yes)	53/431	12.3	52/327	15.9	45/370	12.2	46/434	10.6	62/468	13.2
Do you think that your child experiences difficulty in talking at a level similar to others his/her age? (% yes)	109/438	20.8	67/328	20.4	68/370	18.4	65/434	15	81/467	17.3
Has your child had any medical problems in the last several months? (% yes)	75/434	17.3	51/327	15.6	51/371	13.7	69/440	15.7	76/473	16.1
Other concerns (% yes)	74/425	17.4	49/323	15.2	60/371	16.2	53/438	12.1	73/468	15.6
Does either parent have a family hx of childhood deafness or hearing impairment? (% yes)	29/432	6.7	37/328	11.3	28/372	7.5	34/445	7.6	41/469	8.7
Do you have any concerns about your child's vision? (% yes)	19/433	4.4	7/326	2.1	10/372	2.7	10/444	2.3	11/473	2.3

Source: A&S Questionnaire Summary

Note: Cutoffs change with ASQ age group

* Includes mild/moderate and severe delays

Note: The first 4 questions under the "Other section" are reverse-scored in Meditech and the research dataset in comparison to the original ASQ questions. Wording in the original tool is: 1. Do you think your child hears well? 2. Do you think your child walks, runs, and climbs like (others his/her age)? 3. Can you understand most of what your child says? 4. Do you think your child talks like (others his/her age)? Consistent with current Meditech reporting, the reporting of these indicators has been adapted to reflect proportion of children with identified delays.

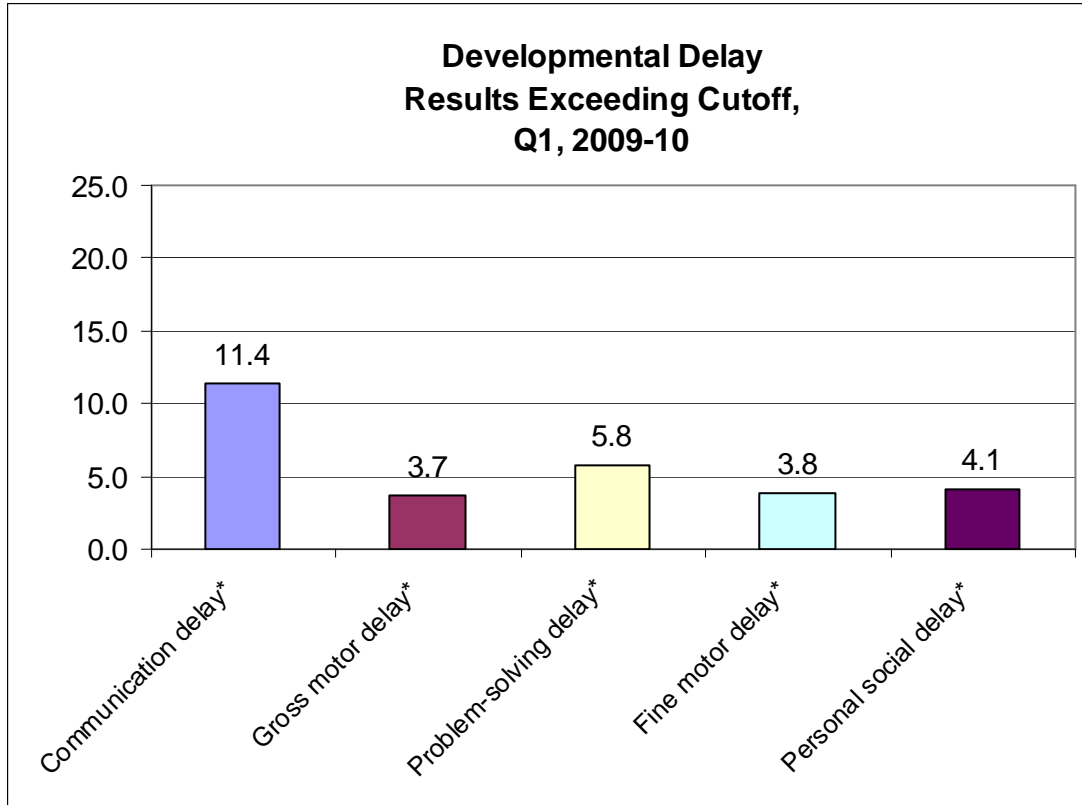


Figure 5 Ages and Stages Domain Cutoffs: Further Investigation required

Represented diagrammatically, scores by domain and severity are presented in the following charts:

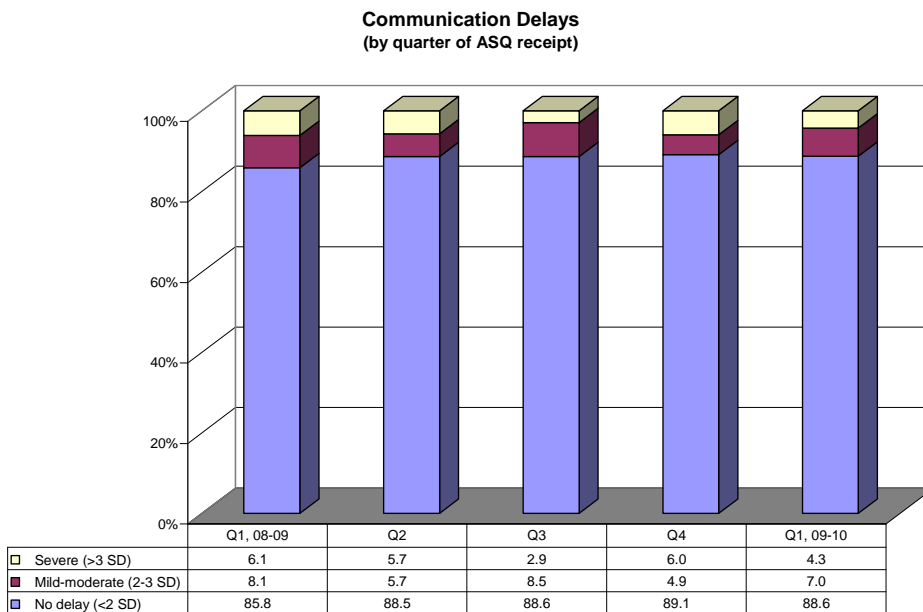


Figure 6 Ages and Stages Domain Cutoffs & Delay Severity: Communication

Gross Motor Delays
(by quarter of ASQ receipt)

