

Wednesday, 2:30 – 4:00, F3

Screening for Fetal Alcohol Spectrum Disorders: What is the Role of Social Workers?

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Objectives:

1. Identify effective methods for the practical application of concepts related to improving the delivery of services for persons with developmental disabilities
2. Identify advances in clinical assessment and management of selected healthcare issues related to persons with developmental disabilities
3. Discuss the ethical issues related to persons with developmental disabilities
4. Develop strategies to promote community inclusion in meeting the needs of persons with developmental disabilities

Notes:

SCREENING FOR FETAL ALCOHOL SPECTRUM DISORDERS: WHAT IS THE ROLE OF SOCIAL WORKERS?

Developmental Disabilities Conference, April 24, 2013
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Objectives

- Describe the benefits of screening and diagnosis of FASD
- Understand the role of social workers in screening children and adults for FASD
- Identify reliable and valid screening tools for mothers and children
- Explain practicality (time and money) of screening

Prevalence and Costs

- FAS alone 0.5 to 2.0 cases per 1,000¹
- FAS and ARND 9.1 per 1,000²
- Recent study shows 2% to 5% of younger children in the US and some European countries³ have FASD
- \$2 to \$2.9 million over a lifetime for one individual with FAS⁴
- Above figure could be higher for persons with FASD as they may not be receiving appropriate supports.⁵

What are Fetal Alcohol Spectrum Disorders

FASD is not a diagnosis but describes the effects of prenatal alcohol exposure

- Fetal Alcohol Syndrome
- Partial Fetal Alcohol Syndrome
- Alcohol Related Neuro-Developmental Disorders
- Alcohol Related Birth Defects

Fetal Alcohol Syndrome

Must meet all 4 criteria

1. Confirmed or unconfirmed maternal alcohol exposure AND
2. Facial features- two⁶ or three⁷ of 3
 - Philtrum rank 4 or 5⁸
 - Upper lip rank 4 or 5
 - Palpebral fissure length \leq 10th percentileAND

FAS (cont.)

3. Growth—pre or postnatal weight or height \leq 10th percentile AND
4. Central nervous system-head circumference \leq 10th percentile, or brain abnormalities found in neuroimaging, or soft neurological signs such as seizures, or functional problems intellectual disability (IQ \leq 2 SD) or significant developmental discrepancies in executive functioning, motor skills, attention, social skills, memory, language², problem solving, arithmetic, abstraction, metacognition¹

Partial FAS⁶

1. Confirmed or unconfirmed maternal alcohol exposure AND
2. Facial dysmorphism in at least 2 of 3 features AND
3. Growth deficiencies OR
4. Deficient brain growth/morphogenesis OR
5. Complex pattern of behavioral or cognitive abnormalities not explained by other factors that includes marked impairments in performing complex tasks, higher level receptive and expressive language, disordered behavior

Alcohol Related Birth Defects⁶

1. Maternal alcohol exposure is confirmed AND
2. Facial dysmorphism in ≥ 2 of 3 features AND
3. Congenital structural malformations or dysplasias in ≥ 2 of these categories: cardiac, skeletal, renal, eyes, ears, minor anomalies

Alcohol Related Neuro-developmental Disorders⁶

1. Maternal alcohol exposure confirmed AND
2. Deficient brain growth or abnormal morphogenesis including one of these:
 - a) Structural brain abnormalities or head circumference $\leq 10^{\text{th}}$ percentile OR
 - b) Complex pattern of behavioral or cognitive abnormalities not explained by other factors that includes marked impairments in performing complex tasks, higher level receptive and expressive language, disordered behavior

Benefits of Screening and Diagnosing

- More difficult to diagnose the other PFAS, ARBD, and ARND because may not have confirmation of prenatal exposure to alcohol
- However, these children may be at greater risk for problems in learning, socialization, daily living skills, health, and safety than those with FAS⁹
- Executive functioning, processing and integrating information big areas of challenge
- May miss out on getting appropriate services and supports

