Psychometric Tools Used for Evaluating Individuals with FASD: Reaching Consensus – Phase 2 Meeting

Canada Northwest FASD Research Network:
Vancouver, British Columbia September 18-19, 2007

CanFASD Northwest
CANADA NORTHWEST FASD RESEARCH NETWORK

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Introduction

The Canada Northwest FASD Research Network (CanFASD Northwest) has been collaborating with diagnostic clinics to support their efforts in conducting comprehensive assessments for individuals with FASD. During several months of 2007, CanFASD Northwest focused on the approaches and tools that clinics were using to assess individuals with FASD. This exploration led to the realization that there was little consistency among clinics regarding the psychometric tools that were used by multi-disciplinary teams in the assessment. In an effort to create a common and consistent pan-Canadian approach for assessing individuals with FASD, CanFASD Northwest decided to invest resources in a process that would begin to address this inconsistency.

CanFASD Northwest devised a two-phase process to bring together representatives of all disciplines working within diagnostic clinics who use a multi-disciplinary approach. The first phase involved psychologists from each of the clinics who would come together for two days to achieve consensus on the psychometric tools to be use in diagnosis. The second phase would involve all others who form a multi-disciplinary diagnostic team (such as Speech-Language Pathologists, Occupational Therapists, and Pediatricians) and include a small representative group from the first phase to build continuity. During each phase, the groups would review current approaches and tools for their respective disciplines and then work towards consensus on the most effective tools to use in assessment.

CanFASD Northwest hosted both sessions in Vancouver, BC. The first session was held on June 13 and 14, 2007. The second session occurred on September 18 and 19, 2007. This report chronicles the process and outcomes of the second session.

Session Purpose and Preparation

The purpose of the session was to bring together Speech and Language Pathologists (S-LPs), Occupational Therapists (OTs) and Pediatricians (who are currently assessing individuals) to reach consensus on which tools would be used consistently across Canadian Northwest diagnostic clinics for their disciplines. This would complete the work begun in Phase 1.

Approximately 45 individuals participated in the session representing 21 clinics from five provinces and territories. Five participants from the Phase 1 meetings were invited to participate also, to provide continuity to the overall process. Staff from the Canada Northwest Research Network attended as well.

In advance of the session, a research assistant was hired to collect information on the tools currently being used by clinics across Canada's Northwest. A survey was distributed to all clinics, asking them to complete and return it to CanFASD Northwest. The information was collated into a table and included tools used in the following 11 domains, or areas of assessment:

1. Cognition
2. Academic Achievement
3. Memory
4. Executive Function and Abstract Reasoning
5. ADHD (and attention more generally)
6. Adaptive Behaviour, Social Skills and Social Communication
7. Neurological Signs (sensory motor)
8. Communication: Receptive and Expressive
9. Supplementary Measures (Emotional Status)
10. Pediatrician Administered Measures
11. Others

The first six categories were the focus of the first session. The second session focused on the remaining domains: Neurological signs, Communication, Supplementary Measures, Pediatrician Administered Measures and Others.

It was evident from the information collected that, while there was some consistency in tools used among clinics, for the most part there was tremendous variability in the instruments used. Coming to consensus was seen as an important and timely exercise.

Session Process

The session began with opening remarks designed to provide background on CanFASD Northwest, set the context for the event, emphasize the importance of the task and ensure clarity on the expectations and outcomes of the two-day meeting. This was followed by a brief presentation and large group discussion that focused on the current picture of assessment. An explanation of the pre-session survey of clinics was offered

along with a review of the matrix of tools, which participants reviewed prior to the session. Participants received a brief overview of the Phase 1 outcomes and together reviewed the Matrix that was produced in that meeting.

The balance of the session consisted of small group discussions, then large group consensus building to identify the psychometric tools the group would agree to use. The session ended with a discussion about next steps and the identification of a small group of individuals who were interested in reviewing the session report and ensuring follow-up occurred.

In setting the context, participants were informed that CanFASD Northwest is in the process of preparing to collect consistent and cohesive data that could be translated to inform decision-making and policy. The outcomes of this session would assist in creating a system where such data could be collected. Recognizing that data was potentially very political and sensitive, the work of this group was seen as extremely important in paving the way ahead.