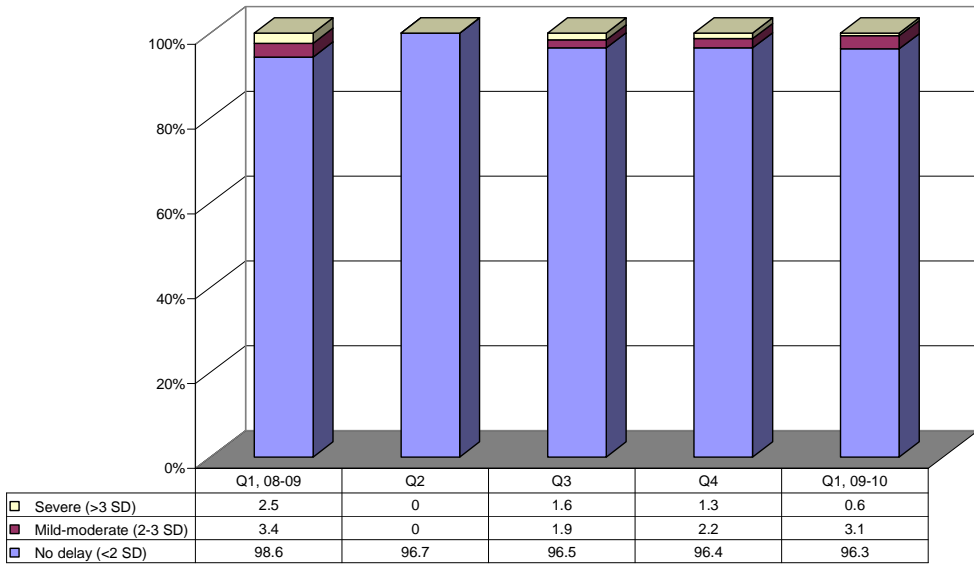


Figure 7 Ages and Stages Domain Cutoffs & Delay Severity: Gross Motor

Fine Motor Delays
(by quarter of ASQ receipt)

