Review of Instructional Materials on Fetal Alcohol Spectrum Disorders

A Report from the
Substance Abuse and Mental Health Services Administration
Fetal Alcohol Spectrum Disorders
Center for Excellence

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BACKGROUND AND PURPOSE OF REPORT

Fetal alcohol spectrum disorders (FASD) is an umbrella term describing the range of effects that can occur in an individual who was prenatally exposed to alcohol. These effects may include physical, mental, behavioral, and/or learning disabilities with possible lifelong implications. The term FASD is not intended for use as a clinical diagnosis. It refers to conditions such as fetal alcohol syndrome (FAS), fetal alcohol effects (FAE), alcohol-related neurodevelopmental disorder (ARND), and alcohol-related birth defects (ARBD). In the United States, about 40,000 babies are born with an FASD each year.

Although the adverse effects of alcohol use during pregnancy have long been recognized, critical gaps in knowledge about FASD remain across many systems of care. Among professionals, very little is known about effective ways to reduce FASD incidence and the adverse effects of FASD. In addition, very little is known about screening, diagnostic methods used to identify FASD, or effective treatments.

In response to this grave situation, the Substance Abuse and Mental Health Services Administration (SAMHSA) established the Fetal Alcohol Spectrum Disorders Center for Excellence (FASD Center). The Center was authorized by the Children's Health Act of 2000. The goals of the FASD Center are to reduce the number of infants born with an FASD and to improve the quality of life for individuals and families affected by FASD.

SAMHSA's FASD Center conducted town hall meetings across the Nation to learn about the needs and experiences of persons with an FASD. Many who testified noted the need for training of staff in various systems that provide services to individuals with an FASD and their families. The overriding perception among participants was that most professionals lack an understanding of FASD and how best to help individuals and families affected by FASD.

Because of the lack of training among professionals (e.g., educators, school counselors, health and mental health professionals, substance abuse treatment providers, social workers, and criminal justice system staff), individuals with an FASD do not receive optimal help and often do not achieve their full potential. They frequently end up in intensive, costly settings such as correctional facilities, residential treatment centers, and hospitals. In addition to the need to train professionals, there is also a strong need to educate the public about FASD. Many people think that it is safe to drink during pregnancy or that some forms of alcohol, such as beer and wine, are safe. Education and training are key to reducing cases of FASD and enhancing the quality and effectiveness of treatment and other services.

To address the need for training, the FASD Center was tasked with developing a training manual. To determine appropriate content and audiences, Center staff reviewed curricula and other instructional materials to determine what was available and whether a manual was needed. Many curricula have already been developed in the United States and Canada for different populations, including educators, health and mental health professionals, substance abuse and social service providers, and the general public.

This report identifies, describes, and reviews current curricula and other educational materials that relate directly or indirectly to FASD. Throughout the report, these materials will be referred to as "curricula" even though many are educational products that can be used for trainings, classroom instruction, or self-instruction. The report highlights the critical FASD issues being addressed through training or classroom instruction and important gaps in information and target populations. The results of this effort inform the Center's development of FASD training materials to bridge the gaps.

METHODS

FASD Center staff entered key information about the curricula they identified into a database. The database contains indepth information on each curriculum or educational product. Each record has multiple fields associated with training content and delivery and critical topics related to FASD and alcohol abuse. This approach was used to get a better idea of which material is being used with various target audiences and to identify any gaps in audiences and information. (See Appendix A for a list of the 46 curricula included in this report and Appendix B for a list of the fields and their definitions contained in the database.) Based on the information collected, staff identified common elements in content and format and important differences among curricula.

For this review, curricula were defined as resources that provided a detailed, step-by-step plan for imparting the knowledge or skills of interest. The review also included other kinds of educational materials (e.g., videos, flip charts, PowerPoint presentations, booklets, online publications). Curricula were differentiated from practice guides, which were defined as resource and reference materials to guide practitioners in their professional work. To date, Center staff have identified 85 practice guides. These guides will be reviewed at a later date, as the information contained therein is an important component of training for the field.

Information about the curricula and other educational materials was gathered from November 2001 through January 2005. To obtain such information, reviewers conducted Internet searches using such search engines as Yahoo and Google. They also searched FASD-related Web sites, such as the Minnesota Organization on Fetal Alcohol Syndrome (MOFAS), the National Organization on Fetal Alcohol Syndrome (NOFAS), Washington State's FAS Diagnostic and Prevention Network and Fetal Alcohol and Drug Unit, and the FAS Community Resource Center. In addition, staff contacted experts in the field regarding training materials they might be aware of or using. If the experts owned the materials or otherwise held copyright, staff requested a copy of the curriculum and permission to review it for this report.

The search resulted in the initial identification of 70 possible curricula and educational materials that could be used for training, classroom instruction, or self-instruction. After further review, 12 of these materials were eliminated from the list as other resource types. Of the remaining 58, 12 were excluded because they have been discontinued and are no longer distributed or for other reasons (e.g., they did not address FASD or alcohol and other drug use among pregnant women)

The review focused on the remaining 46 curricula that were in a format that could be reviewed. Additional data were collected through e-mail contacts with the individuals or organizations responsible for the development or distribution of the 46 curricula or educational materials. One person is responsible for four curricula and two are responsible for two curricula each, so fewer than 46 individuals or organizations were contacted.

The FASD Center sent 38 initial e-mails and discussion guides, along with letters from the FASD Specialist who heads the FASD Center's training program describing the purpose of the curriculum review, asking them to participate, and emphasizing the importance of their feedback. Most respondents were the authors or coauthors. In several cases, distributors were contacted because they had handled the distribution and, in some cases, the evaluation of the curricula since they were produced.

Followup e-mails, letters, and discussion guides were sent to nonrespondents. Those who still did not respond were then contacted several times by telephone. Data collection took place between January 14 and March 31, 2005. The FASD Center received completed discussion guides from 34 respondents and information on 43 of the 46 curricula under review. Additional information could not be obtained on the three remaining curricula—all developed for American Indians—because the persons who created them

have left the organization and their successors could not provide any details about these products. Two of these curricula are being updated, and the organization producing them will notify the Center when they are available for distribution.

Questions in the discussion guide (Appendix C) included:

- Whether the curriculum or educational material was still being distributed and, if so, whether it had been updated
- Whether experts reviewed the materials before their use and distribution and who these experts were
- The estimated number of these curricula that had been distributed
- The estimated number of trainings conducted using these materials
- Which professional groups had used these materials
- Whether the curricula contained evaluation components, and if so, the kind of evaluation

Respondents whose curricula had been evaluated were asked about the feedback they had received from training audiences or users. They were also asked what information, if any, they had about how facilitators and audiences applied what they learned to their work.

RESULTS

Most of the 46 curricula under review were produced in the United States (n=39), and 7 were developed in Canada.

Development Dates

Most of the 46 curricula were developed between 2000 and 2004 (n=27). Eighteen were developed during the 1990s. One was developed in 1984 and updated in 1992. Among the 46 curricula, 17 have been updated. Two are updated with the latest statistics every year, and another is updated twice a year when it is used for training. Another five curricula will be updated during 2005 and one during 2006. None of these curricula were replaced by other curricula or educational materials.

Online Availability

Seventeen curricula can be accessed online for self-instruction or instruction of others. Appendix D lists these products with the Web sites where they can be accessed.

Curriculum Producers and Funding Sources

Most of the curricula were developed by nonprofit organizations, including foundations (see Table 1). Although Federal Government agencies produced only 9 percent of these materials, they funded a higher percentage of them than any other organization (see Table 2).

Table 1. Organizations Producing FASD Curricula (n=46)

Type of Organization	Number	Percent
Nonprofit (including foundations)	18	39
Academic	14	30
State government or Canadian provincial government	4	9
Federal Government	4	9
For-profit	5	11
County government	1	2

Table 2. Funding Sources (n=46)

Type of Organization	Number	Percent
Federal Government*	19	41
Nonprofit (including foundations)	6	13
State government or Canadian provincial government	6	13
Multiple organizations	3	7
Academic	4	9
Canadian government	2	4
For-profit	1	2
Unknown source	5	11

Of the 19 federally funded curricula, the National Institute on Alcohol Abuse and Alcoholism funded 11. The three curricula funded by multiple organizations received funding from:

- University and research foundations
- Canadian provincial government and two nonprofit organizations
- Federal Government, State government, university, and nonprofit organizations

Goals and Objectives

The goals of the curricula typically address one or more of the following issues:

- Enhancing knowledge and understanding of the causes and effects of FASD
- Identifying and describing the specific physical, cognitive, psychological, and social effects of prenatal alcohol exposure
- Preventing the incidence of alcohol use among pregnant women
- Preventing alcohol abuse among children, youth, and adults, including those with an FASD
- Providing guidelines and instruction on FASD diagnostic methods and tools
- Providing information on effective strategies and tools for the screening and diagnosis of alcohol abuse or dependence
- Presenting information on effective intervention and treatment strategies

Among the 46 curricula, 36 listed learning objectives.

Focus

More than half (24) of the curricula focused on prevention. About one-quarter (11) focused on treatment, and the remaining curricula (11) focused on prevention and treatment.

Target Audiences

Table 3 lists the primary target audiences by focus area (e.g., prevention). Most of the curricula targeted multiple audiences from different professional backgrounds, such as education, mental health, substance abuse treatment, and social services. Some were designed for both professionals and parents (birth, adoptive, or foster) of children with an FASD. Because curricula targeted multiple audiences, the subtotals in each area add to a number exceeding the total.

Table 3. Target Audience by Curriculum Focus Area (n=46)

Target Audience	Curriculum Focus Area			
	Prevention (n=24)	Treatment (n=11)	Prevention and Treatment (n=11)	Total (n=46)
Medical professionals (physicians, nurses, nurse practitioners, midwives)	7	8	3	18
Students grades 1-12 (including 3 curricula for American Indian students)*	14	1	1	16
Mental health professionals	3	4	4	11
Educators	4	1	6†	11
Parents of children with FASD (birth parents, foster parents, or adoptive parents)	5	3	2	10
Substance abuse professionals (prevention or treatment)	2	2	2	6
Social workers/social service providers	0	3	3	6
Criminal justice system professionals	3	0	2	5
Pregnant women with substance abuse problems	2	1	1	4
General public	3	0	0	3
Communities/community organizations	2	0	1	3
Self- or family advocates	1	0	1	2
Medical, social work, or college students (one each)	1	0	2	3
Researchers	0	0	3	3
Alcohol retailers	2	0	0	2
Policymakers	2	0	0	2
Speech language pathologists and occupational therapists	0	0	2	2
Women attending prenatal classes	1	0	0	1
Youth with an FASD at high risk for substance abuse	0	1	0	1
Clergy	0	0	1	1
Professional and paraprofessional trainers	0	0	1	1
Aboriginal communities and organizations	0	0	1	1

*One of these curricula is designed for K-12 students with an FASD.
†These include one special education teacher, one health educator, and one social work educator.

Most of the curricula were developed for medical professionals (39%), schoolchildren (35%), educators and mental health professionals (24% each), and parents of children with an FASD (22%). The highest percentage of prevention curricula was developed for schoolchildren (58%), while most of the curricula addressing treatment were developed for medical professionals (73%). Educators (55%) were the largest audience for prevention and treatment curricula.

Among the 14 prevention curricula designed for schoolchildren, 3 were for high school students, 4 were for middle and high school students, 3 were for middle school students, 2 were for students in elementary and middle school, and 2 were for K-12 students. One curriculum was developed for K-12 students attending health and life skills and career and life management classes. Three of these 14 curricula were developed for American Indian students: 1 for high school students and 2 for upper elementary and middle school students.

Among prevention and treatment curricula, one was developed for American Indian parents of children with an FASD, as well as educators and social service providers in American Indian communities nationwide. The other was developed for aboriginal communities, organizations, and individuals and families affected by FASD in Nova Scotia, Canada.

Instructors

Table 4 shows the types of users or instructors designated for these curricula.