Participants were advised that in working towards consensus on the tools, they should recommend tools that would be appropriate for a typically evaluated person, described as falling within the these parameters:

The Individual…

- Is between 4 and 18 years of age (i.e. school-aged children)
- Has an IQ between 70 and 100
- Speaks English adequately ("fluently" was initially in the criteria, but the participants agreed to change it to "adequately")
- Has no sensory deficits
- Has experience in life (i.e. it is valid to use tests for the general population)

When assessing individuals outside of these parameters, clinicians might be required to make modifications to the assessment process such that the recommendations in this report would not apply to those individuals. These modifications were to be based on the clinical judgment of the assessment team and would not be addressed within this report.

Participants were encouraged not to hold back recommendations on tools, if lack of money was an issue, CanFASD Northwest would address this outside of the meeting.

The group was also advised that no one was mandating that they use the tools identified through this process. It was hoped that participants would share the outcomes of this

meeting with their teams, discuss the merits of the tools identified and consider using the tools in an effort to work towards consistency and, eventually, data collection.

Participants were reminded that the results of this meeting would bring all those working in diagnosis a step closer to being able to tell a story to the government about FASD and ultimately to support patients, families and communities.

Discussion

While the number of participants at session 2 was significantly larger than at session 1, there were fewer domains that required discussion. Unlike the first meeting where all participants were part of the same discipline, this session included individuals from three separate disciplines. This made the process more challenging since the small group discussions meant that between 3-5 simultaneous small group discussions were going on in the same room.

The core task for each discussion was to consider the existing matrix of tools and recommend one (or possibly more) psychometric tools for use within each domain. Participants were divided into five smaller groups (two each for the Speech and Language Pathologists (S-LPs) and Occupational Therapists (OTs), and one for the Pediatricians) and assigned to examine, discuss and reach consensus with the evaluation domains that were done within their clinical work in FASD assessment. All groups had an opportunity to present their emerging thoughts about the tools part way through the process so that clarification could be made where necessary, questions could be asked and each group could build other perspectives into their particular discussion.

Groups were instructed to identify tools in three age categories: ages 4-6, 6-16, and 16-18. Tools for each domain, by age group can be found in Appendices at the end of this document.

Please Note: The authors of this document assume a certain level of knowledge with regard to the variety of tools discussed from here forward. As such, the tools discussed are most often listed using the acronym form. For the full names, please refer to the Psychometric Tools Matrix in Appendix.

Psychometric Tools for Neurological Signs (Sensory Motor) – Occupational Therapists

The scan of clinics identified 28 different tools that were being used to assess neurological signs. Four tests were reportedly used by between 6 and 8 clinics (Sensory Profile, NEPSY, Visuospatial Functions, NEPSY Sensorimotor Functions and Beery VMI: Beery-Buktenica Developmental Test of Visual-Motor Integration). Each of the

two OT groups began their discussion by determining whether any other tests should be added and considered during the discussion. None were identified.

As a result of the two small group review of tools, the comparison of results between the groups and a final large group discussion, the OTs recommended that the domain be divided into two categories: Motor and Sensory.

The agreed-upon tool for the **Motor** category is:

For Ages 4-11

The Peabody Developmental Motor Scales–Second Edition (PDMS-2) was selected as the most age appropriate motor-based assessment providing information on visual motor integration, manual dexterity and gross motor skills.

Rationale: In general, the group felt that the Miller Function and Participation Scales (M-FUN) showed promise but was a relatively new assessment and many of the OTs present had reviewed the assessment but had not yet used it enough to know whether it would be useful in this population. Those who had reviewed the M-FUN felt that the parent and preschool questionnaires part of the assessment could also provide valuable supplemental information about the child's functioning in home and preschool environments.

For Ages 5 to 18

The Bruininks-Oseretsky Test of Motor Proficiency–Second Edition (BOT-2) (full form) was selected as the most appropriate overall motor assessment providing information on both fine and gross motor skills. The short form of the BOT-2 was also considered an acceptable option for those situations where time constraints or the client's attention span might limit the amount of time allotted to complete the assessment.

Rationale: Discussion revealed that more of the OTs present had experience with the BOT-2 and felt that it provided accurate and precise information re: motor skills. However, some OTs felt that due to time constraints for doing assessments that the BOT-2 would take too long. It was then recommended that the BOT-2 Short Form could be used. Another concern expressed about the BOT-2 was the space and set-up requirements. Some of the OTs who are community-based are doing assessments in less than ideal settings (for example, church basements). However overall the BOT-2 was felt to be the best tool.