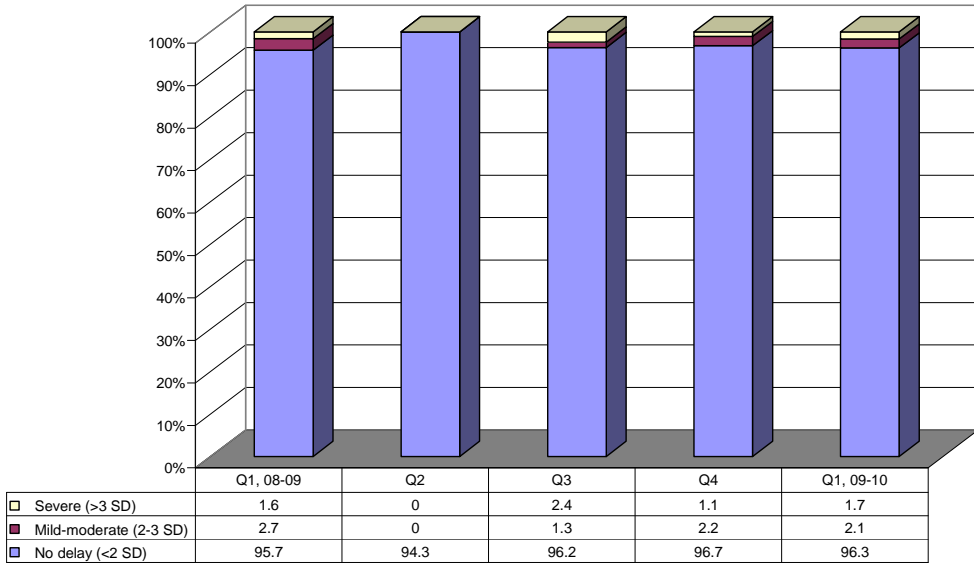


Figure 8 Ages and Stages Domain Cutoffs & Delay Severity: Fine Motor

**Problem-Solving Delays
(by quarter of ASQ receipt)**

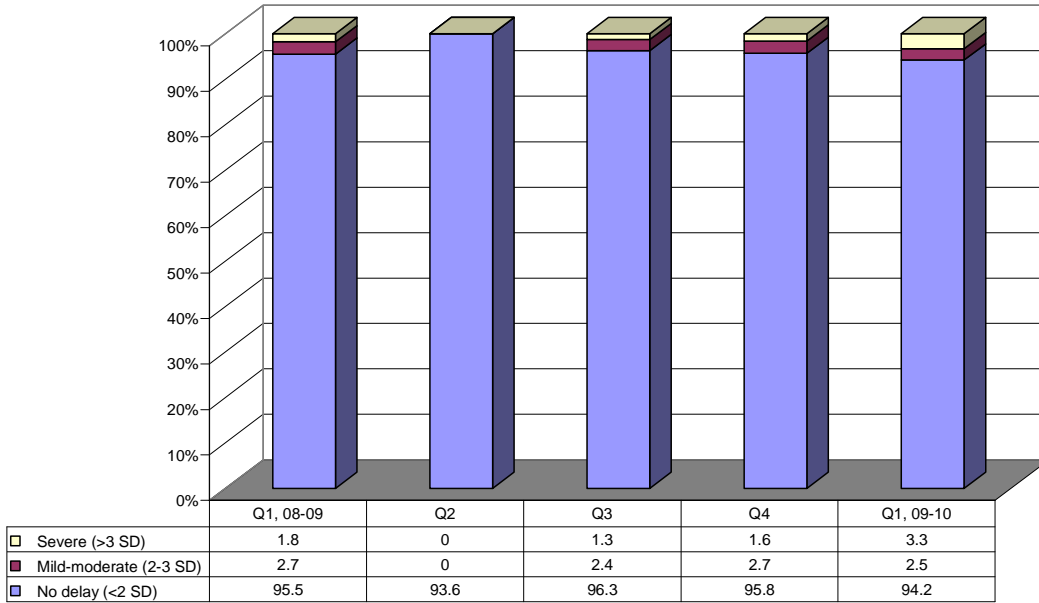


Figure 9 Ages and Stages Domain Cutoffs & Delay Severity: Problem-solving

**Personal Social Delays
2008-09 (by quarter of ASQ receipt)**

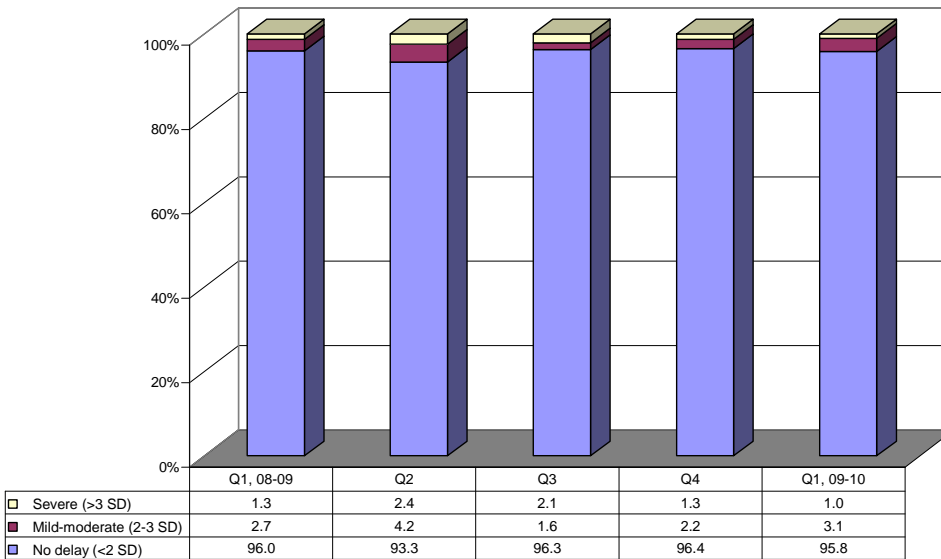


Figure 10 Ages and Stages Domain Cutoffs & Delay Severity: Personal/Social

See Appendixes F for severity scores by domain.

- The majority of children had no developmental delays identified through the Ages and Stages Questionnaire developmental check-up.
- In earlier quarters, increased routine screening did not appear to be associated with an associated increase in overall delays rates. In contrast, multidisciplinary community screening events held in spring 2009 appears to have contributed to an increased identification of potential delays. The proportion of mobility, problem-solving and personal/social delays and parent's difficulty understanding their child's speech increased in comparison to the previous quarter as well as in comparison to the same quarter in 2008-09. The prevalence of fine motor delays also increased in comparison to the previous quarter.
- For most ASQ domains, the proportion of severity-related delays has fluctuated over time with no discernable pattern and may reflect normal dispersion. As data availability increases, quality improvement techniques (e.g. control charts) may be useful in the identification of special case (versus normal) variation.
- High rates of missing data in the problem-solving area, especially among younger age groups (18 mos. 20 mos.) require further examination (e.g. parent understanding of questions asked, compliance with recommended parent contact regarding missed questions).
- Inconsistent wording of questions (e.g. the "other" section) between the ASQ, across ASQ age-specific questionnaires, Meditech and GAWM Master Spreadsheet pose a high risk for data entry error and require further exploration.

B. the Referral/Treatment Process

- 14.7% (n=71/ 484) of children who participated in an ASQ developmental check-up were subsequently referred to Children's CARE for further assessment. Effective April 1, 2009 (in contrast to the previous START assessment process), children were referred directly to a health care professional for assessment/treatment. Rather than wait for parental consent before services could be initiated, parental consent was now obtained at the first assessment visit.
- A child with multiple or complex needs identified through the ASQ may have triggered a referral to several health disciplines. Discipline-specific assignment can be seen in the following table.

Table 5 Discipline-specific referrals for further assessment/treatment

Discipline-specific referrals. ASQ request*	n=98	n=66	n=48	n=45**	n=71
Ages and Stages Questionnaires (GAWM project)	446	331	378	460	484
Speech Language Pathology	62.2% (61/98)	68.2% (45/66)	52.1% (25/48)	86.7% (39/45)	87.3% (62/71)
Infant Preschod Development	10.2% (10/98)	13.6% (9/66)	12.5% (6/48)	6.7% (3/45)	29.6% (21/71)
Audiology	9.2% (9/98)	3.0% (2/66)	8.3% (4/36)	20.0% (9/45)	14.1% (10/71)
Physiotherapy	8.1% (8/98)	4.5% (3/66)	12.5% (6/48)	8.9% (4/45)	7.0% (5/71)
Occupational Therapy	3.1% (3/98)	3.0% (2/66)	4.7% (2/48)	2.2% (1/45)	11.3% (8/71)
Behavior Management Services	1.0% (1/98)	1.5% (1/66)	6.3% (3/48)	4.4% (2/45)	2.8% (2/71)
Baby Team	0.0%	0.0%	0.0%	4.4% (2/45)	0.0%
Feeding Team	0.0%	0.0%	0.0%	0.0%	0.0%
To be determined	6.1% (6/98)	6.1% (4/66)	4.7% (2/48)	13.3% (6/45)	0.0%