Adverse Life Outcomes⁹

- Inappropriate sexual behaviors
- Disrupted school experience
- Trouble with the law
- Confinements
- Alcohol/drug problems

Protective Factors⁹

- Growing up in a stable, nurturing home
- Diagnosis before age 9
- Growing up without violence or abuse
- More years in the same household

Role of Social Workers in Screening

- Unique position to screen many children as social workers are often in settings with children involved in special education, early childhood developmental services and child welfare agencies where young children with FASD may present

Role of Social Workers

- Social workers see children who have:
 - ▣ Problems with socialization
 - ▣ Externalizing behavior such as aggression and defiance
 - ▣ Attention deficits
 - ▣ Learning problems
- Early screening and referral for diagnosis can provide timely interventions

Role of Social Workers

- Social workers tend to look individuals and families within a context, their environment, and an ecology of interacting factors.
- No shame, no blame.
- Social workers meet women in a variety of settings including mental health clinics, medical offices, and women's health clinics.

Sensitivity and Specificity

Measures of Probability

Sensitivity—measures the rate of obtaining a true positive outcome i.e. the assessment says the person has this disorder and they do in reality

Specificity—measures whether the tool distinguishes correctly those who do not have the disorder

Similarities and Differences in Questions of Common Maternal Screening Tools

	Tolerance	Annoyed by Criticism	Should cut Down	Eye Opener	Family/Friends Worried	Amnesia	Guilty Feelings
T-ACE	X	X	X	X			
TWEAK	X	X	X	X	X	X	
CAGE		X	X	X			X
SMAST					X		X

T-ACE

- Tolerance
- Annoyed by criticism
- Cut down
- Eye opener

- ❖ Better sensitivity with pregnant women than the CAGE¹⁰
- ❖ Better sensitivity and specificity in comparison to the CAGE, MAST, clinical interview, asking one question during pregnancy, medical chart review^{10, 11}

TWEAK

Tolerance, **F**amily/friends **W**orried, **E**ye-opener, **A**mnesia, **"Kut"** Down

- ✓ Similar sensitivity and specificity to T-ACE for pregnant women calling into a hot line¹²
- ✓ Better sensitivity and specificity than the CAGE or MAST¹³

CAGE

Cut down, **A**nnoyed at Criticism, **G**uilty feelings, **E**ye opener

- Used in traditional substance abuse programs with success but less effective with women^{13,14}

Short Michigan Alcohol Screening Test (SMAST)

- 13 questions from the longer 25 question MAST
- Tested on 501 men in the 1970s
- Questions include:
 - ▣ Are you a normal drinker?
 - ▣ Are you able to stop drinking when you want?
 - ▣ Have you ever gotten into trouble because of your drinking?¹⁵

A Practical Screening Tool

- ✓ Screens for all FASD
- ✓ Ease of use-short training or learn on line
- ✓ Short time to implement – 10 minutes
- ✓ Cost effective-affordable or no expense
- ✓ Have good to excellent sensitivity and specificity

Comparison of Maternal Screening Tools

	All FASD	Ease of Use	Short Time	Cost Effective	Reliability/ Validity Reported	Sensitivity/ Specificity Reported
T-ACE	NA	X	X	X		X
TWEAK	NA	X	X	X		X
CAGE	NA	X	X	X		
MAST	NA			X		

And the Winners Are:

The T-ACE and the TWEAK are the best maternal screening tools for use with women including pregnant women.

Screening Tools for Children and Young Adults

- Dysmorphology
- Neuro-Behavioral Phenotype
- Mix of Dysmorphology and Neuro-Behavioral Phenotypes
- Forensic Assessment
- Staged or Step Screening Processes

Dysmorphology

- Same as the diagnostic evaluations—palpebral fissures, thin upper lip, smooth philtrum
- New automated feature analysis with 3-D laser imaging and volumetric scans—may also be able to screen for some or more subtle facial signs¹⁶

Neuro-behavioral Phenotype

- Fetal Alcohol Behavior Scale (Anne Streissguth)¹⁷
 - Behavioral “essence” of having an FASD
 - Learning, social skills, impulse control, judgment, memory
 - Checklist of 36 questions-yes or no
 - Shows promise, had good test-retest reliability