Recommendation for Supplementary Tool: The Quick Neurological Screening Test-Second Edition (QNST-II) was suggested as a supplementary test to determine subtle neurological signs that may be affected as a result of pre-natal alcohol exposure.

The M-FUN was discussed as a possible tool for further consideration for this population in the age range of 4-7 years. This was a relatively new assessment and many of the OTs present had reviewed the assessment but had not yet used it enough to know whether it would be useful in this population. Those who had reviewed the M-FUN felt that the parent and preschool questionnaires part of the assessment could also provide valuable supplemental information about the child's functioning in home and pre-school environments.

Rationale: The group decided that the PDMS-2 was the most widely used and easiest to administer assessment for four-year-olds. However, the group also recognized that this assessment might not be ideal for FASD assessments. Therefore, the group chose to include investigations of the M-FUN as part of the recommended tools. As the M-FUN is a relatively new assessment tool, not enough members of the group were familiar enough to support using this tool. The QNST-II was added as a supplemental tool on request of the occupational therapists working more with adolescents and by request of the physicians in the group. The physicians expressed that the QNST-II was helpful for their assessment when occupational therapy was not available. With both recommended assessment tools, the group chose to support use of the full scales. This would provide more comprehensive information and could be done in partnership with a physical therapist when that service was available.

There was much discussion regarding the use of the Movement Assessment Battery for Children (Movement ABC) but it appeared that more of those present had experience with the BOT-2 and felt that the BOT-2 provided more accurate and precise information for assessment of this domain. Therefore, it was not chosen due to its lack of sensitivity.

The agreed upon tools for the **Sensory** category were:

For the 4 year old group

- Short Sensory Profile (SSP)
- The Sensory Profile Caregiver Questionnaire could also be used for supplementary information

For the 5-18 year old group

- Short Sensory Profile (ages 5-10 year old)

- Adult Adolescent Self-Questionnaire (ages 11/12-18 years), with the option of having a caregiver assist the adolescent when filling out the questionnaire

Rationale: The SSP was developed through utilizing the most sensitive questions from the longer version of the Sensory Profile. Therefore, it was felt that the Short Form was more accurate in determining sensory processing differences. Additionally, the SSP provides a total score which is not available with the longer version. Finally, the SSP had been found to be more practical to use because it takes less time and easier to review with an individual who may have low literacy levels.

The group also recommended adding visual perception testing as supplementary testing under the Executive Function and Abstract Reasoning domain, Column 4 of the Matrix I, as a sub domain. As this testing would be completed as a supplement to neuropsychological testing, the recommendation would be to complete the Test of Visual Perceptual Skills – Third Edition (TVP-3), as this provided the most detailed information regarding visual perceptual skills. On this point, one participant noted that the purpose of this addition was not to suggest that visual perception was a core aspect of executive functioning or abstract reasoning, but rather visual perception could be important in addressing potential confounders in the interpretation of the Rey Complex Figure Test (RCFT), which had been identified as a test of Executive Functioning. Low scores on tests of Visual Perception would not, therefore, be sufficient to suggest a deficit in Executive Functioning, but might account for low scores on the RCFT which might otherwise have been attributed to executive dysfunction.

Another recommendation was to rename this domain as "Motor-Sensory" Domain. The rationale being that the OTs felt that they were more specifically assessing motor-sensory skills than neurological signs. The term soft neurological signs has not well defined and this group thought that by calling the domain "motor-sensory skills ", the title would more accurately reflect what was actually being assessed.

A final recommendation was that if standardized assessment reflects delay in either the sensory or the motor sub-domains for this category, it was to be considered an affected domain. Many OTs expressed that while sensory processing tends to be affected, motor may not be. Therefore, a child would not need to have deficits in both sensory and motor skills in order to be considered to have an affected domain.

Psychometric Tools for Communication: Receptive and Expressive – Speech–Language Pathologists (S-LP)

The S-LPs were divided into two groups for ease of discussion and were asked to recommend the best tool for each age group, divided into the following: 4-6 age group, 6-16 age group, and 16 and up age group. The two groups presented a summary of their

discussion and then decisions were reached on final recommendations. The tests, followed by a brief narrative on the rationale have been presented below. The group suggested the domain be divided into sub-domains of: core language, narrative language, expressive language and receptive language.