Source: Ages and Stages Questionnaire Scoring Sheet

* Note a child may have been referred to more than one discipline, multiple referrals could have been made at different questionnaire intervals

** Duplicates removed

- Consistent with the high relative rate of communication delays identified through the ASQ, the vast majority of requests were for speech language services. Increased rates of motor delays were reflected in increased request for occupational therapy services. The spike in requests for infant preschool development referrals may reflect the referrals that would have been addressed (in previous quarters) by the START team.
- There is a trend toward increased multidisciplinary referrals as seen in the table below:

Table 6 Multidisciplinary referrals

ASQ Developmental Check-ups. Discipline-specific referrals (new referrals)	Q1, 08-09	Q2	Q3	Q4	Q1, 09-10
Multidisciplinary referrals	n=77	n=52	n=36	n=45	n=71
One discipline	74.0% (57/77)	71.2% (37/52)	63.9% (23/36)	68.9% (31/45)	62.0% (44/71)
Two or more disciplines	18.2% (14/77)	25.0% (13/52)	36.2% (13/52)	28.9% (13/45)	38.0% (27/71)
Undecided	7.8% (6/77)	3.8% (2/52)	-	13.3% (6/46)	-
Range					1-6

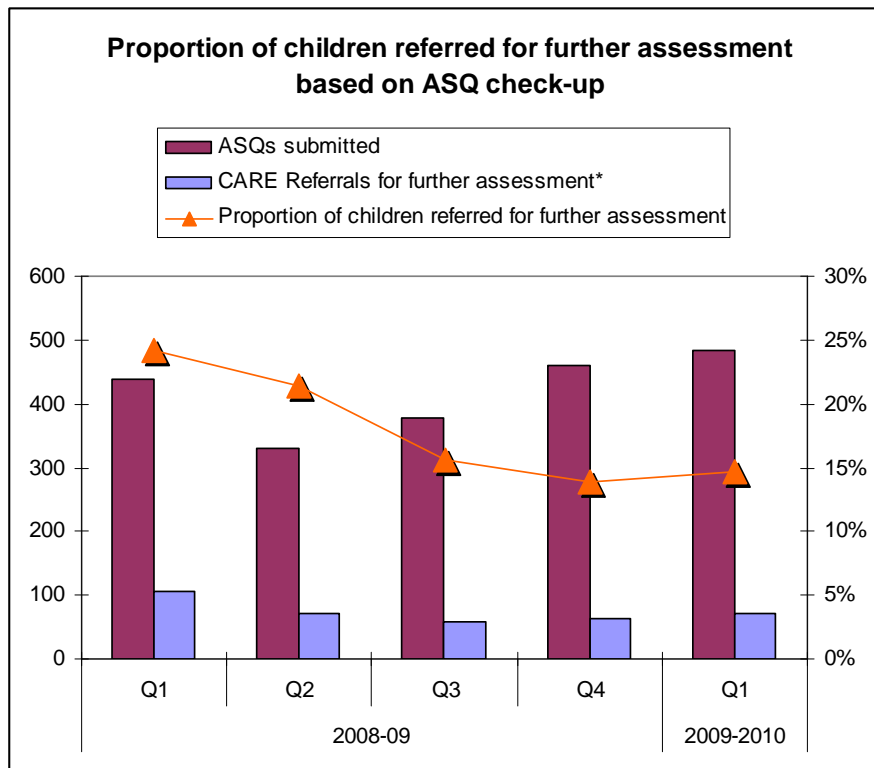


Figure 11 Requests for further assessment (CARE Services) prompted by the ASQ check-up

*Note: Children rereferred after completion of their treatment cycle (CARE) are included in the number of referrals

- Despite a significant increase in the number of children participating in ASQ developmental check-ups since the initiation of the GAWM project in 2008-09 (Q4, 08-09 n=439; Q1, 2008-09, n=484), the proportion of children referred for further assessment as a result of the ASQ developmental check-up has decreased during this same timeframe (Q4, 08-09, 24.1%, Q1, 09-10, 14.7%). This may reflect the increased specificity and sensitivity of referrals initiated as a result of the ASQ and the overall effect of an integrated screening approach (including staff education, capacity building, and community development).

Planned/Defined Outcome

In addition to the above measures, parent satisfaction and project sustainability are outcomes being measured in conjunction with the GAWM project.

Parent Satisfaction: Telephone Interviews

A. Children with no identified delays (Cohort 1 & 2)

In Summer 2008, 63 parents whose children received developmental screening using the Ages and Stages Questionnaire (ASQ) and who had nothing untoward discovered (e.g. a “normal” checkup) consented to be interviewed via the telephone about their experiences (Cohort 1, Participation rate 66.7%). Telephone interviews were also conducted in Spring 2009 with 100 parents (Cohort 2, Participation rate 38.2%).

- The clear majority of parents (Cohort 1, 81.0% [51/63]; Cohort 2, 83% [83/100%]) indicated that the developmental checkup was a positive experience. Parents valued knowing that their children were developing within the normal range of expectations.
- The Ages and Stages Questionnaire (ASQ) provided reassurance that all was “well” with their children.
- A minority of parents (Cohort 1, 17.5% [11/63]; Cohort 2, 15.0% [15/100]) identified some concerns about their experience, including:

Cohort 1

- Parents in the first cohort interviewed who completed the ASQ during well child immunization visits observed that:
 - The person administering the ASQ did not listen to them (parents);
 - It was difficult to answer some of the ASQ questions-- having the questions in advance would have been helpful;
 - The ASQ was not really optional; and,
 - There was some burden associated with completing the ASQ (for example, managing the other children without assistance, trying to focus on the child’s immunization while having to also complete the ASQ, and not having the ASQ available on-line).