Neuro-behavioral Phenotype

- Collaborative Initiative on FASD (CIFASD)¹⁸
 - ▣ 22 variables based on neuro-psychological tests
 - ▣ Visual memory, spatial reasoning, executive functioning, spatial sequencing, cognitive flexibility, verbal fluency, sustained attention, fine motor coordination, visual-motor skills
 - ▣ Had excellent accuracy in distinguishing children with FAS from non-exposed children (92%) and good accuracy distinguishing children, with other heavy exposure but no FAS, from non-exposed group (85%)

Other Neuro-Psychological Issues

- Executive functioning—range of cognitive and emotional regulation tasks such as planning, using working memory, problem solving, focus, act deliberately¹⁹
- ADHD-different – encoding and shifting not as much focusing and sustaining attention^{20, 21}
- Significantly lower IQs²²
- Significantly lower math scores²³

Other Neuro-Psychological Issues

- Differences between verbal and performance measures of IQ even if in the normal range with verbal/language usually more impacted²⁴

Mix of Facial Dysmorphology and Neuro-Behavioral Characteristics

- FAS Screen²⁵ –series of questions about physical signs, cognitive and behavioral skills
- Included epicanthic folds, cross eyes, upturned nose, flat philtrum, thin upper lip, short and broad neck, scoliosis, spina bifida, limited joint mobility, clinomicrodactyly, small nail beds, tremulous and poor finger agility, sunken or protruding chest, raised birth marks, hearing and vision problems
- Excellent sensitivity and specificity

Mix of Facial Dysmorphology and Neuro-Behavioral Characteristics

- Fetal Alcohol Syndrome Diagnostic Checklist (FASDC)²⁶
- Also used for FASD other than FAS
- Alcohol exposure history, physical and cognitive features of FAS screen, and growth, height, weight, head circumference
- Lowest sensitivity and specificity for distinguishing FASD from No-FASD

Forensic Assessment

- Fetal Alcohol Assessment Experts Screening Questionnaire²⁷
 - Developed for advocates and attorneys by mental health and legal organization
 - Series of questions concerning offense conduct, arrest conduct, prior legal history, life history and includes a client interview

Staged or Step Screening Process

- Wisconsin Fetal Alcohol Syndrome Screening Project-4 step process²⁸
 - ▣ Identify newborns with weights below 10th percentile
 - ▣ Neonatal records examined for head circumference less than 10th percentile for gestational age
 - ▣ Records checked for maternal alcohol exposure
 - ▣ At age 2 to years, the above babies are assessed for facial features, weight, height, and head circumference
 - ▣ Prevalence rate was 0.23 per 1,000

Staged or Step Screening Process

- ✓ Active Case Ascertainment Process in Elementary Schools²⁹

First tier—children identified with height, weight, head circumference \leq 10th percentile OR who had behavior and learning problems identified by their teacher

Second tier—examination by trained dysmorphologist using revised IOM⁶, psychological assessments, maternal alcohol use, and other factors-nutrition, SES, etc.

A Practical Screening Tool

- ✓ Screens for all FASD
- ✓ Ease of use-short training or learn on line
- ✓ Short time to implement – 10 minutes
- ✓ Cost effective-affordable or no expense
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Child/Adult FASD Screens

	All FASD	Ease of Use	Short Time	Cost Effective	Reliability /Validity	Sensitivity/ Specificity
Facial Dysmorphology		X	X	X		
FABS	X	X	X	X	X	
CIFASD	X					X
Other Neuro-psychological features	X					
FASDC	X					X
Wisconsin 4 Step						
FASD Experts	X					

Which One is the Most Practical?