For the 4-6 Year Age Group

- Core language: CELF-P2
- Narrative language: Recommended test is Bus Story
- Expressive language: PLAI-II
- Receptive language: CELFP-2 Pragmatics checklist

Rationale: The CELF-P2 was chosen because the PLS-4 overestimates language ability in this population. The CELF-P2 should be used for 5-year old children unless clinical judgement suggests otherwise. Regarding narrative language vs. social language and the overlap – sometimes testing oral narration is important.

Regarding the Renfrew Bus Story, research shows that the UK norms are a better fit with Canadian populations. Therefore, there was consensus to use the UK version if these could be easily obtained and distributed.

For measuring early verbal reasoning skills, it was noted that the first subtest does not in fact indicate verbal reasoning, while the three others do assess some early verbal reasoning skills.

It was mentioned that the Pragmatics Profile of CELF-P2 and CELF-4 are not ideal, but they are currently the best that exist. It is recommended that the caregiver fill the checklist out and additionally, the teacher if clinically indicated.

For the 6-11 Year Age Group

- CELF-4,
- TNL
- TOPS-2Elementary
- Pragmatics Profile

The participants identified an additional level of testing depending upon how well the child performs on the above and that the use of the additional tests would be based on clinical judgment. For those who were lower function and struggle early on, the CELF-4 subtests can be used to complete the receptive and expressive assessment. For those who were higher functioning, the CASL (for inferencing and non-literal language) and

the Coggins Mental State Reasoning can be used. The "Frog Story" was also strongly recommended as a supplemental here.

Rationale and Notes: Participants noted that it is important to get receptive and expressive indices of CELF-4 but not necessarily the language memory dimensions because this would be covered in the Memory domain. While the CASL was another optional test, the core language, receptive and expressive dimensions were weak and hence not recommended.

The TNL was chosen over the Renfrew Bus Story for this age group because of the range of tasks and decrease of visual support. The norms are not very sensitive, but the tool gives good clinical information.

There was a discussion around vocabulary assessment that served to highlight that it is not important to indicate brain dysfunction, but it is important clinically to show discrepancies. While this area does not make the critical "must do" list, it is important to continue to consider it.

The TOPS-E is an important part of the battery for this age group and that it takes a much shorter amount of time to administer and score than other tools. Participants remarked that the TOPS did not evaluate the same abilities of the Test of Language Comprehension (TLC) or subtest of the CASL.

A point was made about time constraints faced for doing assessments and this aspect was factored into the discussion on selection of tools.

Regarding the Coggins Test – it was noted that the results were often highly clinically useful but not normed. It was suggested that there might be a need to additional training for SLPs who were not familiar with the test since it was not often used in a more general clinical setting. Furthermore, the participants agreed that they should advocate for support of Coggins materials and for the development of norms. Some additional consultation needed to occur among participants in order to decide how to gather data from Coggins materials in order for it to be useful for research purposes. The Coggins could be used to identify higher levels of dysfunction not captured on the TOPS. A final problem with the Coggins was identified, as many did not know how to use the test to obtain mental state reasoning score. Finally, participants mentioned that it would be worthwhile to explore the possibility of Coggins materials becoming the standard. However, until that happens, it should be placed on the "supplementary list" of tools.

At the present time, the Pragmatic Checklist was the best tool available.

In summary, participants felt that "clinical judgement" remained an important aspect of assessment and use of tools. It was recognized that choosing a specific battery of tests for every client was a challenge.

For the 12+ Age Group

- CELF-4 for core language, receptive and expressive
- TOPS – Adolescent or TOPS Elementary, Pragmatics Profile of CELF-4 and Word Definitions of CELF-4 for 12 year olds
- CASL for inferred and non-literal language

Rationale and Notes: Participants noted that CELF-4 for core/receptive/expressive did not include the Word Definitions subtest for 12 years olds, so it was to be added for this age group.

A supplemental subtest that was considered helpful was the TOWK for multiple contexts. There was a suggestion to review at some time for possible inclusion with the core tests listed above. The Frog Story – Mental State Reasoning was offered as a supplemental in this category as well.

The group mentioned that Oral Motor/Apraxia/Articulation/Phenology are all supplemental if indicated. Their results are counted in "Hard and Soft" Neurological Signs domain, especially oral motor difficulties and/or apraxia.

Additional Notes

The group proposed (but did not reach consensus on) the following as the complete set of (re-named) domains that SLPs would have responsibility for:

- Hard and Soft Neurological Signs (all supplemental)
- Communication – Core Language; Narrative Language
- Executive Functioning and Abstract Reasoning – Verbal Reasoning
- Adaptive Functioning and Social Communication – Pragmatic Language

There was a need to consult with psychologists in the final analysis and remain flexible depending upon results that the entire team brings to the discussion of any client.