Cohort 2

- Parents in the second cohort reported that:
 - They found the (ASQ) questions redundant or confusing; and,
 - No one looked at their child.

Participants from both cohorts reported that community-based agency checkup experiences were sometimes “chaotic” and appointments were rushed.

B. Children with identified delays (Cohort 1)

The purpose of the telephone surveys were to understand parents' experiences as they journeyed with their children from completion of the developmental screening through to discharge from Children's C.A.R.E. Services. Eighteen interviews were conducted with parents of children who **were referred to Children's C.A.R.E. services for further assessment** following a developmental check-up in April & May, 2009 (Cohort 1). Highlights of the telephone interviews included:

- The time between completion of the ASQ and initial contact for follow-up ranged from a few weeks to 8-9 months. While half of the children (9/18) obtained further assessment and/or intervention within 4 months of completing the ASQ, the remainder waited over 4 months for a follow-up appointment. 5/8 parents viewed the wait time (for follow-up) as unreasonable.
- The majority of children (88.9%, 16/18) were referred for speech-language follow-up. Two-thirds of these children were male.
- Following assessment by the multidisciplinary START assessment team, one-third of children (6/18) did not require further services or intervention. Parents of the children who did not receive further treatment services perceived suggestions and/or educational material received in conjunction with the assessment as valuable.
- Treatment times ranged from 6 weeks to 3 months.
- The majority of parents whose children had delays identified through the ASQ and who were referred to Children's CARE services were satisfied with the assessment process and the services they received (89.9%, 16/18).

Interviews with a second cohort of parents are currently underway.

<p>Objective 1.4 To increase Chinook Health staff involvement with community-based programs.</p>
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Chinook Health staff involvement with community programs has been enhanced through:

- Co-facilitated core educational sessions;
- Integrated meetings (e.g. Grow Along with Me Educator Meetings) and;
- Off-site visits (Children's C.A.R.E. staff and community based organizations [e.g., Parent Link Centers, Parents as Teachers, day cares/homes, etc]) to network, and share information and resources.

Detailed staff workload information from the Nov-Dec 2008 pilot can be found in the Q3, 2008-09 report.

Sustainability. The ‘Grow Along With Me’ Partnership Self-Assessment Inventory

In June, 2008 G.A.W.M. Steering Committee members identified factors deemed instrumental for project success and opportunities for improvement. Data from the GAWM Partnership Self Assessment Inventory proved a catalyst for quality improvement. Progress toward achieving the partnership success will be reassessed in September 2009 (see 2007-08 Quarter 1 report, Appendix G for a detailed description of the baseline survey and focus group).

Goal 2 To develop a comprehensive continuum of services that provides the right level of service, at the right time, by the right person as near to the child’s residence as possible.

Objective 2.1

To provide a child and their family timely screening and assessment services.

Target: October 2007

Wait Times

Discipline-specific wait times (reported in the Q4, 2008-09 report and client pathway audit) will be reported for the entire study population in conjunction with the next quarterly report.

Objective 2.2

a) To increase Chinook Health’s professional staff involvement with partnering community agencies (i.e., Parent Link Centers, child care facilities, and community agencies), and;

(b) To increase the utilization of paraprofessional staff to support the enhancement of developmental screening and follow-up services in the Chinook Health Region.

Target: Oct 2007

See objective 1.3

Objective 2.3

To increase partner agency staff knowledge regarding early childhood development as well as the importance of periodic developmental screening and services available to support children and families.

Target: Dec. 31/2009

Staff knowledge, attitudes and perceptions. Periodic developmental screening

“Grow Along With Me” partners and staff play a critical role in creating (and utilizing) appropriate screening procedures, developing strategies for engaging families in the screening process, and identifying methods to prompt follow-up on results of the screening. During the timeframe of the study, educational sessions were offered to four cohorts (public health nurses, GAWM Educators, Day Care and Day Home staff). Participants were invited to complete an assessment of their knowledge and attitudes (toward developmental screening and the Ages and Stages Questionnaire) prior to, immediately following, and six months after the educational sessions. Preliminary results are presented below:

In February-March 2008, 65 participants attended the “Grow Along With Me” sponsored Ages and Stages educational sessions (PHNs 61.5%, n=40, multidisciplinary staff 38.5%, n=25). Both cohorts reported increased knowledge regarding the Ages and Stages Questionnaire and increased confidence in managing referrals following the educational sessions and more than half reported that six months after the educational sessions the use of the ASQ increased in their practice setting as a result of training

In March – April 2009, Ages and Stages educational sessions were held with 30 Day Care/Day Home staff. Both cohorts reported significantly greater confidence in managing follow-up services after identification of a developmental delay immediately after (in comparison to before) the educational sessions. Cohort 3 (Odyssey Childcare) reported significantly greater confidence in scoring the ASQ and in staff perception of service timeliness and accessibility. The 6-month follow-up survey is scheduled for fall 2009.

Objective 2.4

To increase Chinook Health’s capacity to offer core training programs and other ECD educational modules to all partner staff.