- FABS meets most of the criteria and includes screening for all FASD
- Needs more research and testing in different settings
- Facial features are unique to FAS so they are the best measure for screening for FAS

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FASD Related Websites:

Substance Abuse and Mental Health Services Administration FASD Center for Excellence: <http://www.fasdcenter.samhsa.gov/>

SAMHSA FASD Michigan page: <http://fasdcenter.samhsa.gov/statesystemsofcare/states/michigan.aspx>

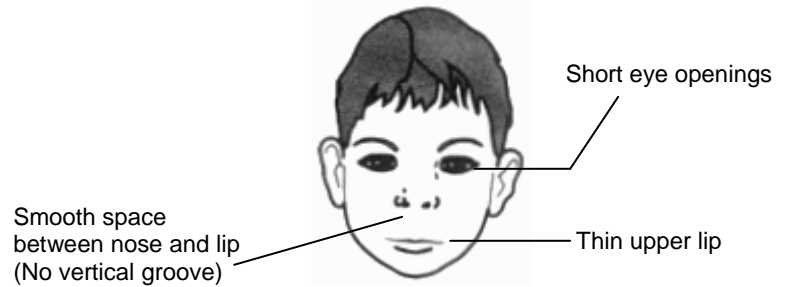
Michigan Department of Community Health FAS Page: <http://www.michigan.gov/fas>

National Organization on Fetal Alcohol Syndrome: www.nofas.org

Center for Disease Control and Prevention: <http://www.cdc.gov/ncbddd/fasd/>

**Michigan Department of Community Health
Fetal Alcohol Spectrum Disorders Program
FETAL ALCOHOL SYNDROME (FAS) PRE-SCREEN**

FAS is a birth defect caused by alcohol use during pregnancy. FAS is a medical diagnosis. This form is not intended to take the place of a diagnostic evaluation.



FACIAL FEATURES

Last Name:	First Name:	Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female
Address:		Race:
City/State/Zip code:		Birthdate:
Parent/Caregiver Name(s):		Home Phone:
<input type="checkbox"/> Bio <input type="checkbox"/> Foster <input type="checkbox"/> Adopted <input type="checkbox"/> Other		Work Phone/Cell:

If 2 or more of the identifiers listed below are noted, the individual should be referred for a full FAS Diagnostic Evaluation.

IDENTIFIERS	Check or explain if a concern exists
1. Height and weight seem small for age	
2. Facial features (See diagram above)	
3. Size of head seems small for age	
4. Behavioral concerns: (any one of these qualifies as an identifier) <ul style="list-style-type: none"> • Sleeping/eating problem • Mental retardation or IQ below familial expectations • Attention problem/impulsive/restless • Learning disability • Speech and/or language delays • Problem with reasoning and judgment • Acts younger than children the same age 	
5. Maternal alcohol use during pregnancy	

Any previous diagnosis: _____

Screener _____ Agency _____

Contact the nearest center to schedule a complete FAS diagnostic evaluation.