Table 4: Users or Instructors (n=46)

Intended User	Number	Percent
Facilitators/trainers	16	35
Educators/schoolteachers	12	26
Educators or facilitators	5	11
Target audience (self-instruction)	13	28

Most of these materials were designed as instructional tools to be used by facilitators/trainers (35%) for trainings, educators/schoolteachers (26%) in the classroom, or educators or facilitators (11%). However, 13 (28%) of the curricula were designed as self-learning tools to be used by specific target audiences (e.g., physicians, substance abuse professionals, educators, researchers, general public). Other users of these self-learning tools included FASD self-advocates and juvenile justice system professionals.

Duration

Table 5 shows the amount of time allocated in the curricula for presenting information and other learning activities.

Table 5. Time Allocated for Information and Activities (n=46)

Duration	Number	Percent*
At user's pace	19	41
22 to 35 minutes	2	4
1.5 hours to 10 hours	6	13
1 day to 7 days	8	17
Ongoing classroom instruction	2	4
6 classes to 16 classes	3	7
Time not stated	6	13

*Percentages add to less than 100 due to rounding.

For a large percentage of the curricula (54%), no specific time was indicated. Users could take as little or as much time as they needed (41%) or were given no estimate of the time needed for training or self-instruction (13%). For other curricula, the duration ranged from 22 minutes (for a video) to 7 days (for a workshop). Some curricula did not note specific timeframes but instead indicated the number of classes or were ongoing.

Presentation

Most of the curricula involved more than one mode of presentation (e.g., video, printed materials, PowerPoint, overheads). Table 6 lists the primary modes of presenting instructional material.

Table 6. Presentation of Material (n=46)

Primary Mode of Presentation	Number	Percent
Print materials (for information, lecture, individual, or group exercises)	21	46
Videotape (with lecture, PowerPoint, exercises, and training manual)	9	20
Videotape only	1	2
CD-ROM	6	13
Slides with lecture/narrative	4	9
Overheads with lecture	2	4
PowerPoint with lecture	2	4
Online tutorial	1	2

Printed materials were used as the primary mode of presentation in most of the curricula or educational products (46%), followed by videos with or without other modes of presentation (22%).

Learning Activities

Most of the 46 curricula used more than one learning activity so that the instructional style was more interactive than didactic. The CD-ROMs, designed as self-learning tools, also used an interactive instructional style. Learning activities of the curricula and other educational products included:

- Multiple activities in addition to lecture with or without slides or PowerPoint presentations (e.g., large group discussion, individual or small group exercises, role-playing, storytelling, showing of videos, and games [n=30])
- Reading of material and completion of exercises included in self-learning tools available online or on a CD (n=10)
- Single activities, such as watching a video or lectures with slides or overheads (n=6)

Curriculum Content

General Content

Table 7 shows general aspects of instructional content.

Table 7. General Content (n=46)

Indicator	Number	Percent
Appropriate use of language	46	100
Abbreviations defined	46	100
Definitions of terms	41	89
Citations and references included	35	76
Resources identified	34	74
Use of case studies	15	33
Use of animal models	10	22

As far as can be determined, all the curricula used language appropriate for the intended audience. All of the instructional materials also defined abbreviations and most (89%) defined key terms. Most of the curricula provided citations and references (76%) and lists of resources (74%). To enhance instruction, some curricula used case studies (33%) and others used animal models (22%) to illustrate the adverse effects of alcohol use during pregnancy. All but four curricula were in English only. The others were available in English and Spanish.

Specific Topics

The curricula addressed a broad range of topics associated with FASD and alcoholism in general. These topics have been organized into Tables 8-10 and listed under three main categories:

1. Description and Etiology of FASD
2. Epidemiology and Effects of FASD
3. Prevention, Screening/Diagnosis, and Treatment of FASD

Table 8. Description and Etiology of FASD (n=46)

Curriculum Topic	Number	Percent
Description of FASD		
Background information	31	67
Secondary disabilities	34	74
Co-occurring disorders	21	46
Differential diagnosis	11	24
Etiology of FASD		
Drinking level and damage	24	52
Effects of alcohol use during pregnancy	33	72
Absorption of alcohol	29	63
Breastfeeding and alcohol	13	28
Role of genetics	18	39

Topics addressed by most curricula were:

- Secondary disabilities (74%)
- Effects of alcohol use during pregnancy (72%)
- Background information on FASD (67%)
- Absorption of alcohol (63%)
- Drinking level and damage (52%)

Differential diagnosis (24%) and breastfeeding and alcohol (28%) were featured in the lowest number of curricula addressing the description and etiology of FASD.

Table 9. Epidemiology and Effects of FASD (n=46)

Curriculum Topic	Number	Percent
Epidemiological Data		
Incidence of FASD	30	65
Rates of alcohol use	19	41
Rates of alcohol use during pregnancy	17	37
Risk factors	22	48
Effects of FASD		
Cognitive effects	34	74
Child behavioral sequelae	24	52
Adolescent behavioral sequelae	15	33
Adult behavioral sequelae	15	33
Impact on society	18	39

Topics most frequently addressed were:

- Cognitive effects of FASD (74%)
- Incidence of FASD (65%)
- Child behavioral sequelae (52%)
- Risk factors (48%)

Rates of alcohol use during pregnancy (37%) and adolescent and adult behavioral sequelae (33% each) were the least frequently mentioned topics in the curricula.

Table 10. Prevention, Screening/Diagnosis, and Treatment of FASD (n=46)

Curriculum Topic	Number	Percent
FASD Prevention Efforts	24	52
Screening and Diagnosis		
Screening at-risk women for alcohol use	11	24
Screening tools for alcohol use, drug use, or mental health status*	11	24
Screening for FASD	16	35
Diagnostic information	30	65
Screening and diagnostic tools	22	48
Treatment of alcoholism or FASD		
Treatment of women	18	39
Postdelivery services	6	13
Role of the father	22	48
Treatment of children	14	30
Treatment of adolescents	13	28
Treatment of adults	9	20

*Some instruments included items related to drug use or mental health status.

A higher percentage of curricula address FASD or alcohol abuse prevention efforts (52%) than alcohol treatment or FASD treatment. Diagnostic information (65%) and diagnostic tools (48%) are addressed in higher percentages of curricula than topics associated with screening for alcohol use (24%) or screening for FASD (35%).

Table 11 presents tools used to screen for alcohol use, drug use, and mental health status that were discussed in the curricula. Some curricula mention multiple tools, so the subtotals add to more than the number of curricula. Appendix E provides short descriptions of each tool.

Table 11. Alcohol, Drug, and Mental Health Screening Tools (n=11)

Screening Tools	Number
No specific tool mentioned	6
4-Ps (4 scale items: (Parents-Partner-Pregnant-Pregnant)	1
10-question drinking history	2
Adolescent Alcohol Involvement Scale (AAIS)	1
Adolescent Drinking Index (ADI)	1
Adolescent Self-Assessment Profile (ASAP)	1
Alcohol Dependence Scale	1
Alcohol Use Disorders Identification Test (AUDIT)	3
CAGE (4 items: Cut down-Annoyed-Guilty-Eye-Opener)	4
Child and Adolescent Functional Assessment Scale (CAFAS—used for mental health and substance abuse)	1
Comprehensive Addiction Severity Index for Adolescents (CASI-A)	1

Screening Tools	Number
CUGE (4 items: Cut down-Under the Influence-Guilty-Eye-Opener—for young adults)	1
Diagnostic Interview Schedule for Children (DISC—used for mental health and substance abuse)	1
Drug and Alcohol Problem Quick Screen (DAP)	1
Drug Use Screening Inventory (DUSI)	1
Health Screening Survey (HSS)	1
Massachusetts Youth Screening Instrument—Second Version (MAYSI-2)	1
Michigan Alcohol Screening Test; 24 item instrument (MAST)	1
Personal Experience Inventory (PEI)	1
Problem Oriented Screening Instrument for Teenagers (POSIT)	2
RAFT (4 scale items: Relax-Alone-Family/Friends-Trouble)	1
Self-Administered Alcohol Screening Test (SAAST)	1
Short Michigan Alcoholism Screening Test (SMAST)	1
Substance Use Survey IA (SUS IA)	1
T-ACE (4-scale items: Tolerance-Annoyed-Cut Down-Eye Opener)	3
TWEAK (developed for young women of childbearing age: assesses Tolerance-Worried-Eye-Opener-Amnesia-K[C]ut Down)	3

Only 11 (24%) of the 46 curricula discussed screening tools for substance abuse. Over half (55%) of the 11 curricula that mentioned screening tools for alcohol and drug use did not identify any particular tool. Among the five remaining curricula, the most frequently mentioned tools were the CAGE (n=4), AUDIT (n=3), T-ACE (n=3), and TWEAK (n=3). One curriculum designed specifically for children and youth provided a list of nine screening tools, including the POSIT, which was also mentioned in another curriculum.

FASD diagnostic information was discussed in 30 (65%) of the 46 curricula. This information includes what is required to receive a diagnosis and different tools used to assist in diagnosis. Of the 30 curricula, 22 discussed diagnostic tools. Table 12 lists the screening and diagnostic tools mentioned. Some curricula mentioned multiple tools, so the subtotals add to more than the number of curricula. Short descriptions of these diagnostic tools are provided in Appendix E.

Table 12: Tools for Diagnosing an FASD (n=22)

Screening/Diagnosis Tool	Number	Percent
No specific tool mentioned	14	64
4-Digit Diagnostic Code	9	41
FAS Facial Photographic Analysis	1	5
Lip-Philtrum Guide	5	23
NIAAA alcohol exposure screening tools	1	5

FOLLOWUP RESULTS

The following results are based on the 43 curricula from which followup information was obtained from 34 respondents.

Distribution

Respondents were asked to estimate how many of their curricula or other educational products had been distributed since their creation. Table 13 presents their responses.

Table 13. Estimated Number of Curricula Distributed (n=43)

Number Distributed	Number	Percent
1–100	2	5
101–500	4	9
501–1,000	6	14
1,100–5,000	8	19
5,100–10,000	2	5
> 10,000	4	9
Don't know	16	37
A few	1	2

Fourteen respondents (33%) indicated that between 500 and 5,000 copies of their curricula had been distributed. Most respondents who did not know how many curricula had been distributed said they did not keep records of this information, especially when the materials were available online or more than one organization was distributing the materials.

Training Sessions

Table 14 shows the estimated number of training sessions conducted using the curricula. Only 18 respondents (41%) could provide estimates of the number of training sessions. Those 18 respondents conducted a total of 43 training sessions.

Table 14. Estimated Number of Training Sessions Conducted Using the Curricula (n=43)

Number of Trainings	Number	Percent
1–50	9	21
51–100	1	2
101–500	4	9
501–1,000	1	2
> 1,000	3	7
Don't know	8	19
None	17	40

Ten curricula (22%) have been used to conduct between 1 and 100 trainings. Respondents who did not know how many training sessions had been conducted using their curricula explained that they did not keep records of this information or that the curricula could be used by anyone because they were available online. Seventeen respondents answered "none" to this question because their products were not specifically designed for training, although the information in these materials could be used for this purpose. Some materials were specifically designed for classroom instruction.

Few respondents had any plans to use their curricula for future trainings, because they were already being used for training or were not designed for training. Five respondents whose curricula were being used for training reported plans to conduct training in 2005.

Users

Respondents were asked to identify the professional groups or organizations that had used their curricula. Since most curricula had multiple users, the subtotals add to more than the number of curricula. The multiple users represent a broad range of professional groups, interest groups, and organizations, many of which have been organized into "umbrella groups," shown in Table 15.

Table 15. Curriculum Users (n=43)

Curricula Users	Number	Percent
Educators	19	44
Medical professionals (physicians, physician assistants, nurses, nurse practitioners)	17	40
Mental health professionals (psychologists, psychiatrists, etc.)	15	35
Community/social service providers	11	26
Substance abuse prevention or treatment professionals	10	23
Family service providers*	9	21
Social workers	9	21
Family or school counselors	8	19
Laypersons†	7	16
Juvenile justice or criminal justice workers	6	14
Occupational therapists	5	12
Speech-language pathologists	4	9
Researchers	3	7
Geneticists	3	7
Students	2	5
Diagnostic teams	2	5
FASD coordinators	1	2

*Family service providers included family support workers, child care providers, family mentors, WIC home visit nurses, WIC and ECI providers, and caseworkers.
†Laypersons included families of individuals with an FASD, FASD advocates, community members, and participants in the annual NIAAA National Alcohol Screening Day.