Target: October 2007

'Grow Along with Me' project CORE educational courses include:

Table 10 Grow Along with Me Core Education Sessions ⁶

Target	CORE Sessions
Universal	<ul style="list-style-type: none"> · Learning Language and Loving It · You Make the Difference
Targeted	<ul style="list-style-type: none"> · Coping with Toddler Behavior · Parenting the Strong-willed Child
Clinical	<ul style="list-style-type: none"> · Target Word · Responsive Teaching

Core training and education initiatives have targeted two stakeholder groups: parents and GAWM staff. The number of sessions and session attendance for each stakeholder group are presented in the following section:

A) Parent Education

Table 7 GAWM Education Session Attendance

Communication and Knowledge	2008-09				2009-10	
Parents						
Indicators	Q1	Q2	Q3	Q4	08-09	Q1
Number of core groups offered to parents						
COPEing with Toddler Behavior	4	0	1	1	6	1
Parenting the Strong-Willed Child	3	0	2	2	7	5
You Make the Difference	0	0	2	1	3	3
Total:	7	0	5	4	16	9
Child Care & Incentives: Core Parent Groups						
# Core Groups with child care available	5	0	2	4	11	8
% of Core Groups with child care available	71.4%	na	40.0%	100.0%	70.5%	85.2%
# Core Groups with incentives	4	0	3	1	8	8
% of Core Groups with incentives	57.1%	na	60.0%	25.0%	47.4%	36.2%
Parents registered for core groups						
COPEing with Toddler Behavior	51	0	12	17	80	8
Parenting the Strong-Willed Child	35	0	19	24	78	67
You Make the Difference	0	0	15	6	21	23
Total:	86	0	46	47	179	98
Parents attending core groups						
COPEing with Toddler Behavior	42	0	9	15	66	8
Parenting the Strong-Willed Child	30	0	10	19	59	49
You Make the Difference		0	14	4	18	19
Total:	72	0	33	38	143	76
Number of other sessions/presentations offered to parents						
Other (not one of the core programs)	6	0	0	9	15	3
Total:	6	0	0	9	15	3
Parents attending other sessions/presentations						
Other (not one of the core programs)	134	0	0	190	324	25
Total:	134	0	0	190	324	25

Source: Community Education Tracking Form

⁶

Universal. Covering the collective whole; available equitably to all;

Targeted. Directed toward a target group;

Clinical. Targeted toward observable and diagnosable symptoms.

(adapted from Merriam Webster online dictionary: <http://www.merriam-webster.com/dictionary/clinical>)

Table 8 CORE groups by location

Core groups by location	2009-10			
	2008-09		2009 Q1	
	Urban	Rural	Urban	Rural
COPEing with Toddler Behavior	2	4	1	0
Parenting the Strong-Willed Child	1	6	1	4
You Make the Difference	2	1	1	2
Learning Language and Loving It	1	0	0	0
Total:	6	11	3	6

Source: G.A.W.M. Community Education

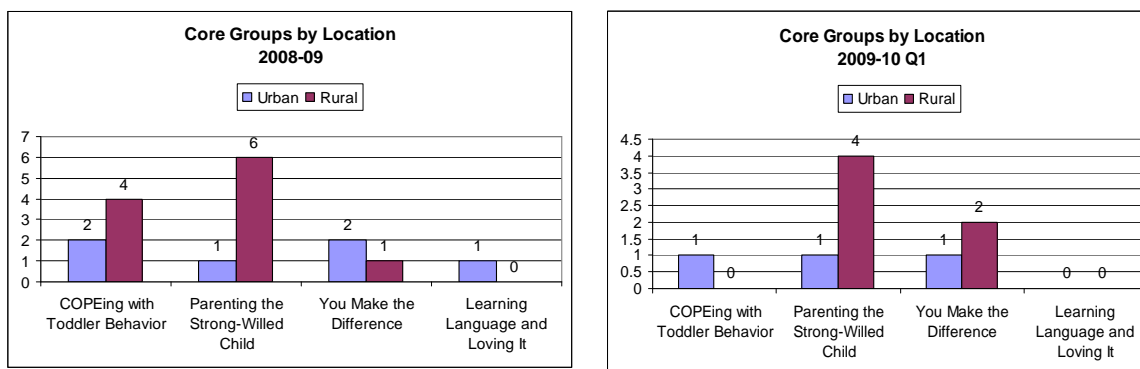


Figure 12 CORE educational groups by rural/urban location

Since the inception of the project:

- Over 560 parents have attended GAWM-sponsored early childhood development educational sessions (n=568).
- Nearly twice as many CORE courses have been offered at rural sites (n=17) in comparison to courses offered in Lethbridge (n=9).

In Q1, 09-10:

- Nine CORE courses were offered to regional parents, the highest number of courses offered in a quarter since the start of the GAWM project.
- More than three times as many parents attended Core groups as non-core groups (n=76, n=25, respectively); this is in contrast to the previous quarter, where non-CORE groups were more frequently attended.
- The greatest demand was for “You make the Difference”. In these sessions, small groups of parents (8-10) learned “how to foster and enrich their young child's social, language and literacy development during everyday experiences” over the 9-week course duration
- 77.6% of parents registered for CORE courses actually attended them. Attendance rates by CORE group was:
 - Coping with Toddler Behavior (100%, 8/8);,
 - Parenting the Strong-Willed Child (73.1%, 49/67); and,
 - You Make the Difference (77.6%, 16/98).

Course availability and content are continually updated on the ‘Grow Along with Me’ website (http://www.growalongwithme.ca/info_for_parents/upcoming_parent_programs).