FAS DIAGNOSTIC CENTERS IN MICHIGAN

Ann Arbor: 734-936-9777

Grand Rapids: 616-391-2319

Marquette: 906-225-4777

Detroit: 313-993-3891

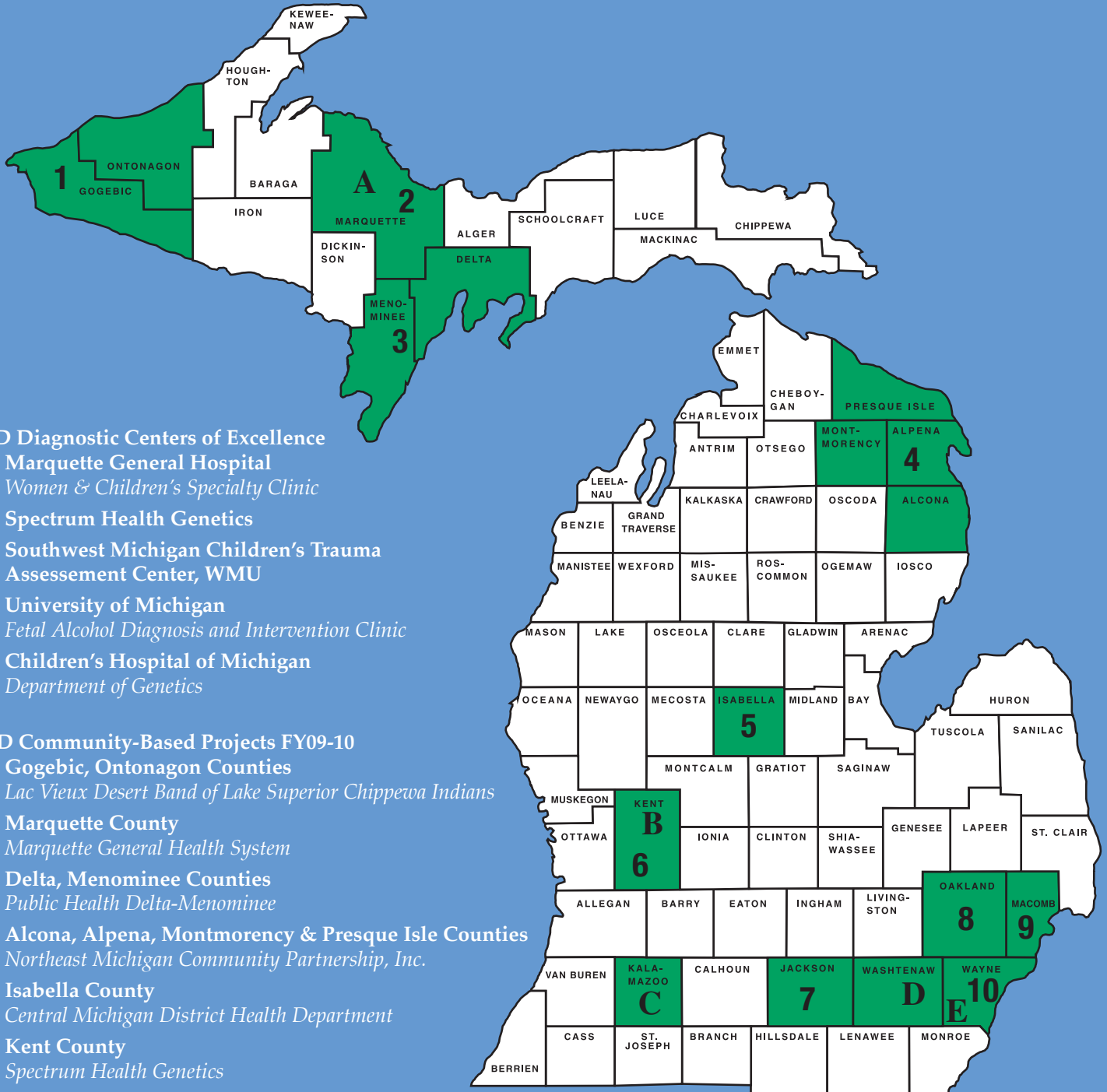
Kalamazoo: 269-387-7073

FASD Michigan Program

Michigan Department
of Community Health



Jennifer M. Granholm, Governor
Janet Olszewski, Director



FASD Diagnostic Centers of Excellence

- A** Marquette General Hospital
Women & Children's Specialty Clinic
- B** Spectrum Health Genetics
- C** Southwest Michigan Children's Trauma Assessment Center, WMU
- D** University of Michigan
Fetal Alcohol Diagnosis and Intervention Clinic
- E** Children's Hospital of Michigan
Department of Genetics

FASD Community-Based Projects FY09-10

- 1** Gogebic, Ontonagon Counties
Lac Vieux Desert Band of Lake Superior Chippewa Indians
- 2** Marquette County
Marquette General Health System
- 3** Delta, Menominee Counties
Public Health Delta-Menominee
- 4** Alcona, Alpena, Montmorency & Presque Isle Counties
Northeast Michigan Community Partnership, Inc.
- 5** Isabella County
Central Michigan District Health Department
- 6** Kent County
Spectrum Health Genetics
- 7** Jackson County
Community Action Agency
- 8** Oakland County
St. Joseph Mercy Oakland
- 9** Macomb County
CARE (Community Assessment Referral & Education)
- 10** Wayne County
The Guidance Center