Physician-Administered Measures

Six pediatricians from across the Northwest participated in this meeting. Their task was to discuss, identify and come to consensus on a battery of tools that any pediatrician working in a multi-disciplinary team would use within an FASD clinic.

The discussion for this group addressed not only potential tools, but began with a very broad discussion about the role of the pediatrician and identification of specific responsibilities and tasks that the individual brings to the FASD team. At the time of the session, there were no standard battery of tests designed for use by Pediatricians. The group provided a list of the various tasks and associated median timelines that were part of pediatrician role in FASD diagnosis. These included:

- Chart Review (.5 to 1 hour after intake)
- Physical examination of child (up to .5 hour)
- Caregiver interview with social worker (1 hour)
- Mental Status Examination and academic (minimum 1-hour)
- Team conference (1.5 hours)
- Family meeting (1 hour)
- Community team (1.5 hours)
- Conferencing/feedback with adolescent (.5 hour)
- Report writing (.5 hour)

Following the Vancouver meeting, the six pediatricians conferred as a group to discuss this issue further. They drafted a document that described in detail the physician role, goals for the medical examination and specific tasks and tools recommended for the achievement of goals.

The full text of their report is included below.

"FASD is a medical diagnosis based on analysis of physical factors and key functional assessments by a multidisciplinary team. Thus the physician has an important role. The physician on the FASD Diagnostic Team needs to have training in child and youth development, mental health issues, neurological and genetic disorders and family function. To work with an older teen and adult FASD Diagnostic Team, knowledge of substance abuse and secondary mental health disorders is important.

Goals of the medical evaluation are to:

- Identify all the possible medical and environmental etiological factors
- Participate in the differential diagnosis with the team
- Confirm the final diagnosis
- Identify co-morbidities and concurrent conditions
- Provide a health assessment, additional testing and referrals to sub-specialties as indicated
- Make recommendations with the team, with medications under the discretion of the physician

Outline of tasks and tools:

- History analysis: consider all risk factors including familial/genetic patterns, prenatal and perinatal factors, postnatal psychosocial and physical impact that can be contributing to the individual's functional difficulties. The tool for this task is methodical tracking of documents and interview of current care provider. (Details of the maternal history including pre-pregnancy and pregnancy health, education level, mental health, relationships, substance abuse and treatment programs for addictions are critical but not always available for a child not in care of the birth mother.) Information from Child Welfare records may be helpful but with caution as it is often 3rd or 4th party information and there may be secondary gain by the informants.
- Current function of the child and how this has changed over time is obtained by past and present documentation from school and caregivers. The tool could be the Caregiver Interview from the DPN Manual (elaborated on by many of the diagnostic clinics). This is often co-conducted by the Physician and Social Worker and leads to the evaluation of the "day in the life of the child" from the caregiver's perspective, what strategies have been put on place, the family dynamics and the caregivers knowledge of FASD, advocacy skills and commitment to the child.
- Health determinants that impact development and function: Past and present history of seizures, tics, obstructive sleep apnea, low iron, diet restrictions, sleep pattern, chronic wheezing and middle ear dysfunction, surgeries, accidents, hospitalizations, testing such as EEG and MRI, medications (which ones, how long, dose, targeted behavior, responses, side effects), general system review.
- Physical exam including growth measurements, neurological exam noting soft neurological signs, movement disorders such as tics, dysmorphology, sensory issues, general physical examination looking for Alcohol Related Birth Defects and current health issues, including vision and hearing. It is key to do

differential diagnosis of other genetic syndromes with dysmorphic facies, other causes for growth deficiency, other reasons for neurological abnormality that may require neuroimaging.