B) Staff Education

Priest & Waters (2007) have suggested that a community capacity-building approach is effective in supporting children with, or at risk of, developmental difficulties. Outcomes of the community capacity-building model included “improved early identification and early intervention for children with, or at risk of, fine motor developmental difficulties; increased confidence in the effectiveness of their practice with these children; improved practice for kindergarten staff with both targeted and all children; improved empathy with, and support for, parents; and increased interagency links and ongoing advocacy for further resources” (p. 1). Staff communication and knowledge translation initiatives are highlighted in the table below:

Table 9 GAWM Education Session Attendance. Staff

Communication and Knowledge Translation	2007-08	2008-09				08-09	2009-10
Staff & Partners							
Indicators	Q4	Q1	Q2	Q3	Q4		Q1
Facilitator training: core groups offered							
COPEing with Toddler Behavior	-	0	0	0	0	0	0
Parenting the Strong-Willied Child	-	0	0	2	0	2	0
You Make the Difference	-	0	0	0	0	0	0
Learning Language and Loving It (Includes Teacher Talk)	-	0	0	0	0	0	0
Responsive Teaching	-	0	0	0	0	0	0
Total:	-	0	0	2	0	2	0
Partners attending core group facilitator training							
Chinook Health							
Physiotherapists	-	0	0	0	0	0	0
Occupational therapists	-	0	0	0	0	0	0
Infant Preschool Development Educators	-	0	0	2	0	2	0
Speech language pathologists	-	0	0	0	0	0	0
Parent Links	-	0	0	8	0	8	0
Parents as Teachers	-	0	0	3	0	3	0
Other Organizations	-	0	0	8	0	8	0
Total:	-	0	0	21	0	21	0
Number of core groups offered to staff							
Teacher Talk	-	0	0	0	0	0	0
Learning Language and Loving It	-	1	0	1	0	2	0
Total:	-	1	0	1	0	2	0
Staff attending core groups							
Teacher Talk	-	0	0	0	0	0	0
Learning Language and Loving It	-	15	0	14	0	29	0
Total:	-	15	0	14	0	29	0
Number of other sessions/presentations offered to staff							
Other (not one of the core programs)	2	0	1	2	6	9	4
Total:	2	0	1	2	6	9	4
Staff attending other sessions/presentations							
Other (not one of the core programs)	50	0	30	37	56	123	92
Total:	50	0	30	37	56	123	92

Source: Community Education Tracking Form

- CORE Group staff education was not offered this quarter, possibly due to indeterminate project funding and halt of educational sponsorship due to provincial health system reorganization.
- Over ninety staff attended 4 non-CORE educational presentations in Q1, 09-10.

Objective 2.5**To increase:**

- a) Parent's knowledge of partner services, and;**
- b) Service providers' knowledge and abilities to support early child development.**

Target: January 1, 2008

Parent Focus Groups

It is important for the Steering Committee to understand 'why' and 'under what circumstances' "Grow Along With Me" developmental checkups are being accessed. Between September and December, 2008, 21 geographically-dispersed participants participated in four focus groups and one telephone interview. While most parents strongly endorsed the preventive nature of regular developmental checkups, many expressed confusion regarding Grow Along with Me - its intent and purpose, organizational and structural relationships, and project scope. Parents offered suggestions as to how to optimize the developmental screening project. Their comments and suggestions closely mirrored those of telephone interview respondents. A copy of the preliminary report is available on the Grow Along with Me website:

<http://www.growalongwithme.ca/files/2009%20Mar%20GOLD%20Parent%20Focus%20Group%20FINAL.pdf>

Plans for repeat focus group sessions in fall 2009 are currently underway.

Service Provider Knowledge

(See Objective 2.3)

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Appendix A

Spring Newsletter

Placeholder

Appendix B

Community Screening Event Poster

Placeholder

Appendix C

Website Dashboard

Placeholder

Appendix D

Ages and Stages Completion by Residence

Ages and Stages Questionnaires by Residence		2008-09		2009-10	
Location	Q2 n=331	Q3 n=376	Q4 n=449	Q1 n=484	
Lethbridge	55.2% (186/327)	47.5% (160/337)	48.1% (212/441)	52.4% (247/471)	
Total Urban	55.2% (186/327)	47.5% (160/337)	48.1% (212/449)	52.4% (247/471)	
Fort McLeod, Standoff, Monarch, Nobleford	7.6% (25/327)	0% (0/337)	0% (0/441)	0% (0/471)	
Blairmore, Coleman, Lundbreck, Pincher Creek	na	6.5% (22/337)	2.3% (10/441)	4.0% (19/471)	
Taber	9.5% (31/327)	12.5% (42/337)	8.8% (39/441)	5.7% (27/471)	
Coaldale	4.9% (16/327)	10.7% (36/337)	14.1% (62/441)	16.3% (77/471)	
Other rural*	21.1% (69/327)	22.8% (77/337)	26.8% (118/441)	21.4% (101/471)	
Total Rural	43.1% (141/327)	52.5% (177/337)	51.9% (229/441)	47.6% (224/471)	
Out of region	2	10	0	-	
Missing data	2	29	8	13	

Source: GAWM Master Spreadsheet

* Includes: Barnwell, Blairmore, Cardston, Coleman, Coutts, Del Bonitam, Enchant, Grassy Lake, Lundgreck, Magarth, Milk River, New Dayton, Picture Butte, Pincher Creek Raymond, Shaughnessey, Stirling, Vauxhall, Warner