Respondents also cited 18 organizations that had used their curricula:

- Major FASD organizations
- Substance abuse prevention organizations nationwide
- Major medical centers across the country
- Grassroots substance abuse prevention organizations (e.g., SADD, MADD)
- Community-based organizations such as the YMCA and Boys & Girls Clubs
- Addictions foundations
- Schools and school districts
- Tribes and tribal councils
- Prince Albert Grand Council
- RADAR Network (State substance abuse prevention clearinghouses nationwide)
- Safe and Drug-Free Partnerships
- Partnership for a Drug-Free New Jersey
- Nechi Institute
- Alberta University College of the North
- First Nations and Inuit Health Branch, Alberta Region
- Winnipeg School Division
- West Region Child and Family Services
- Red River College

Quality and Effectiveness of Curricula

Expert Review

All 43 curricula were subjected to expert review to ensure the quality, accuracy, and scientific integrity of their content. Nearly half of the curricula (22) were assessed by both FASD experts and peer reviewers. The 105 reviewers included:

- 30 peer reviewers
- 26 FASD experts
- 9 naïve reviewers
- 5 expert panels or advisory groups
- 17 other
- 1 unknown
- 4 NIAAA or NIH reviewers
- 4 physicians, including OB-GYNs, developmental pediatricians, and medical reviewers
- 2 executive working group members representing leading substance abuse prevention organizations nationwide
- 1 alcohol researcher
- 1 consumer
- 1 middle school teacher
- 1 curriculum developer
- 1 National Association of FAS member
- 1 parent or guardian of a child 10 to 14 years old
- 1 Human Resources and Skills Development Canada staff (homelessness initiative)

Evaluation

An evaluation component was included in 35 (81%) of the 43 curricula on which additional information was obtained. Types of evaluations included in the curricula are shown in Table 16.

Table 16. Curriculum Evaluations (n=35)

Evaluation Design	Number	Percent
User/trainee feedback	29	83
Pretest/posttest	8	23
Followup	4	11
Posttest only	2	6
Presenter feedback	1	3

Most curricula (83%) had evaluations based on user or trainee feedback. Seven respondents identified more than one kind of evaluation:

- Pre/posttest and user/trainee feedback (n=4)
- Pre/posttest and followup (n=1)
- Feedback and followup (n=1)
- Posttest, user feedback, and initial pilot testing of the curriculum using an external evaluator to follow up at three pilot sites (n=1)

Plans To Evaluate

Five respondents whose curricula already included evaluations described plans to enhance their evaluations by adding components:

- Formal postmarketing evaluation is planned. Results will be posted on the FAS Diagnostic and Prevention Network Web site.
- Trainee feedback will be used, as well as part of a randomized study (June 2005 through April 2007) comparing social work education practices of MSW educators who use the curriculum with those not yet trained to use it.
- A quantitative evaluation has been proposed to get more objective data. Additional evaluations are being collected via the Carolina Biological Supply Web site and the curriculum distributor and are planned through a proposed R25 grant application.
- Plans are to get permission from OMB to conduct surveys of requesters to see how this module meets their needs. There are no immediate plans to conduct pre/posttesting of students' knowledge, attitudes, and behaviors.
- Plans are to add feedback and followup components to the evaluation.

Most of these plans involve the use of quantitative methods and additional data collection (e.g., feedback and followup) to obtain more objective results.

Another respondent reported that his or her organization had to rely on informal evaluation, saying, "More formalized evaluation is difficult because individuals with FASD don't interview well. So their responses would not be an authentic representation or evaluation of the program."

Evaluation Results

Respondents were asked to indicate how favorable the results were of their curriculum evaluations and to provide some typical examples. Appendix F includes their verbatim responses.

Among the 33 respondents who answered this question, most (n=27) reported results based on audience/trainee feedback. Most of the assessments these respondents reported were qualitative (n=20); 7 respondents provided quantitative feedback. Examples of their responses follow.

Qualitative Feedback (n=20)

- Generally favorable. Professionals and direct service providers viewed the curriculum as a valuable learning tool. They were pleased with information, methods, and strategies. People with an FASD and those facing other challenges found the information especially valuable.
- Professionals using the software report that it is user-friendly, allows a broader array of professionals to accurately measure the facial features, and removes the subjectivity of the facial diagnosis.
- Very favorable. This tape has been the Center's most well-received and in-demand video program. Most teachers and counselors who used the tape found it compelling and useful, because it seems to reach the target audience and truly speak to young people directly.
- Have received multiple calls of support and thanks from users in the field. This video and teacher's guide and exercises won two awards: North West Regional Emmy for Best Instructional Special and an Emerald City Silver Award for Best Instructional Video.
- Very positive feedback. Easy to use, step-by-step instructions, case examples very helpful for stimulating conversations, and good range of relevant topics.
- Positive evaluation results. The diverse audience reported increased FASD awareness and found presentations effective. The Saskatchewan Prevention Institute is publishing the research data.

Quantitative Feedback (n=7)

- Guide highly rated, averaging 4.7 on a 5-point scale by 800 trainees attending FASD Interdisciplinary Diagnostic Team Trainings conducted twice annually since 1998.
- Eight hundred trainees evaluated the manual, rating it 4.6 on a 5-point scale.
- Most trainings given with this curriculum include an audience evaluation. Results are highly favorable, e.g., average ratings by 748 participants of trainings conducted between 2/1/84 and 6/30/85 were 95% for content, delivery, usefulness of the information, value, and quality of the presentation.

Five other respondents reported pre- and posttest results, including:

- Significant improvement in knowledge and understanding of FAS/FAE from pre/posttests; high levels of satisfaction (60% rating CD ROM as very useful); 30% useful.
- Results highly favorable. Teachers' comments indicate increased knowledge.
- To date, approximately 45% of our registered learners have completed the FAS e-learning module. The pre- and posttest scores indicate that most learners acquired a significant gain in FASD knowledge.

One other respondent reported posttest, feedback, and followup results: "Evaluation data from >300 students showed a significant increase in knowledge regarding birth defects, and improvement in health lifestyle factors affecting birth defect incidence. Curriculum received 4 awards: 3 from University of Missouri Outreach and extension and 1 from Central Region NEAFCS."

In one case, evaluation results of a CD-ROM training program could not be obtained because the project was moved into the private sector and evaluation results were not kept.

Impact of the Curricula

Last, respondents were asked to provide information on the impact of their curricula on users or the training audience. (See Appendix F for a list of their verbatim responses.) Of particular interest were ways curriculum users or trainees used what they had learned in their practice or other settings. Nine respondents reported 14 different ways their curricula had had an impact on users or trainees. These effects fall into four main categories:

1. Enhancing clinical practice (n=6)
2. Training, developing, or updating curricula (n=4)
3. Serving as a model for other settings (n=2)
4. Expanding services, networks, and resources (n=2)

Examples of these responses follow.

Enhancing Clinical Practice (n=6)

- Evidence of clinical changes in audiences, e.g., in a followup survey, the majority of 136 respondents were more likely to discuss alcohol with pregnant patients; 82% of the 56% of total 136 respondents who conduct intake have used some or all of the Ten Question Drinking History items.
- Over 70 interdisciplinary FASD diagnostic teams across the USA and Canada who were trained to use this Guide (Diagnostic Guide for FASD: The 4-Digit Diagnostic Code) by FAS DPN have successfully opened FASD diagnostic clinics in their communities and use the Guide. These clinics are posted on the FAS DPN Web site.

- Occasional reports from trainees who are using what they learned in their workplaces. DPN frequently receives diagnostic referrals from former trainees as they identify individuals at risk in their professional settings.

Training, Updating or Developing New Curricula (n=4)

- Many participants purchased the curriculum or started implementing it in their settings, whether in the classroom or individual consultations. The curriculum was sold in the NASCO catalog for 3 years. A new edition is being printed with updates and revisions.
- Curriculums with a facilitator's guide have been published, and an Advanced FAS Family Intervention Training curriculum was completed and provided through 2002 upon request. Contacts in WI, MI, and KS requested the curriculum and facilitator training.

Serving as a Model for Programs in Similar Settings (n=2)

- The training manual should provide a useful model for implementing similar programs in this and other Aboriginal communities.
- The videos have established a theoretical model for neurobehavioral intervention with FAS children and their families.

Expanding Services, Networks, and Resources (n=2)

- Training led to the establishment of ongoing training and diagnostic collaboration between the FAS DPN clinic and a nearby juvenile rehabilitation center.
- Other effects include the development of family and children's support networks; ongoing recreational activities; an e-mail network of 52 adoptive FAS families; and an FAS parent resources Web site.

Six other respondents reported that they could not provide any information on the impact of their curricula for various reasons, including:

- Information not collected due to "systems and policy" issues.
- Will know when survey results are received from the evaluator.
- We don't have information relating to this specific question.
- Can't easily measure after the training. We do ask in the evaluation about changes in attitude/knowledge and intentions as far as taking action on what they learned.

New Curricula

The current curriculum review will be updated to include additional FASD-related curricula that will become available during 2005. Following are brief descriptions of these curricula.

Fetal Alcohol Spectrum Disorder: Information Everyone Should Know

A teaching resource package developed by the Saskatchewan Prevention Institute for high school teachers and other educators. Reviewed by Saskatchewan Learning and linked to Saskatchewan curriculum, this teaching resource includes current FASD information from evidence-based research with lesson plans, activities, Web, print, and audiovisual or CD resources for teaching students in grades 7-12 primary prevention and awareness of FASD. URL: www.preventioninstitute.sk.ca.

Online Course: (2004) FASD 4-Digit Diagnostic Code

Launching in 2005. Developed by the FAS Diagnostic and Prevention Network, this individual-start, self-paced, fully online program presents an overview of current assessment and diagnostic strategies for FASD.

This course is designed to enable participants to:

1. Understand the full spectrum of outcomes associated with prenatal alcohol exposure
2. Recognize the importance of an interdisciplinary approach to FASD screening, diagnosis, and prevention
3. Use the (2004) FASD 4-Digit Diagnostic Code
4. Use the FAS Facial Analysis Software (Version 1.0, 2003)

The 20-hour course is designed for completion in 4 weeks. URL: http://depts.washington.edu/fasdpn/htmls/online-train.htm.

Curricula Developed by Regional Centers for the Education and Training of Medical and Allied Health Students and Professionals on FASD and Other Prenatal Alcohol-Related Disorders

Established by the Centers for Disease Control and Prevention (CDC) in 2002, these regional centers are Meharry Medical College and Morehouse School of Medicine, Atlanta; University of Medicine and Dentistry of New Jersey; St. Louis University School of Medicine; and University of California at Los Angeles School of Medicine. The educational curricula developed by these four centers incorporate evidence-based diagnostic guidelines for FAS and other prenatal alcohol-related disorders. They will be used to train medical and allied health professionals. In addition, the centers will incorporate FASD content into the training curricula of medical and allied health schools at their university or college and other universities and colleges throughout their region and into the credentialing requirements of professional boards. Training materials include case studies, standardized patient exercises, educational videos, PowerPoint presentations, and Web sites for online materials. URL: www.cdc.gov/ncbddd/fas/regional.htm.

Tools for Success: Working With Youth With Fetal Alcohol Spectrum Disorders in the Juvenile Justice System

Based on the Tools for Success Resource Guide produced by the Minnesota Organization on Fetal Alcohol Syndrome (MOFAS), this curriculum is being developed by MOFAS in collaboration with the SAMHSA FASD Center for Excellence. The curriculum addresses the extent of the problem of FASD, its background and history, and effective intervention strategies for youth with FASD and provides resources and referrals. URL: www.mofas.org

Fetal Alcohol Syndrome Awareness and Education

The Education Development Center (EDC) is developing a Web-based FAS awareness and education package that includes a training guide for State trainers. The guide and an online course prepare trainers to provide school-based FAS awareness sessions for elementary school staff (including administrators, teachers, special educators, nurses, counselors, social workers, and psychologists) and parents. CDC is funding the development of this curriculum. URL: http://main.edc/org.