- Mental status: observation and interview of client looking at attention, hyperactivity, impulsivity, communication pattern such as overly talkative and tangential, anxiety, depression, mood, attachment including personal boundaries, awareness of impact of behavior on others, suicidal tendencies. Differential diagnosis and co-morbidities and secondary disabilities of a mental health nature also need to be considered. Tools for this area may include BASC, Connors, Stonybrooke Childhood Symptom Inventory, etc. often done in conjunction with the team Psychologist. The Physician has the opportunity to "play" with the child without requiring the child to do a test and this may be closer to "real life".
- Formulation of diagnosis: participate in the integration and collaboration of information with the rest of the team. Other team members will have information on motor function, behavior, mood, and communication as part of their standardized assessments as well as their qualitative observations during the assessment. The task is to identify sufficient evidence for organic brain dysfunction contributing to the individual's difficulties.
- Development of intervention strategies and support systems after diagnosis. This needs to be strength-based and across all settings of home, school and community and focused on child and caregiver. Knowledge of availability of resources in the community is key. All team members participate in this process. The Physician needs to make the referrals for medical tests and sub-specialists. The Physician presents medications to the family with discussion of benefits and risks. If prescribed follow up needs to be planned.
- Longitudinal follow up is important as the child's function may change with age and different societal expectations and care giving situations may change. In the current Health Care system, the Physician is looked on as the point of contact when crisis arrive. In best practice, anticipatory follow up would be planned."

Summary

CanFASD Northwest will soon be embarking on an extensive data collection exercise that will seek to further describe and understand the picture of FASD in Canada's Northwest. In anticipation of that exercise, CanFASD Northwest wanted to ensure that the data coming into the system can be useful in terms of moving the field forward. The idea of consulting with multi-disciplinary diagnostic teams on the psychometric tools

they use emerged as a way of working toward a pan-Canadian approach to assessment of individuals with FASD.

This session was the second of two designed to identify the tools that multi-disciplinary diagnostic teams will use to assess individuals with FASD. The task was seen as central to paving the way for a consistent pan-Canadian approach to diagnosis that in turn would have the potential to generate a very useful foundation of data to inform the FASD field. This particular meeting was a very complex process given our number of participants and the mix of disciplines in the room. It made for some lively discussion, but also some distraction as a result of multiple discussions occurring simultaneously.

Nevertheless, those who participated in the session demonstrated immense commitment to the task, a sincere willingness to provide leadership in FASD assessment and great enthusiasm for the work ahead. They expressed appreciation for the invitation to be involved in the deliberations and agreed to offer additional input to support the completion of the tasks. Several participants offered to form a small sub-committee to ensure adequate and timely follow-up.

CanFASD Northwest was extremely pleased with the outcomes of the exercise and is in the midst of merging the outcomes of the two meetings and devising critical next steps.

Appendix A: Agenda

September 17 – Day One

8:15 Breakfast

9:00 Welcome and Opening Remarks,

Dr. Sterling Clarren

Jan Lutke

9:15 Introductions and Overview of the Meeting

Paula Stanghetta, Facilitator

9:45 Phase 1 Meeting Outcomes from June 2007

Jan Lutke

10:00 Overview of Current Approaches to Psychometric Testing for FASD

Dr. Christine Lilley

10:30 Refreshments

10:45 Response to Current Approaches – Group Discussion

11:45 Lunch

12:45 Detailed Discussions and Consensus Building on Psychometric Tools by Domain Simultaneous Small Group Work

2:15 Refreshments

2:30 Large Group Discussion

4:00 Summary of day

4:30 Adjourn

September 19, 2007 - Day Two

7:45 Breakfast

8:30 Review of Day One Accomplishments

8:45 Simultaneous Small group work Continued

10:00 Refreshments

10:15 Large Group Discussion re: Pediatrician Domain Results

11:30 Lunch

12:30 Practical Considerations for Moving Forward: Training, Resources and Timing

1:45 Refreshments

2:00 Outstanding Issues

Next Steps

3:00 Adjourn

Appendix B: Participant List

Prov	Name	Organization
BC	Dr. Chris Loock	CDBC Clinic Sunny Hill Health Centre for Children Vancouver, BC
	Dr. Barb Fitzgerald	CDBC Clinic Sunny Hill Health Centre for Children Vancouver, BC
	Dr. Jonathan Down	CDBC Clinic Queen Alexandra Centre for Children's Health Vancouver Island Health Authority Victoria, BC
	Ali Henderson	Okanagan Speech and Language Kelowna, BC
	Cheryl Headey	CDBC Clinic CDC Nanaimo Child Development Centre Nanaimo, BC
	Jillian Gordon	CDBC Clinic CDC Nanaimo Child Development Centre Nanaimo, BC
	Christine Lilley	CDBC Clinic Sunny Hill Health Centre for Children Vancouver, BC
	Alexis Davis	CDBC Clinic Sunny Hill Health Centre for Children Vancouver, BC
	Janice Forsey	CDBC Clinic Sunny Hill Health Centre for Children Vancouver, BC
	Dr. Kelly Price	CDBC Clinic Queen Alexandra Centre for Children's Health Vancouver Island Health Authority Victoria, BC