Appendix E

1) GAWM delay severity cutoff scores, Oct. 2008

18 Month	No Delay	Mild- Moderate	Severe	27 Month	No Delay	Mild- Moderate	Severe
Communication	24-60	10-23	0-9	Communication	34-60	25-33	0-24
Gross Motor	42-60	35-41	0-34	Gross Motor	36-60	27-35	0-26
Fine Motor	40-60	33-39	0-32	Fine Motor	27-60	15-26	0-14
Problem- Solving	34-60	26-33	0-25	Problem- Solving	38-60	30-37	0-29
Personal Social	38-60	30-37	0-29	Personal Social	34-60	26-33	0-25
20 Month	No Delay	Mild- Moderate	Severe	30 Month	No Delay	Mild- Moderate	Severe
Communication	37-60	26-36	0-25	Communication	39-60	31-38	0-30
Gross Motor	37-60	27-36	0-26	Gross Motor	31-60	21-30	0-20
Fine Motor	40-60	33-39	0-32	Fine Motor	26-60	13-25	0-12
Problem- Solving	30-60	21-29	0-20	Problem- Solving	29-60	18-28	0-17
Personal Social	36-60	27-35	0-26	Personal Social	37-60	30-36	0-29
22 Month	No Delay	Mild- Moderate	Severe	33 Month	No Delay	Mild- Moderate	Severe
Communication	36-60	23-35	0-22	Communication	36-60	27-35	0-26
Gross Motor	41-60	34-40	0-33	Gross Motor	42-60	35-41	0-34
Fine Motor	37-60	30-36	0-29	Fine Motor	30-60	18-29	0-17
Problem- Solving	37-60	30-36	0-29	Problem- Solving	37-60	29-36	0-28
Personal Social	40-60	33-39	0-32	Personal Social	37-60	28-36	0-27
24 Month	No Delay	Mild- Moderate	Severe	18 Month	No Delay	Mild- Moderate	Severe
Communication	38-60	26-37	0-25	Communication	39-60	31-38	0-30
Gross Motor	37-60	27-36	0-26	Gross Motor	36-60	27-35	0-26
Fine Motor	37-60	29-36	0-28	Fine Motor	31-60	20-30	0-19
Problem- Solving	33-60	24-32	0-23	Problem- Solving	39-60	31-38	0-30
Personal Social	36-60	28-35	0-27	Personal Social	39-60	32-38	0-31

ASQ Risk Indicators by Score (M. Moland, personal communication, 09/10/2008)

2) ASQ Updates. Revised Mean, SD, and Cutoff Points for Selected ASQ Intervals

Interval	Communication			Gross Motor			Fine Motor			Problem-solving			Personal Social		
	Mean	SD	Cutoff point	Mean	SD	Cutoff point	Mean	SD	Cutoff point	Mean	SD	Cutoff point	Mean	SD	Cutoff point
18	41	14	23	56.5	7.5	41.5 *	54.5	7.5	39.5 *	49	8	33	52	7.5	37
22	50	12.5	35	54	7	40	51.5	7.5	36.5 *	51.5	7.5	36.5 *	53.5	7	39.5 *
27	51.5	9	33.5 *	53	9	35	49	11.5	26	53	8	37	49	8	33
33	52	8.5	35	55.5	7	41.5*	52	11.5	29	53.5	8.5	36.5*	53	8.5	36

Source: Bricker & Squires (n.d.) Retrieved July 3, 2009 from the Brookes Publishing Web site: <http://www.brookespublishing.com/asqupdates/cutoff.htm>

* Areas of discrepancy with current GAWM Project severity cutoff scores

Appendix F
Severity Scores by Domain

Developmental Domain	2008-09								2009-10	
% Delay (Below ASQ Cutoff)	Q1, 08-09		Q2		Q3		Q4		Q1, 09-10	
	N=446		N=331		N=376		N=448		N=484	
	#	%	#	%	#	%	#	%	#	%
Communication delay*	63/444	14.2	38/331	11.4	43/376	11.4	49/448	10.9	55/484	11.4
No delay (<2 SD)	381/444	85.8	293/331	88.5	333/376	88.6	399/448	89.1	429/484	88.6
Mild-moderate (2-3 SD)	36/444	8.1	19/331	5.7	32/276	8.5	22/448	4.9	34/484	7.0
Severe (>3 SD)	27/444	6.1	19/331	5.7	11/376	2.9	27/449	6.0	21/484	4.3
Gross motor delay*	26/446	5.8	11/331	3.3	13/376	3.5	16/448	3.5	18/484	3.7
No delay (<2 SD)	420/446	98.6	320/331	96.7	363/376	96.5	432/448	96.4	466/484	96.3
Mild-moderate (2-3 SD)	15/446	3.4	7/331	2.1	7/376	1.9	10/448	2.2	15/484	3.1
Severe (>3 SD)	11/446	2.5	4/331	1.2	6/376	1.6	6/448	1.3	3/484	0.6
Problem-solving delay*	20/442	4.5	21/328	6.4	14/375	3.7	19/448	4.3	28/481	5.8
No delay (<2 SD)	422/442	95.5	307/328	93.6	361/375	96.3	428/447	95.8	453/481	94.2
Mild-moderate (2-3 SD)	12/442	2.7	9/328	2.7	9/375	2.4	12/447	2.7	12/481	2.5
Severe (>3 SD)	8/442	1.8	12/328	3.7	5/375	1.3	7/448	1.6	16/481	3.3
Fine motor delay*	19/445	4.3	19/331	5.7	14/373	3.8	15/449	3.3	18/483	3.8
No delay (<2 SD)	426/445	95.7	312/331	94.3	359/373	96.2	433/448	96.7	465/483	96.3
Mild-moderate (2-3 SD)	12/445	2.7	9/331	2.7	5/373	1.3	10/448	2.2	10/483	2.1
Severe (>3 SD)	7/445	1.6	10/331	3.0	9/373	2.4	5/449	1.1	8/483	1.7
Personal social delay*	18/445	4.0	22/330	6.6	14/376	3.7	16/448	3.5	20/481	4.1
No delay (<2 SD)	427/445	96.0	308/330	93.3	362/376	96.3	432/448	96.4	461/481	95.8
Mild-moderate (2-3 SD)	12/445	2.7	14/330	4.2	6/376	1.6	10/448	2.2	15/481	3.1
Severe (>3 SD)	6/445	1.3	8/330	2.4	8/376	2.1	6/448	1.3	5/481	1.0