Any other curricula that are obtained by the FASD Center will also be reviewed in an updated report and additional future curricula will be included.

SUMMARY

General characteristics of the 46 curricula include the following:

- All of the curricula are still being distributed.
- Over half of the 46 curricula (59%) were produced between 2000 and 2005.

- Seventeen curricula (37%) have already been updated. Two are updated annually and one is updated twice a year when used for trainings. Six other curricula will be updated this year (n=5) or in 2006 (n=1).
- Eighteen (39%) are accessible online for self-instruction or instruction of others (see Appendix D).
- Most curricula were produced by nonprofit organizations (39%) or academic institutions (30%), but the Federal Government (41%) was the main funding source for most of the 46 curricula reviewed.
- More than half the curricula (52%) focused on prevention, with fewer addressing treatment (24%) or prevention and treatment (24%).
- Most curricula were developed for multiple audiences, especially physicians, nurses, or other medical professionals (39%), schoolchildren (35%, most in middle and high school), educators and mental health professionals (24% each), and parents of children with an FASD (22%).
- The curricula were primarily designed to be used by facilitators/trainers, educators, or both (72%), but some (28%) were designed for self-instruction.
- No set time for instruction was given for most of the curricula (54%).
- Most curricula used multiple modes of presentation, but the primary modes were print materials (46%) and video (22%).
- The curricula typically used more than one learning activity (e.g., lecture, discussion, exercises, video) so that instruction would be more interactive than didactic.

As shown in Tables 8 to 10, topics most frequently included were:

- Secondary disabilities (74%)
- Cognitive effects of FASD (74%)
- Effects of alcohol use during pregnancy (72%)
- Background information on FASD (67%)
- Incidence of FASD (65%)
- Diagnostic information regarding FASD (63%)

A higher percentage of curricula addressed FASD or alcohol abuse prevention efforts (52%) than alcohol or FASD treatment issues (with percentages for the treatment of women, children, adolescents, and adults ranging from 20% to 39%). Only 11 curricula (24%) discussed alcohol or drug screening tools. Of these, over half (55%) did not mention any specific screening tool (see Table 11).

FASD diagnostic information was included in 30 (65%) of the curricula. Tools for diagnosing FASD were discussed in 22 (48%) curricula, but most of them (64%) did not mention any specific tool. FASD diagnostic tools most frequently addressed in the remaining curricula were the 4-Digit Diagnostic Code and the Lip-Philtrum Guide.

Results from the followup study of the 43 curricula indicate that:

- Between 500 and 5,000 copies of 14 curricula (39%) have been distributed, but 16 respondents (37%) did not know how many copies of their curricula had been distributed.
- Forty-two percent of the curricula have been used for trainings. The number of trainings ranges from between 1 and 50 to over 1,000. However, 40 percent have not been used for trainings, mostly because they were designed for other purposes, such as self-instruction or classroom instruction.
- Most users were educators (44%), medical professionals (40%), or mental health professionals (35%). Other users included community/social service providers (26%), substance abuse prevention or treatment professionals (23%), and family service providers and social workers (21% each).

- Only 7 curricula (16%) were used by laypersons, including families of persons with an FASD, advocates, and community members.
- All curricula were reviewed by experts, most of whom were peer reviewers (70%) and FASD experts (60%).
- Thirty-five curricula (81%) included evaluations. Most consisted of user/audience feedback (83%), with 23 percent including pre/posttests of knowledge and 11 percent including a followup component.
- Evaluation plans were reported by only five respondents whose curricula already contained evaluation components.
- Twenty-seven curricula received highly positive evaluations, although most of the results reported by respondents were qualitative (74%) rather than quantitative (26%).
- Only nine respondents provided information on the impact of their curricula on users or trainees. Posttraining uses of the curricula were encouraging:
  - Incorporating what was learned into clinical practice in multiple settings (n=6)
  - Using curricula for training, updating them, or using them as the basis for developing other curricula (n=4)
  - Serving as a model for instruction in other settings (n=2)
  - Expanding services, networks, and resources (n=2)

Conclusions: Strengths, Gaps, and Recommendations

As instructional materials, the 46 curricula reviewed by the FASD Center exhibit some important features that may be viewed as major strengths. These include the following:

- All of these materials are still available and easily accessible (especially those online), and most (61%) have been or will be updated within the next year.
- Many have been developed for and have been used by a broad range of professionals, including educators and health, mental health, and social service providers.
- All curricula used appropriate language and defined abbreviations.
- Most curricula defined key terms, included citations and references, and provided lists of useful resources.
- Most curricula used multiple modes of presentation and a range of activities to enhance learning among different audiences.
- Many curricula addressed a broad range of topics to increase understanding of the complexity and challenges posed by FASD and related risk factors.
- Most curricula included an evaluation component so that users or audiences could provide feedback to the producers on the quality and usefulness of the instructional materials.

Some important gaps remain in content and target audiences that need to be bridged to maximize the positive impact of training and other forms of instruction on FASD. These gaps could be filled by developing more curricula to:

- Identify and describe alcohol and FASD treatment strategies, not only for professional service providers but also for pregnant women using alcohol, individuals and families affected by FASD, and advocates.
- Address both prevention and treatment issues. This information would be especially helpful for families and advocates, as well as communities adversely affected by high rates of alcohol abuse and FASD by providing a more comprehensive approach to the problem.

- Discuss alcohol and FASD screening and diagnosis and describe widely used screening and diagnostic tools for alcohol use and FASD (including how to obtain additional information). The inclusion of mental health screening tools, especially for adolescents at risk for FASD, might also be helpful.
- Assist substance abuse prevention and treatment professionals serving women at risk to develop effective service delivery networks with health, mental health, social service, and criminal justice professionals.
- Target many more women likely to use or currently using alcohol while pregnant, as well as their spouses or partners.
- Reach out to children and youth with an FASD and parents (birth, foster, or adoptive) and guardians of children with an FASD.
- Target non-English-speaking families and children (e.g., increasing the number of curricula in English and Spanish and any other language as necessary).
- Reach out to African-American, Hispanic/Latino, and Asian and Pacific Islander children, youth, families, and communities with user-friendly and culturally appropriate instruction, as well as to the professional service providers who work with these populations.

Another important gap exists in the design of almost all of the current evaluations being used to assess the curricula reviewed in this report. Curricula that represent promising practices will be more easily identified if they:

- Include evaluations that use both quantitative and qualitative methods
- Obtain feedback from users or learners
- Determine whether participants learned what the training was designed to teach
- Investigate the extent to which participants used what they learned in their work, clinical practice, or home

If funds are available to produce and distribute the curricula, it is recommended that FASD-related curricula incorporate evaluations that address at least three of the four levels identified by Kirkpatrick (1998):

- Reaction—Level 1 (user/trainee feedback)
- Learning—Level 2 (pre/posttesting of the knowledge gained by the user/trainee)
- Behavior—Level 3 (followup with users/trainees to assess learning application)

Inclusion of this kind of evaluation will ensure that the promising practices represented by FASD curricula are evidence based.

By identifying and describing current curricula and other instructional materials addressing FASD and related issues and discussing major strengths and gaps, this report represents a first step toward advancing FASD prevention and treatment through the development, distribution, and use of effective instructional strategies and materials. The next step is to create an expert panel to evaluate the current curricula based on a set of evaluation criteria that will be developed for this purpose.

Reference

Kirkpatrick, D.L. *Evaluating Training Programs, Second Edition*. San Francisco: Berrett-Koehler Publications.

Appendix A

Curricula Obtained to Date

Curriculum_Title	Alcohol and Pregnancy (flip chart)
Author(s)	
Date of Curriculum	1990
Update	No
Organization	Health Edco, a Division of WRS Group, Ltd.

Curriculum_Title	Alcohol, Drugs, and the Fetus: A Teaching Package
Author(s)	Lynn Weiner, Barbara A. Morse
Date of Curriculum	1984
Update	1992
Organization	Fetal Alcohol Education Program

Curriculum_Title	Alcohol Use and Its Medical Consequences: Unit 5: Alcohol, Pregnancy, and the Fetal Alcohol Syndrome
Author(s)	Ann P. Streissguth, Ruth E. Little
Date of Curriculum	1994
Update	No
Organization	Project Cork Institute, Dartmouth Medical School

Curriculum_Title	...And Down Will Come Baby (Video and Teacher's Guide)
Author(s)	
Date of Curriculum	1994
Update	No
Organization	Scott Newman Center

Curriculum_Title	An Ounce of Prevention: Addressing Birth Defects Related to Folic Acid, Alcohol, and Tobacco
Author(s)	Lori Williamson-Kruse, Brenda Bell, Carrie L. McMahon
Date of Curriculum	2000
Update	2005
Organization	University of Missouri–Columbia, Missouri Lincoln University Outreach and Extension

Curriculum_Title	Basic Awareness and Introduction to Fetal Alcohol Syndrome: Presentation Package
Author(s)	
Date of Curriculum	2002
Update	2004
Organization	Saskatchewan Institute on Prevention of Handicaps

Curriculum_Title	Better Safe Than Sorry: Preventing a Tragedy
Author(s)	Kathleen Sulik, Marianne Meeker
Date of Curriculum	2003
Update	2004
Organization	National Institute on Alcohol Abuse and Alcoholism

Curriculum_Title	Beyond the Doom and Gloom: Tools for Help and Hope With Native People Affected by FAS and Related Neurodevelopmental Disorders
Author(s)	Suzanne L.B. Kuerschner
Date of Curriculum	2001
Update	2005 or 2006
Organization	National Indian Child Welfare Association (NICWA)

Curriculum_Title	The College Drinking Prevention Curriculum for Health Care Providers
Author(s)	Michael Fleming
Date of Curriculum	2002
Update	No
Organization	Department of Family Medicine, University of Wisconsin—Madison

Curriculum_Title	Diagnosis and Treatment of Alcohol Dependence: RSA Lecture Series
Author(s)	Allen Zweben
Date of Curriculum	2000
Update	No
Organization	University of Wisconsin—Milwaukee School of Social Welfare

Curriculum_Title	Educating Self-Advocates About FAS Prevention
Author(s)	The Arc's Prevention Committee and Self-Advocacy Committee
Date of Curriculum	1994
Update	No
Organization	The Arc

Curriculum_Title	Empowering Our Communities on FAS/FAE: Training Manual
Author(s)	Della Maguire, Kim Ryles, Russell Bernard, Tammy Barbour
Date of Curriculum	1998
Update	2002
Organization	Micmac Native Friendship Centre

Curriculum_Title	Faces Yet To Come (Video and Curriculum Guide)
Author(s)	Geneva Stretch
Date of Curriculum	1997
Update	No
Organization	American Indian Institute, University of Oklahoma

Curriculum_Title	FAS Prevention, Diagnosis, Treatment: A Clinical Guide for Pediatric and Obstetric Providers
Author(s)	Betsy Anderson
Date of Curriculum	2000
Update	No
Organization	Vida Health Communications

Curriculum_Title	FAS/Special Needs Parent Training and Support Group Curriculum: "Parenting Your Porcupine" Series
Author(s)	Antonia Rathbun
Date of Curriculum	2002
Update	2005 (into a training of trainers)
Organization	The Children's Center

Curriculum_Title	FAS Training: A Web-Based Fetal Alcohol Spectrum Disorders Training Module (CD-ROM)
Author(s)	Todd Brocious, Terri Campbell, Cynthia Scott
Date of Curriculum	2004
Update	2005
Organization	State of Alaska Department of Education and Early Development

Curriculum_Title	Fetal Alcohol Spectrum Disorder Awareness (CD-ROM)
Author(s)	Tailored Training
Date of Curriculum	2003
Update	2004 (minor revisions)
Organization	Texas Office for the Prevention of Developmental Disabilities, State of Texas

Curriculum_Title	Fetal Alcohol Spectrum Disorder and Homelessness
Author(s)	Brenda Stade, Karen Clark, Danielle D'Agostino
Date of Curriculum	2004
Update	No
Organization	St. Michael's Hospital