	Adelle Rama	CDBC Clinic Queen Alexandra Centre for Children's Health Vancouver Island Health Authority Victoria, BC
	Ramona Brar	Fraser Development Clinic New Westminster, BC
	Laurie Cole	CDBC Clinic Queen Alexandra Centre for Children's Health Vancouver Island Health Authority Victoria, BC
	Kristal Bodaly	The Asante Centre for Fetal Alcohol Syndrome Maple Ridge, BC
	Carol Woodworth	The Asante Centre for Fetal Alcohol Syndrome Maple Ridge, BC
AB	Brie Saunderson	Peace Country Health Peace River, AB and Chinook Health Region Lethbridge, AB
	Mitch Cedar	Peace Region FASD Diagnostic Services Peace River, AB
	Maribeth Tik	Northern Lights Health Region Northwest Health Centre High Level, AB
	Lynne Abele-Webster	Glenrose Rehabilitation Hospital Edmonton, AB
	Jacqueline Pei	Glenrose Rehabilitation Hospital Edmonton, AB
	Connie Alton	Glenrose Rehabilitation Hospital Edmonton, AB
	Gail Andrew	Glenrose Rehabilitation Hospital Edmonton, AB
	Sharon Winik	Aspen Regional Health Authority Cold Lake Community Health Services Cold Lake, AB

	Vanna Thiel	Aspen Regional Health Authority Cold Lake Community Health Services Cold Lake, AB
	Ben Gibbard	Alberta Children's Hospital Calgary, AB
	Pearl Park	Alberta Children's Hospital Calgary, AB
	Shaffina Mohamed	Alberta Chidlren's Hospital Calgary, AB
	Terri Bainbridge	Children's Health & Developmental Services Palliser Health Region Regional FASD Program, A Division of Bridges Family Programs Medicine Hat, AB
	Brad Irvine	Children's Health & Developmental Services Palliser Health Region Regional FASD Program, A Division of Bridges Family Programs Medicine Hat, AB
	Dr. Valerie Massey	Canadian Diagnostic and Training Centre Redwater, AB
	Melanie Bergmann	Renfrew Educational Services Calgary, AB
	Leah Fitness Loiselle	Renfrew Educational Services Calgary, AB
SK	Rae Lynn Lang	Chidren's Program Wascana Rehabilitation Centre Regina, SK
	Donna Jackson	Chidren's Program Wascana Rehabilitation Centre Regina, SK
	Carol Lahey-Wiggs	Alvin Buckwood Child Development Program at Kinsmen Children's Centre Saskatoon, SK

	Cynthia Bojkovsky	Alvin Buckwood Child Development Program at Kinsmen Children's Centre Saskatoon, SK
	Della Hunter	Cognitive Disabilities Diagnostic Support Regina Child & Youth Services Regina, SK
	Crystal Day	Cognitive Disabilities Diagnostic Support Regina Child & Youth Services Regina, SK
	Karin Heaney	Child & Youth Development Clinic Mental Health Prince Albert, SK
MB	Dorothy Schwab	Clinic for Alcohol and Drug Exposed Children Children's Hospital of Winnipeg Winnipeg, MB
	Dr. Ana C. Hanlon-Dearman	Clinic for Alcohol and Drug Exposed Children Children's Hospital of Winnipeg Winnipeg, MB
	Shelley Proven	Clinic for Alcohol and Drug Exposed Children Children's Hospital of Winnipeg Winnipeg, MB
	Brenda Fjeldsted	Clinic for Alcohol and Drug Exposed Children Children's Hospital of Winnipeg Winnipeg, MB
YK	Andrea Taeger	Children and Youth FASD Diagnostic and Support Teams CDC Team: Birth to 5 years c/o Child Development Centre Whitehorse, YK
	Rachel Moser	Children and Youth FASD Diagnostic and Support Teams CDC Team: Birth to 5 years c/o Child Development Centre Whitehorse, YK
	Pauline Craig	Children and Youth FASD Diagnostic and Support Teams Yukon Dept. of Education, Special Programs: 5 to 18

		years
	Wendy Kitchen	Children and Youth FASD Diagnostic and Support Teams Yukon Dept. of Education, Special Programs: 5 to 18 years
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