Curriculum_Title	Fetal Alcohol Syndrome and Fetal Alcohol Effects, Research Society on Alcoholism Lecture Series: Module #7
Author(s)	Ed Riley
Date of Curriculum	2000
Update	No
Organization	San Diego State University

Curriculum_Title	Fetal Alcohol Syndrome Manual
Author(s)	Mary Sutherland
Date of Curriculum	1995
Update	No
Organization	Health Promotion Program Initiatives

Curriculum_Title	Fetal Alcohol Syndrome: Real World Consequences
Author(s)	Virginia Rondero
Date of Curriculum	1998
Update	No
Organization	Southwest Texas State University, Department of Social Work

Curriculum_Title	Fetal Alcohol Syndrome Tutor: Medical Training Software (CD-ROM)
Author(s)	Susan J. Astley, Sterling K. Clarren, Michelle Gratzer, Adam Orkand, Michael Astion
Date of Curriculum	1999
Update	2005
Organization	FAS Diagnostic and Prevention Network, University of Washington

Curriculum_Title	The Gamble Learning Module
Author(s)	
Date of Curriculum	2001
Update	No
Organization	RealityWorks (formerly BTIO Educational Products)

Curriculum_Title	Here's to Healthy Babies! A Review of the Effects of Alcohol, Drugs, and Tobacco on Pregnancy
Author(s)	Lynn Weiner, Barbara A. Morse
Date of Curriculum	1998
Update	No
Organization	Fetal Alcohol Education Program

Curriculum_Title	How Does Alcohol Affect the World of a Child?
Author(s)	
Date of Curriculum	2004
Update	Annually
Organization	The Leadership To Keep Children Alcohol Free

Curriculum_Title	Instructional Manual: FAS Facial Photographic Analysis Software
Author(s)	Susan J. Astley, James Kinzel
Date of Curriculum	2003
Update	No
Organization	FAS Diagnostic and Prevention Network, University of Washington

Curriculum_Title	Keep Kids Alcohol Free: Strategies for Action
Author(s)	Harold Holder, Marilyn Aguirre-Molina, Frank Chaloupka, et al.
Date of Curriculum	2004
Update	Annually
Organization	The Leadership To Keep Children Alcohol Free

Curriculum_Title	Make a Difference: Talk to Your Child About Alcohol
Author(s)	National Institute on Alcohol Abuse and Alcoholism
Date of Curriculum	2002
Update	2004
Organization	National Institute on Alcohol Abuse and Alcoholism

Curriculum_Title	Motivating Pregnant Women To Stop Drinking
Author(s)	Hester Reid, Nancy Handmaker, Ben Daitz (Producers)
Date of Curriculum	1997
Update	1998
Organization	Kinetic Video

Curriculum_Title	One-Day Training for Community Professionals on Screening, Diagnosis, Treatment Planning, and Primary Prevention of FASD
Author(s)	Susan J. Astley
Date of Curriculum	2004
Update	2005
Organization	FAS Diagnostic and Prevention Network, University of Washington

Curriculum_Title	Perinatal Impact of Alcohol, Tobacco, and Other Drugs: Continuing Education for Registered Nurses and Certified Nurse-Midwives
Author(s)	Margaret H. Kearney
Date of Curriculum	1999
Update	Scheduled for 2006
Organization	March of Dimes

Curriculum_Title	Remembering What We Know (Video and Curriculum Guide)
Author(s)	Geneva Stretch
Date of Curriculum	1998
Update	No
Organization	American Indian Institute, University of Oklahoma

Curriculum_Title	Science of Alcohol Curriculum for American Indians (SACAI): An Interdisciplinary Approach to the Study of the Science of Alcohol for Upper Elementary and Middle Level Students
Author(s)	
Date of Curriculum	1994
Update	No
Organization	The American Indian Science and Engineering Society

Curriculum_Title	Sharing Stories, Finding Hope: A Curriculum for Families and Others Affected by Fetal Alcohol Syndrome and Neurodevelopmental Disorder
Author(s)	Leigh Ann Davis, Sharon David, et al. (staff of The Arc)
Date of Curriculum	2003
Update	2004
Organization	The Arc

Curriculum_Title	Social Work Curriculum for the Prevention and Treatment of Alcohol Use Disorders
Author(s)	Audrey L. Begun, Editor
Date of Curriculum	2004
Update	No
Organization	National Institute on Alcohol Abuse and Alcoholism

Curriculum_Title	Teaching for the Prevention of Fetal Alcohol Spectrum Disorder
Author(s)	Patricia Shields
Date of Curriculum	2002
Update	No
Organization	Alberta Learning and Alberta Partnership on Fetal Alcohol Syndrome

Curriculum_Title	Teaching Students With Fetal Alcohol Spectrum Disorder: Building Strengths, Creating Hope
Author(s)	Sandra G. Bernstein Clarren
Date of Curriculum	1997
Update	2004
Organization	Alberta Learning and Alberta Partnership on Fetal Alcohol Syndrome

Curriculum_Title	Tough Kids and Substance Abuse
Author(s)	Paula Cook, Richard Kellie, Kathy Jones, Laura Goosen
Date of Curriculum	2000
Update	2004
Organization	The Addictions Foundation of Manitoba

Curriculum_Title	A Training Manual for Trainers: Alcohol and the Fetus
Author(s)	Carolyn Hartness
Date of Curriculum	2000
Update	2002
Organization	Children With Special Health Care Needs Program, Department of Public Health, Seattle and King County, Washington

Curriculum_Title	A Training Manual: TIPs on Assisting Service Providers To Appropriately Respond to the Needs of the Pregnant and Substance-Using Woman and Her Alcohol/Drug-Exposed Infant
Author(s)	Susan G. Doctor, Gary Fisher
Date of Curriculum	1997
Update	No
Organization	Center for the Application of Substance Abuse Technologies, Nevada Prevention Resource Center, University of Nevada

Curriculum_Title	2004 Update: Diagnostic Guide for Fetal Alcohol Spectrum Disorders: The 4-Digit Diagnostic Code, Third Edition
Author(s)	Susan J. Astley, Sterling J. Clarren
Date of Curriculum	1999 (original)
Update	2004
Organization	FAS Diagnostic and Prevention Network, University of Washington

Curriculum_Title	Understanding Alcohol: Investigations into Biology and Behavior: NIH Curriculum Supplement Series
Author(s)	Biological Sciences Curriculum Studies, NIAAA
Date of Curriculum	2004
Update	No
Organization	National Institute on Alcohol Abuse and Alcoholism

Curriculum_Title	Washington State Fetal Alcohol Syndrome Diagnostic and Prevention Network (FAS DPN) Multidisciplinary Clinical Training Manual
Author(s)	Susan J. Astley
Date of Curriculum	1998
Update	Twice each year
Organization	FAS Diagnostic and Prevention Network, University of Washington

Curriculum_Title	We CARES: Practical Skills for Front-Line Workers Working With Adults Affected by Fetal Alcohol Spectrum Disorder
Author(s)	L. Bonnie Dinning, Adrea Podruski, Diana Fox, Anne Wright
Date of Curriculum	2004
Update	No
Organization	Anne Wright and Associates, Inc.

Curriculum_Title	Working Together for Change: Co-Occurring Mental Health and Substance Use Disorders Among Youth Involved in the Juvenile Justice System
Author(s)	Eric Trupin, Lisa Boesky
Date of Curriculum	2001
Update	2003
Organization	The National GAINS Center for People With Co-Occurring Disorders in the Juvenile Justice System

Appendix B

Category Field Definitions—Database

General Information on the Curriculum

1.	Curriculum Title	Exact title of the curriculum
2.	Author(s)	Author(s) of the curriculum (last name, first name)
3.	Date of Curriculum	Year the curriculum was written
4.	Update	Year the curriculum was or will be updated
5.	Latest Edition Date	Date of latest edition of curriculum
6.	Still Distributed	Whether the curriculum is still being distributed for training or other purposes
5.	Organization	Organization (if any), associated with the curriculum
6.	Organization URL	Web address for the organization associated with the curriculum
7.	Curriculum URL	Web address from where the curriculum can be downloaded
8.	Contact Person	Person to contact to obtain copies of the curriculum or to ask questions about the curriculum
9.	Contact E-mail	E-mail address for the contact person or the organization
10.	Contact Phone	Telephone number for the contact person or the organization
11.	Contact Fax	Fax number for the contact person or the organization
12.	Street	Street address for the contact person or the organization
13.	City	City where the contact person or the organization is located
14.	State (Province)	State/province where the contact person or the organization is located
15.	ZIP Code	ZIP code where the contact person or the organization is located
16.	Funding Source	Source of funding for the curriculum

Purpose/Goals, Focus, and Target Audiences

17	Target Focus	Focus of the curriculum (prevention or treatment)
18.	Curriculum Goal	Overall goal or purpose of the curriculum
19.	Target Audience 1	Primary audience to whom the curriculum is directed
20.	Target Audience 2	Secondary audience to whom the curriculum is directed
21.	Target Audience 3	Tertiary audience to whom the curriculum is directed
22.	User/Instructor	Who will present or use the curriculum (e.g., facilitators, students, parents [some curricula are self-learning tools])

Duration, Presentation, and Learning Activities

23.	Duration	How much time it takes to present the curriculum (e.g., 30 minutes, 1 day, 2 weeks)
24.	Presentation	Format in which the information is presented (e.g., written, slide/PowerPoint, video with study guide, other visual aids)
25.	Learning Activities	Training activities incorporated into the curriculum (e.g., lecture, small group discussions, videos, exercises, role play)

General Content

26.	Objectives listed	Whether curriculum objectives are clearly stated
27.	Language	Whether the curriculum is available in languages besides English

28.	Appropriate Language	Whether the language used is appropriate for the target audience
29.	Acronyms Defined	Whether abbreviations and acronyms are defined
30.	Citations	Whether citations are presented in the curriculum
31.	References	Whether references are listed in the curriculum
32.	Resources Identified	Whether additional resources are identified in the curriculum (e.g., Web sites, organizations, other print materials)
33.	Case Studies	Whether case studies are cited in the curriculum (story or history of a person or person's experience with an FASD)
34.	Animal Models	Whether animal models were used as a teaching tool (e.g., to illustrate the adverse physical effects of alcohol)

Curriculum Topics

Description and Etiology of FASD

35.	Background Information	Is background information about FASD presented in the curriculum (e.g., general description and history of FAS, how the diagnosis was developed)
36.	Secondary Disabilities	Are secondary disabilities discussed (disabilities that occur as a result of having an FASD)?
37.	Co-Occurring Disorders	Are co-occurring disorders discussed, (e.g., FASD plus mental health problems or substance abuse and mental health problems)?
38.	Differential Diagnosis	Is differential diagnosis discussed?
39.	Drinking Level & Damage	Is the level of drinking and the damage caused by the level of drinking discussed?
40.	Effects During Pregnancy	Does the curriculum describe how alcohol affects the fetus at different times throughout the pregnancy (alcohol as a teratogen, effects on the brain)?
41.	Absorption of Alcohol	Does the curriculum discuss how alcohol is processed and absorbed in the body?
42.	Breastfeeding and Alcohol	Are the issues surrounding breastfeeding and maternal alcohol use discussed?
43.	Role of Genetics	Is the role of genetics discussed in the curriculum?

Epidemiology and Effects of FASD

44.	FASD Incidence	Is the incidence or prevalence of FASD discussed?
45.	Rates of Alcohol Use	Is the prevalence or incidence of alcohol or other drug use given?
46.	Pregnant Alcohol Use	Are rates of alcohol use by pregnant women given?
47.	Risk Factors	Are risk factors of giving birth to a child with an FASD discussed (e.g., being a heavy drinker, having a family history of alcoholism)?
48.	Cognitive Effects	Are cognitive effects discussed (e.g., IQ, adaptive functioning, learning problems)?
49.	Child Behavioral Sequelae	Are the behavioral sequelae of children with an FASD discussed?
50.	Adol. Behavioral Sequelae	Are the behavioral sequelae of adolescents with an FASD discussed?
51.	Adult Behavioral Sequelae	Are the behavioral sequelae of adults with an FASD discussed?

52.	Impact of FASD on Society	Does the curriculum address the societal (e.g., economic) effects of FASD?

Prevention, Screening/Diagnosis, and Treatment of FASD

53.	Prevention Efforts	Are prevention efforts discussed in any way (e.g., public awareness campaigns, PSAs, screening of women)?
54.	Screening At-Risk Women	Are issues of screening women at risk of giving birth to a child with an FASD discussed (i.e., women of childbearing years)?
55.	Screening Tool	Are specific screening tools used to screen women (e.g., T-ACE, TWEAK) noted?
56.	Screening for FASD	Are issues surrounding the need to screen individuals for an FASD discussed?
57.	Diagnostic Information	What kind of information is discussed about the diagnosis of individuals with an FASD?
58.	Screening/Diagnostic Tool	Which specific FASD screening/diagnostic tools are mentioned (e.g., 4-Digit Diagnostic Code)?
59.	Treatment of Women	Are treatment issues of women at risk for giving birth to a child with an FASD discussed?
60.	Role of the Father	Is the role of the father in helping the woman stop drinking discussed?
61.	Services After Delivery	Is there a discussion of services available to the mother and the infant after delivery?
62.	Treatment of Children	Is treatment of children with an FASD discussed?
63.	Treatment of Adolescents	Is treatment of adolescents with an FASD discussed?
64.	Treatment of Adults	Is treatment of adults with an FASD discussed?

Distribution, Use, and Users of the Curricula

65.	Number distributed	Approximately how many copies of the curriculum have been distributed?
66.	Number of Trainings	Approximately how many trainings have been conducted using the curriculum?
67.	Plans To Use for Training	What plans are there to use the curriculum for trainings in the future?
68.	Professional and Other Users	What professional groups/organizations or others have used the curriculum?

Assessing the Quality and Effectiveness of the Curricula: Expert Review and Evaluation

69.	Reviewed by Experts	Was the curriculum reviewed by experts before distribution?
70.	Expert Reviewers	What kinds of experts reviewed the curriculum?
71.	Evaluated	Was the curriculum evaluated?
72.	How Evaluated	If yes, how was the curriculum evaluated?
73.	Plans To Evaluate	What plans are there to evaluate the curriculum in the future?
74.	Evaluation Results	How favorable were the evaluation results?
75.	Impact of Training	What information is there on the impact of trainings using this curriculum on trainees or users (e.g., how did they use what they learned in their work)?

Appendix C

FASD Curriculum Discussion Guide

Please complete this form and e-mail it back to Suzanne Bowler at suzanne.bowler@ngc.com or fax it to her attention at (301) 527-6441 by *(due date)*. Feel free to contact Dr. Bowler by phone, (301) 527-6495, if you have any questions. With regard to *(Name of curriculum or other educational materials)*:

1. Is this curriculum/publication still being distributed and/or used for training? Yes _____ No _____

2. *(If Yes)* Has it been updated? Yes _____ When? _____ No _____.

3. *(If No to Q1)* Has another curriculum/publication been developed? Yes _____ No _____

(If Yes) How can we obtain a copy?

4. Was this curriculum reviewed by experts prior to its use and/or distribution? Yes _____No _____

(If Yes) Who reviewed it? FASD experts? _____ Peer reviewers? _____

Naïve reviewers? _____ Others? (please specify) _____

5. Approximately how many trainings were conducted using this curriculum? # _____
(If don't know) Please explain:_____

6. Approximately how many copies of this curriculum/publication have been distributed? # _____
(If don't know) Please explain:_____

7. What professional groups (e.g., educators, physicians, mental health professionals) and/or other organizations have used this publication?

8. *(If the curriculum is not used for training)* What plans are there to use it for future trainings?

9. *(If the curriculum was used for training)* Was the curriculum evaluated? Yes _____ No _____

10. *(If Yes)* What kind of evaluation was used (for example, posttraining feedback from trainees, pre- and posttesting of trainees' knowledge and skills)?

11. *(If evaluated)* In general, how favorable was the feedback from audiences or trainees? (Can you provide some data and/or examples or tell us where we can get this information?)

12. What information, if any, do you have on the outcomes of trainings based on this publication/curriculum (for example, how trainees have made use of what they learned in their work)?

13. *(If not evaluated)* What plans are there to evaluate this publication in the future?

Thank you very much for your time!

Appendix D

Curricula Available Online

Curriculum Title	Better Safe Than Sorry: Preventing a Tragedy
Author(s)	Kathleen Sulik, Marianne Meeker
Date	2003, updated 2004
Organization	National Institute on Alcohol Abuse and Alcoholism
Curriculum URL	www.niaaa.nih.gov/publications/science/curriculum-text.html
Curriculum Title	The College Drinking Prevention Curriculum for Health Care Providers
Author(s)	Michael Fleming
Date	2002
Organization	Department of Family Medicine, University of Wisconsin, Madison
Curriculum URL	www.collegedrinkingprevention.gov/reports/trainingmanual/contents.aspx
Curriculum Title	Diagnosis and Treatment of Alcohol Dependence
Author(s)	Allen Zweben
Date	2000
Organization	Research Society on Alcoholism Lecture Series
Curriculum URL	www.rsoa.org/lectures/04/start.html
Curriculum Title	Educating Self-Advocates About FAS Prevention: FAS Chapter Action Kit
Author(s)	The Arc's Prevention and Self-Advocacy Committees
Date	1994
Organization	The Arc
Curriculum URL	www.thearc.org/pubtemp.htm (No. 20–11)
Curriculum Title	FAS Prevention, Diagnosis, Treatment: A Clinical Guide for Pediatric and Obstetric Providers
Author(s)	Betsy Anderson
Date	2000
Organization	Vida Health Communications, Inc.
Curriculum URL	www.vida-health.com/product_detail.php?selected_product=0011
Curriculum Title	Fetal Alcohol Syndrome and Fetal Alcohol Effects, Research Society on Alcoholism Lecture Series: Module #7
Author(s)	Ed Riley
Date	2000
Organization	San Diego State University
Curriculum URL	www.rsoa.org/lectures/07/index.html
Curriculum Title	Fetal Alcohol Syndrome Tutor: Medical Training Software
Author(s)	Susan J. Astley, Sterling K. Clarren, Michelle Gratzer, Adam Orkand, Michael Astion
Date	1999, updated 2005
Organization	FAS Diagnostic and Prevention Network, University of Washington
Curriculum URL	www.modimes.org

Curriculum Title	Fetal Alcohol Syndrome: Real-World Consequences
Author(s)	Virginia Rondero Hernandez
Date	1998
Organization	Social Work Education Department, California State University, Fresno
Curriculum URL	www.health.txstate.edu/sowk/title4-fas.htm

Curriculum Title	Fetal Alcohol Spectrum Disorder and Homelessness
Author(s)	Brenda Stade, Karen Clark, Danielle D'Agostino
Date	2004
Organization	St. Michael's Hospital
Curriculum URL	www.motherisk.org

Curriculum Title	Keep Kids Alcohol Free: Strategies for Action
Author(s)	Harold Holder, Marilyn, Aguirre-Molina, Frank Chaloupka, et al.
Date	2004, with annual updates
Organization	The Leadership To Keep Children Alcohol Free
Curriculum URL	www.alcoholfreechildren.org/en/pubs/pdf/prevention.pdf

Curriculum Title	How Does Alcohol Affect the World of a Child?
Author(s)	National Institute on Alcohol Abuse and Alcoholism
Date	2004, with annual updates
Organization	The Leadership To Keep Children Alcohol Free
Curriculum URL	www.alcoholfreechildren.org/en/pubs/pdf/statbooklet.pdf

Curriculum Title	Make a Difference: Talk to Your Child About Alcohol
Author(s)	National Institute on Alcohol Abuse and Alcoholism
Date	2002, updated 2004
Organization	National Institute on Alcohol Abuse and Alcoholism
Curriculum URL	www.niaaa.nih.gov/publications/makediff.htm

Curriculum Title	Social Work Curriculum for the Prevention and Treatment of Alcohol Use Disorders
Author(s)	Audrey L. Begun, Editor
Date	2004
Organization	National Institute on Alcohol Abuse and Alcoholism
Curriculum URL	www.niaaa.nih.gov/publications/social/main.html

Curriculum Title	A Training Manual for Trainers: Alcohol and the Fetus
Author(s)	Carolyn Hartness
Date	2000, updated 2002
Organization	Children With Special Health Care Needs Program, Department of Public Health, Seattle and King County, Washington
Curriculum URL	www.metrokc.gov/health/cshcn/FAS-TrainingManual-Part1.pdf

Curriculum Title	Understanding Alcohol: Investigations Into Biology and Behavior: NIH Curriculum Supplement Series
Author(s)	Biological Sciences Curriculum Studies
Date	2004
Organization	National Institute on Alcohol Abuse and Alcoholism Office of Collaborative Research and National Institutes of Health Office of Science Education
Curriculum URL	science.education.nih.gov/supplements/nih3/alcohol/default.htm

Curriculum Title	We CARES: Practical Skills for Front-Line Workers Working With Adults Affected by Fetal Alcohol Spectrum Disorder
Author(s)	L. Bonnie Dinning, Andrea Podruski, Diana Fox, Anne Wright
Date	2004
Organization	Anne Wright and Associates, Inc.
Curriculum URL	www.annewright.ca/workshops_training/index.html

Curriculum Title	Working Together for Change: Co-Occurring Mental Health and Substance Use Disorders Among Youth Involved in the Juvenile Justice System
Author(s)	Eric Trupin, Lisa M. Boesky
Date	2001, updated 2003
Organization	The National GAINS Center for People With Co-Occurring Disorders in the Juvenile Justice System
Curriculum URL	www.gainsctr.com/curriculum/juvenile/index.htm

Appendix E

Screening Tools for Alcohol, Drug Use, and Mental Health Status and Screening/Diagnostic Tools for FASD

Screening for Alcohol or Drug Use and/or Mental Health Status

The **4-P's**, an acronym that represents the four-scale items (**parents-partner-pregnant-pregnant),** queries individuals about parental and partner alcohol and drug problems, as well as pregnancy beer drinking and cigarette use. The scale was designed for use in prenatal clinics to identify women who were at risk for pregnancy alcohol and drug use. The 4-P's Plus was found to be readily accepted by prenatal care providers and was effective in identifying pregnant women at highest risk for drug and alcohol use. (Chasnoff, I.J.; and Hung, W.C. 2000. *The 4 P's Plus*. Chicago: NTI Publishing.)

The **10-Question Drinking History (TQDH)** separately inquires about the frequency, quantity, and variability of beer, wine, and liquor consumption. The first nine questions determine present drinking problems, and the tenth explores changes in drinking habits during the past year. The TQDH was developed specifically for women in prenatal care and showed evidence of high convergent validity in initial use. (Rosett, H.L.; Weiner, L.; and Edlin, K.C. 1981. Strategies for prevention of fetal alcohol effects. *Obstetrics and Gynecology* 57(1):1-7.)

The **Adolescent Alcohol Involvement Scale (AAIS)** is a 14-item quick-screen, self-report questionnaire that investigates the type and frequency of alcohol use and several behavioral and perceptual aspects of drinking among youth referred for emotional or behavioral disorders. The severity of the adolescent's alcohol abuse (e.g., nonuser/normal user, misuser, abuser/dependent) is rated using an overall score that ranges from 0 to 79. (Mayer, J., and Filstead, W.J. 1979. The Adolescent Alcohol Involvement Scale: An instrument for measuring adolescents' use and misuse of alcohol. *Journal of Studies of Alcohol* 40*:*291-300; Winters, K.C. 2005. Assessment of alcohol and other drug use behaviors among adolescents. In *Assessing Alcohol Problems: A Guide for Clinicians and Researchers, Second Edition*. Rockville, MD: National Institute on Alcohol Abuse and Alcoholism, pp. 101-124.)

The **Adolescent Drinking Index (ADI)** is a 24-item instrument administered through a structured interview to adolescents suspected of having substance abuse problems by measuring psychological, physical, and social symptoms and loss of control. It is written at the fifth grade reading level and yields a single score with cutoffs and two research subscale scores (self-medicating drinking and rebellious drinking). This instrument aids in case identification, referral, and treatment. (Harrell, T.H.; Honaker, L.M.; and Davis, E. 1991. Cognitive and behavioral dimensions of dysfunction in alcohol and polydrug abusers. *Journal of Substance Abuse* 3:415-426; Winters, K.C. 2005. Assessment of alcohol and other drug use behaviors among adolescents. In *Assessing Alcohol Problems: A Guide for Clinicians and Researchers, Second Edition*. Rockville, MD: National Institute on Alcohol Abuse and Alcoholism, pp. 101-124.)

The **Adolescent Self-Assessment Profile (ASAP)** is a 225-item instrument designed to provide an indepth assessment of drug involvement, including drug use frequency, benefits, and consequences, along with major risk factors related to this behavior (e.g., deviance, peer influence). Supplemental scales, based on common factors found within the specific psychosocial and problem severity domains, can be scored as well. (Wanberg, K.W. 1992. *Adolescent Self-Assessment Profile.* Arvada, CO: Center for Alcohol/Drug Abuse Research and Evaluation.)

The **Alcohol Dependence Scal**e is a 25-item self-administered, pencil-and-paper questionnaire (also in a computer-administration format) designed to measure the severity of alcohol dependence, using the past 12 months as a temporal referent. Items are scored on a 2-point, 3-point, or 4-point scale (0 through 3) with total scores ranging from 0 to 47. Individuals are classified into groups ranging from 0 = no evidence of dependence to 31-47 = severe. It is one of the most widely used and reliable clinical tools for measuring the severity of alcohol dependence. (Skinner, H.A., and Allen, B.A. 1982. Alcohol dependence syndrome: Measurement and validation. *Journal of Abnormal Psychology* 91:199–209.)

The **Alcohol Use Disorders Identification Test (AUDIT**) is a 10-item instrument developed from a 6-country World Health Organization collaborative project to detect alcohol use disorders. There are two versions: a 10-item instrument particularly useful for the early detection of individuals with at-risk drinking behavior and an 8-item clinical instrument for identification of individuals with alcohol dependence. (Saunders, J.B.; Aasland, O.G.; Babor, T.F.; et al. 1993. Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption—II. *Addiction* 88(6):791-804.)

The **Brief MAST (B-MAST)** is a variation of the Michigan Alcoholism Screening Test. The B-MAST is a 10-item instrument designed to detect alcoholism in adults. It is less sensitive than other brief scales, particularly in the ability to detect moderate alcohol problems in the general population. (Pokorny, A.D.; Miller, B.A.; and Kaplan, H.B. 1972. The brief MAST: A shortened version of the Michigan Alcoholism Screening Test. *American Journal of Psychiatry* 129(3):342-348.)

The **CAGE** is an acronym that represents the four-scale items (**Cut down-Annoyed-Guilty-Eye opener**) in queries about the individual's drinking behavior. The CAGE has been used effectively to identify alcoholic clients but may not be as sensitive as other brief scales with female populations. (Mayfield, D.; McLeod, G.; and Hall, P. 1974. The CAGE questionnaire: Validation of a new alcoholism screening instrument. *American Journal of Psychiatry* 131(10):1121-1123.)

The **CAGE-AID** is an acronym that represents the four-scale items for the CAGE and its **adaptation to include drugs**. It was designed to identify primary care patients with alcohol and drug disorders. An initial evaluation of the CAGE-AID indicated that it was sensitive to individuals with varying demographic characteristics and to most patterns of substance abuse. (Brown, R.L., and Rounds, L.A. 1995. Conjoint screening questionnaires for alcohol and other drug abuse: Criterion validity in a primary care practice. *Wisconsin Medical Journal* 94(3):135-140.)

The **Child and Adolescent Functional Assessment Scale (CAFAS)** is a clinician-rated instrument designed to assess the degree of impairment in children and adolescents with emotional, behavioral, or substance use disorders. It provides a rapid visual profile of problem areas across settings and significant life problems, including substance abuse. There are two versions of this screening tool: one for children age 4 to 7 years and the other for children and youth age 8 to 14 years. (Hodges, K. 1995. *CAFAS Self-Training Manual and Blank Scoring Forms.* Ypsilanti, MI: Eastern Michigan University Psychology Department.)

The **Children of Alcoholics Screening Test (CAST-6)** is a shortened version of the original scale. The CAST-6 was designed to identify adult children of alcoholic parents and was found to be a reliable and valid measure for this purpose. (Hodgins, P.C., and Shimp, L. 1995. Identifying adult children of alcoholics: Methodological review and a comparison of the CAST-6 with other methods. *Addiction* 90(2):255-267.)

The **Comprehensive Addiction Severity Index for Adolescents (CASI-A)** is a semistructured interview questionnaire designed to assess substance use and other life issues (e.g., family history, peer relationships, psychiatric status, legal history) in adolescents suspected of substance abuse problems.

Space is provided at the end of several major topics for the assessor's comments and ratings of addiction severity and the quality of the respondent's answers. The interview incorporates results from a urine drug screen and observations from the assessor. (Meyers, K.; McLellan, A.T.; Jaeger, J.L.; et al. 1995. The development of the Comprehensive Addiction Severity Index for Adolescents (CASI-A): An interview for assessing multiple problems of adolescents. *Journal of Substance Abuse Treatment* 12:181-193.)

The **CUGE** is a variation of the CAGE, with three of the four-scale items used in that instrument. Designed to detect alcohol use disorders in young adults, the instrument substituted the scale item **driving Under the influence** for the **Annoyed** item in the CAGE. This substitution resulted in significantly greater sensitivity and a higher score for area under the receiver operating characteristic curve in a sample of 3,564 college students at a Catholic university in Belgium. (Aertgeerts, B.; Buntinx, F.; Bande-Knops, J.; et al. 2000. The value of CAGE, CUGE, and AUDIT in screening for alcohol abuse and dependence among college freshmen. *Alcoholism, Clinical and Experimental Research* 4:53-57.)

The **Diagnostic Interview Schedule for Children (DISC)** is administered by interview and consists of separate forms for the child and the parent. The DISC is designed to garner the information needed to make a diagnosis according to the DSM-IV diagnostic categories. These include anxiety disorders, mood disorders, disruptive disorders, substance use disorders, schizophrenia, and miscellaneous disorders. (Shaffer, D.; Fisher, W.P.; Lucas, C.; et al. 2000. The NIMH Diagnostic Interview Schedule for Children [NIMH-DISC-IV]: Description, differences from previous versions, and reliability on some common diagnoses. *Journal of the American Academy of Child & Adolescent Psychiatry* 35:28-38.)

The **Drug and Alcohol Problem (DAP) Quick Screen** is a 30-item instrument designed to screen adolescents referred for emotional or behavioral disorders for drug use problem severity. When tested in a pediatric practice setting, about 15 percent of the respondents responded positively to 6 or more items, which was considered by the authors to be a red flag for "problem" drug use. Item analysis indicates that the items contribute to the single dimension score but no reliability or criterion validity evidence is available. (Schwartz, R.H., and Wirtz, P.W. 1990. Potential substance abuse: Detection among adolescent patients. Using the Drug and Alcohol Problem (DAP) Quick Screen, a 30-item questionnaire. *Clinical Pediatrics* 29:38-43.)

The **Drug Use Screening Inventory (DUSI)** is a 159-item instrument designed to assess alcohol and other drug use problem severity and associated problems (e.g., health status, work adjustment, peer relations, social competence, family adjustment). It is used to screen adolescents who are substance abusers and are referred for emotional or behavioral disorders. Scores are produced on 10 subscales as well as one lie scale. (Tarter, R.E.; Laird, S.B.; Bukstein, O.; et al. 1992. Validation of the adolescent drug use screening inventory: Preliminary findings. *Psychology of Addictive Behavior* 6:322-326.)

The **Health Screening Survey (HSS)** is a general lifestyle questionnaire. Questions about alcohol and drug use are embedded in the larger inventory examining a variety of health topics, including smoking, fitness, and nutrition, to decrease the likelihood of defensiveness or denial by respondents. The CAGE has been incorporated into the alcohol section of the HSS, along with frequency and use questions over the past 3 months, the Trauma Scale, and additional problem drinking questions to elicit the respondent's perception of current or past alcohol use problems and whether a physician had expressed concern about his or her alcohol use. (Fleming, M., and Barry, K. 1991. A three-sample test of a masked alcohol screening questionnaire. *Alcohol and Alcoholism* 26:81-91.)

The **Massachusetts Youth Screening Instrument—Two (MAYSI-2)**. This second version of the MAYSI is a 52-item self-report instrument designed to identify potential mental health and substance needs of youth at any entry or transitional placement point in the juvenile justice system. Constructs measured include alcohol and drug use, somatic complaints, depression/anxiety, anger-irritability, suicidal ideation, and traumatic experiences. (Grisso, T., and Barnum, R. 2000. *Massachusetts Youth Screening*

Instrument Second Version: User Manual and Technical Report. Worcester, MA: University of Massachusetts Medical School.)

The **Michigan Alcoholism Screening Test (MAST)** is a 24-item instrument designed to detect alcoholism among adults. It can be used for individuals who are not totally candid in their responses and can be either orally or self-administered. (Selzer, M.L. 1971. The Michigan Alcoholism Screening Test: The quest for a new diagnostic instrument. *American Journal of Psychiatry* 127(12):1653-1658.)

The **Personal Experience Inventory (PEI)** is a 276-item questionnaire developed to measure substance involvement and related psychosocial factors among individuals suspected of having substance abuse problems. Several scales are used to measure chemical involvement problem severity, psychosocial risk, and response distortion tendencies. Additional problem screens measure eating disorders, suicide potential, physical/sexual abuse, and parental history of drug abuse. The scoring program provides a computerized report that contains narratives and standardized scores for each scale and additional clinical information. (Winters, K.C., and Henly, G.A. 1989. *Personal Experience Inventory and Manual.* Los Angeles: Western Psychological Services.)

The **Problem Oriented Screening Instrument for Teenagers (POSIT)** is a self-administered 139-item "yes/no" screening questionnaire. It was developed by a panel of expert clinicians as part of a more extensive assessment and referral system for use with adolescents 12 to 19 years old. The POSIT was designed to identify problems and potential treatment or service needs in 10 areas, including substance abuse, mental and physical health, and social relations. A POSIT followup questionnaire can be used to screen for potential change in 7 of 10 problem areas represented on the scale. The POSIT has been successfully used by service providers in a variety of settings and is an excellent assessment tool for identification of potential adolescent problem areas requiring more indepth assessment and intervention. (National Institute on Drug Abuse. 1991. *The Problem Oriented Screening Instrument for Teenagers [POSIT]*. Rockville, MD: National Institutes of Health.)

The **RAFT**, an acronym that represents the four-scale items (**relax-alone-family/friends-trouble**), queries adolescent clients concerning possible alcohol and drug abuse disorders. The RAFT was found to be effective in identifying adolescents, presenting at emergency room and ambulatory care settings, who had substance abuse or dependence problems. (Bastiaens, L.; Francis, G.; and Lewis, K. 2000. The RAFT as a screening tool for adolescent substance abuse disorders. *American Journal of Addictions* 9(1):10-16.)

The **Self-Administered Alcoholism Screening Test (SAAST)** is a 35-item alcoholism screening test for adults that was derived from the MAST and contains additional items to make it suitable for use in general medical populations. The test can be administered to the patient (Form I) or to a spouse, friend, or other person who knows the patient (Form II). Domains include family members with alcohol problems, loss of control, occupational and social disruption, and physical and social consequences. (Davis, L.J.; Hunt, R.; Morse, R.M.; et al. 1987. Discriminant analysis of the Self-Administered Alcoholism Screening Test. *Alcoholism, Clinical and Experimental Research* 11(3): 269-273.)

The **Short Michigan Alcoholism Screening Test (SMAST)** is a 13-item instrument designed to detect alcoholism in adults. The SMAST has been found to be an appropriate screening instrument for women and comparable to other brief assessments in performance. (Selzer, M.L.; Vinokur, A.; and Van Rooijen, L. 1975. A self-administered Short Michigan Alcoholism Screening Test (SMAST). *Journal on Studies of Alcohol* 36(1):117-126.)

The **Substance Use Survey IA (SUS 1A)** is the most recent version of a self-report, face-valid instrument designed to screen an adolescent's use of alcohol and other drugs, current mental health concerns, motivation for treatment, and degree of defensiveness. The SUS 1A uses five specific self-report scales: **involvement**, **disruption**, **mood adjustment**, **defensiveness**, and **motivation** and one

global measurement, the **overall adolescent disruption scale (OADS)**. The OADS includes the sum of the first three specific scales (involvement, disruption, and mood adjustment). Wanberg, K.W. 2000. *A User's Guide to the Adolescent Substance Use Survey - SUS: Differential Screening of Adolescent Alcohol and Other Drug Use Problems.* Arvada, CO: Center for Addictions Research and Evaluation, Inc.

The **T-ACE** is an acronym that represents the four-scale items (**Tolerance-Annoyed-Cut down- Eye opener**). It is a variant of the CAGE but substitutes the tolerance question for guilt. The T-ACE has been found effective in the detection of pregnant women who consumed sufficient amounts of alcohol to endanger their fetus. (Sokol, R.J.; Martier, S.S.; and Ager, J.W. 1989. The T-ACE questions: Practical prenatal detection of risk drinking. *American Journal of Obstetrics and Gynecology* 160(4):863-868.)

The **TWEAK**, an acronym that represents the five-scale items (**Tolerance-Worried-Eye opener-Amnesia-Cut down**), combines questions from the MAST, CAGE, and T-ACE scales. It has been found highly sensitive in identifying women who are at-risk drinkers. (Russell, M. 1994. New assessment tools for risk drinking during pregnancy: T-ACE, TWEAK, and others. *Alcohol Health & Research World* 18(1).)

TOOLS FOR SCREENING AND DIAGNOSIS OF FETAL ALCOHOL SPECTRUM DISORDERS

The **4-Digit Diagnostic Code** was developed in response to the need for standardized criteria for the FAS diagnosis. The four digits of the diagnostic system consider the extent to which the individual exhibits the four key diagnostic features of FAS: growth deficits, FAS facial features, neurologic dysfunction, and prenatal alcohol exposure. A patient receives the FAS diagnosis if he or she presents with growth deficiency, facial stigmata, and neurologic dysfunction as exemplified by one of 12 different 4-digit diagnostic codes. Atypical FAS and varying combinations of characteristics that represent fetal alcohol effects can also be identified using this system. The 4-Digit Diagnostic Code has shown excellent interreliability, and validity studies are promising but still in progress. (Astley, S.J., and Clarren, S.K. 1999. *Diagnostic Guide for Fetal Alcohol Syndrome and Related Conditions: The 4-Digit Diagnostic Code, Second Edition*. Seattle, WA: University of Washington Publication Services.)

The **FAS Facial Photographic Analysis** software was developed to provide health care professionals with a user-friendly, inexpensive, objective method for analyzing photographs of children, adolescents, and adults to measure and rank the expression of the FAS facial phenotype (short palpebral fissures, smooth philtrum, and thin upper lip). The software system was based on computerized image analysis of thousands of individuals and has shown excellent reliability and validity in identifying individuals with the FAS facial phenotype. (Astley, S.J., and Kinzel, J. 2002. *Instruction Manual. FAS Facial Photographic Analysis Software*. Seattle, WA: University of Washington Publication Services.)

Identification and Care of Fetal Alcohol Exposed Children: A Guide for Primary Care Providers includes an FAS screening tool for children 5 years old and younger based on the Institute of Medicine (1996) diagnostic criteria. The screen helps providers identify children with growth retardation, facial anomalies, developmental deficits, and prenatal alcohol exposure who require followup diagnostic assessment. However, the tool has not been validated and is recommended at this time only for clinical use. (National Institute on Alcohol Abuse and Alcoholism and Office of Research on Minority Health. 1999. *Identification and Care of Fetal Alcohol Exposed Children: A Guide for Primary Care Providers*. NIH Publication No. 99-4368. Rockville, MD: National Institute on Alcohol Abuse and Alcoholism.)

The **Lip-Philtrum Guide** is a 5-point pictorial ruler used to accurately measure philtrum smoothness and upper lip thinness. The Lip-Philtrum Guide is one of several tools used to derive a patient's 4-Digit Diagnostic Code. It is intended for use by medical professionals and involves the use of a laminated guide held next to the patient's face to measure the lip and philtrum. (Astley, S.J.; Clarren, S.K.; Gratzer, A.; et al. 1999. *FAS Tutor™ Instructional CD-ROM*. Wilkes-Barre, PA: March of Dimes, 1999.)

Appendix F

Curriculum Evaluation Results and the Impact of Training

EVALUATION RESULTS (N=33)

Feedback Data (n=27)

Qualitative Assessments (n=20)

- Highly favorable assessment.
- Very favorable.
- Very well received.
- Excellent.
- Preliminary results and onsite feedback were highly favorable. Awaiting final evaluation report. Will provide data when it is received from their evaluator.
- Anecdotal information; highly favorable assessments of training.
- Generally favorable. Professionals and direct service providers viewed the curriculum as a valuable learning tool; pleased with information, methods, and strategies; people with an FASD and those facing other challenges found the information especially valuable.
- Professionals using the software report that it is user-friendly; allows a broader array of professionals to accurately measure the facial features; removes the subjectivity of the facial diagnosis.
- Evaluation results were positive: the diverse audience reported increased FASD awareness and found presentations effective. The Saskatchewan Prevention Institute is publishing this research data.
- Since the manual is a TOT (training of trainers), the evaluation results will go to the trainer using this manual. However, the author has received multiple letters and phone calls from users giving highly favorable comments about the manual.
- Very favorable. This tape has been the Center's most well received and in-demand video program. Most teachers and counselors who used the tape found it compelling and useful because it seems to reach the target audience and truly speak to young people directly.
- Have received multiple calls of support and thanks from users in the field. This video and teacher's guide and exercises won two awards: North West Regional Emmy for Best Instructional Special and an Emerald City Silver Award for Best Instructional Video.
- Very positive feedback: easy to use, step-by-step instructions, case examples very helpful for stimulating conversations, good range of relevant topics.

Quantitative Assessments (n=7)

- Guide highly rated, averaging 4.7 on a 5-point scale by 800 trainees attending FASD Interdisciplinary Diagnostic Team Trainings conducted twice annually since 1998.
- Eight hundred trainees evaluated the manual, rating it 4.6 on a 5-point scale.
- Most trainings given with this curriculum include an audience evaluation. Results are highly favorable (e.g., average ratings by 748 participants of trainings conducted between 2/1/84 and 6/30/85 were 95% for content, delivery, usefulness of the information, value, and quality of the presentation).
- Formal evaluation of a 12-participant training of trainer workshop: high ratings for instructional content (medical/scientific information and cultural sensitivity; and for interactive instructional style using multiple methods). The training manual was also highly rated.

- 2003 evaluation: high rating (mean score ranging from 1.65 to 1.87) for cognitive objectives and their relationship to overall purpose of module; expected practice outcomes; key concepts; content; clinical applications; group discussion items; references; supplementary materials; overall quality; effectiveness as teaching/learning tool; and effectiveness in increasing awareness of issue/topic. 95% of users would recommend module to others. When asked what may change as a result of completing the module, 36% reported attitude change; 87% reported enhanced knowledge; 32% reported skills.
- Typical results: Training received very high ratings for content, information, relevance and usefulness, and instruction; and 100% would recommend it to others. Note only 8% of respondents had extensive experience.
- Training consistently rated as "excellent" with an average of 6 out of a 7-point rating scale.

Pre-/Posttest Results (n=5)

- Questions in pre-/posttest instruments had high reliability scores. Results showed statistically significant increases in student knowledge of FASD and its effects.
- Significant improvement in knowledge and understanding of FAS/FAE from pre/posttests; high levels of satisfaction (60% rating CD-ROM as very useful); 30% useful.
- Results highly favorable. Teachers' comments indicate increased knowledge.
- To date, approximately 45% of our registered learners have completed the FAS e-learning module. The pre- and posttest scores indicate that most learners acquired a significant gain in FASD knowledge.
- During field testing, observed positive effects on student knowledge and attitudes.

Posttest, Feedback, and Followup Results (n=1)

- Evaluation data from >300 students showed a significant increase in knowledge regarding birth defects and improvement in health lifestyle factors affecting birth defect incidence. Curriculum received four awards: three from University of Missouri Outreach and extension and one from Central Region NEAFCS.

Why There Were No Evaluation Results (n=1)

- Cannot provide data; user feedback has been collected by UWA TUTOR program, which helped them (UW DPN) create this CD, but the project was moved into the private sector and evaluation results not kept. (*Note: this curriculum is now being distributed by March of Dimes.)*

IMPACT OF THE TRAINING: LEARNING APPLICATION (N=9)

The number of reported posttraining activities exceeds the number of respondents because several respondents described more than one type of activity.

Adoption of Training in Clinical Practice (n=6)

- All but one of the 54 respondents (nurse practitioners) participating in one evaluation reported plans to use what they learned with their patients.
- Evidence of clinical changes in audiences (e.g., in a followup survey, the majority of 136 respondents were more likely to discuss alcohol with pregnant patients; 82% of the 56% of total 136 respondents who conduct intake have used some or all of the Ten Question Drinking History items).
- Users of the FAS Facial Photograph Analysis Software asked Dr. Astley to review photographs that they had analyzed with the software to confirm that their measures matched hers. To date, all reviews conducted have confirmed that users are accurately analyzing photographs with the software.
- Over 70 interdisciplinary FASD diagnostic teams across the United States and Canada who were trained to use this Guide (Diagnostic Guide for FASD: The 4-Digit Diagnostic Code) by FAS DPN

have successfully opened FASD diagnostic clinics in their communities and use the Guide. These clinics are posted on the FAS DPN Web site.

- Over 70 interdisciplinary FASD diagnostic teams across the United States and Canada who were trained to use this FAS DPN Multidisciplinary Clinical Training Manual have successfully opened FASD diagnostic clinics in their communities and are using the manual. These clinics are posted on the FAS DPN Web site.
- Occasional reports from trainees who are using what they learned in their workplaces. DPN frequently receives diagnostic referrals from former trainees as they identify individuals at risk in their professional settings.

Using the Curriculum for Training or To Develop New Curricula (n=4)

- Many participants purchased the curriculum or started implementing it in their settings, whether in the classroom or for individual consultations. The curriculum was sold in the NASCO catalog for 3 years. A new edition is being printed with updates and revisions.
- Users of this manual have presented it to educators and parents. Also, the materials have been used to prepare a curriculum for foster parents.
- Curriculum with a facilitators' guide has been published, and an Advanced FAS Family Intervention Training curriculum was completed and provided through 2002 upon request. Contacts in WI, MI, and KS requested the curriculum and facilitator training.
- CDC's FAS Intervention Grant staff was trained with the two videos in best practices.

Using the Curriculum as a Model for Programs in Similar Settings (n=2)

- The training manual should provide a useful model for implementing similar programs in this and other Aboriginal communities.
- The videos have established a theoretical model for neurobehavioral intervention with FAS children and their families.

Collaboration, Services, and Resources (n=2)

- Training led to the establishment of ongoing training and diagnostic collaboration between the FAS DPN clinic and a nearby juvenile rehabilitation center.
- Other effects include the development of family and children's support networks, ongoing recreational activities, an e-mail network of 52 adoptive FAS families, and an FAS parent resources Web site.

Why There Was No Impact Information (n=6)

- Information not collected due to "systems and policy" issues.
- Too long ago.
- No further information, only workshop evaluations.
- Will know when survey results are received from the evaluator.
- We don't have information relating to this specific question.
- Can't easily measure after the training. We do ask in the evaluation about changes in attitude/knowledge and intentions as far as taking action on what they learned.