Cryptosporidiosis — Continued

To better understand the magnitude of cryptosporidiosis, health-care providers should specifically request testing for suspected cryptosporidiosis. Laboratories should consider routinely testing for *Cryptosporidium* as part of their ova and parasite examination protocol. Alternatively, when reporting test results back to health-care providers, laboratories should specifically indicate when *Cryptosporidium* is not tested for as part of a requested ova and parasite examination. Cryptosporidiosis is reportable in 41 states; interpretation of national data would be facilitated by mandatory reporting in all states.

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Child Health Month — October 1998

The American Academy of Pediatrics (AAP) has designated October as Child Health Month. This year, the AAP is focusing on the prevention of alcohol use and abuse that affects children and youth. Specific priorities include fetal alcohol syndrome (FAS), underage drinking, children of alcoholics, drinking and driving, and binge drinking.

Alcohol use during pregnancy has been cited as the most common known nongenetic cause of mental retardation among children and youth (*1*). Approximately 700 children aged 0–15 years die each year in alcohol-involved motor vehicle crashes; many of these children were being transported by a drunk driver (*2*). Approximately 80% of high school students have had at least one drink of alcohol, and one third have had five or more drinks on one or more occasions in any given month (*3*). During October, CDC, in collaboration with AAP and other organizations, will highlight the consequences of alcohol use as it relates to children and youth.

Additional information about Child Health Month is available from AAP, telephone (847) 981-7871, or the World-Wide Web, http://www.aap.org; and from the Health Resources and Services Administration, Maternal and Child Health Bureau, World-Wide Web, http://www.hhs.gov/hrsa/mchb. Information about FAS and other alcohol-related birth defects and developmental disabilities is available from CDC's Fetal Alcohol Syndrome Prevention Section, telephone (770) 488-7268, or the World-Wide Web, http://www.cdc.gov/nceh/programs/programs.htm. Information on the role of alcohol in traffic deaths among children and youth is available from CDC's National Center for Injury Prevention and Control, Division of Unintentional Injury Prevention, telephone (770) 488-4652, World-Wide Web, http://www.cdc.gov/ncipc/cmprfact.htm. Information on alcohol-related behaviors among youth is available from CDC's Division of Adolescent and School Health, telephone (770) 488-3168, World-Wide Web, http://www.cdc.gov/nccdphp/dash.

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Identification of Children with Fetal Alcohol Syndrome and Opportunity for Referral of their Mothers for Primary Prevention — Washington, 1993–1997

Heavy maternal use of alcohol during pregnancy can cause permanent birth defects, including fetal alcohol syndrome (FAS). Although these alcohol-related defects are entirely preventable, the factors associated with maternal use of alcohol during pregnancy are complex and often resistant to change. In addition, not all women who drink heavily will produce children with FAS (*1*). Although targeting primary prevention efforts to all women at risk for drinking during pregnancy is ideal, limited resources require targeting women at the highest risk for producing children affected by prenatal alcohol exposure. One such population is women who have already given birth to an alcohol-affected child (*2*). This high-risk population is not easily identified because not all children with FAS have their condition diagnosed, and these birth mothers are often separated from their children during the first few years of the child's life, often before a diagnosis of FAS has been considered. However, once identified, these women are receptive to intervention (*3*). To identify a population of women at highest risk for a future alcohol-exposed pregnancy through diagnosing a previously affected birth child, researchers at the University of Washington developed the Fetal Alcohol Syndrome Diagnostic and Prevention Network (FAS DPN). This report summarizes the results of this program and documents the feasibility of identifying persons who may have FAS so their condition can be diagnosed and their birth mothers can be identified and referred to prevention services.

FAS DPN opened its first clinical site at the Center for Human Development and Disability (University of Washington Medical Center, Seattle, Washington) in January 1993. Persons suspected of having FAS were identified through referral by various community sources and by directed screening of high-risk populations (*4*) (Table 1). Patients were then evaluated and their condition diagnosed in a multidisciplinary clinical setting (*5*), and birth mothers who were still at risk for producing additional affected children were identified, enabling referral to community alcohol treatment, family planning, and maternal advocacy programs (*6*).

During 1993–1997, there were 3002 requests for appointments for diagnostic evaluations at FAS DPN. To determine the appropriateness of referrals, parents and other caregivers were given a questionnaire (*7*) asking about the child's developmental and exposure history; 1374 completed the questionnaire. Persons referred for evaluation

TABLE 1. Number and percentage of patients referred to the Fetal Alcohol Syndrome (FAS) Diagnostic and Prevention Network, by referral source — Washington, 1993–1997*

Referral source	No.	(%)
Social services agencies†	334	(28.0)
Medical-care providers	267	(22.4)
Mental-health providers	184	(15.4)
FAS support organizations	147	(12.3)
Self referrals	124	(10.4)
School personnel	64	(5.4)
Lawyer or judge	23	(1.9)
Other	49	(4.1)

*Among the 1192 (87%) caregivers who responded to this question.
†Includes persons identified through photographic screening of high-risk populations.

Fetal Alcohol Syndrome — Continued

ranged from birth to middle age; the racial distribution was comparable to the general population in Washington, with a slight overrepresentation of American Indians. Approximately 20% lived with their birth mothers, 20% with other biological family members, and more than 50% with foster or adoptive parents. Although all patients had been seen in the health-care system before referral, only 56 of the 1374 caregivers completing the questionnaire reported that a diagnosis of FAS or related conditions had ever been considered and/or previously recorded in the medical or mental health records of the patient. Most diagnostic requests arose from concerns relating to issues of education and social skills (Table 2).

Because of limited capacity at the FAS DPN clinic, priority for diagnostic evaluation was based on responses to questions regarding in utero alcohol exposure and evidence of organic brain damage (based on previous medical and psychologic test results). Of the 1374 patients whose caregivers responded to the questionnaire, 811 were selected to receive diagnostic evaluations. Patients ranged in age from 0–51 years (mean: 10 years). Of these, 573 (71%) were found to have either documentation of in utero alcohol exposure or signs of organic brain damage; the remaining 238 had both. A total of 39 met the clinical criteria for an FAS diagnosis*, which includes elements of the FAS facial phenotype and growth deficiency in addition to in utero

*The FAS DPN uses a 4-Digit Diagnostic Code (*7*) that is consistent with the Institute of Medicine guidelines (*8*), but is a more detailed case definition.

TABLE 2. Number and percentage of reasons for referral to a fetal alcohol syndome (FAS) diagnostic and prevention clinic* — Washington, 1993–1997

Reason	No.	(%)
Problem with adaptation		
Conduct disorders, extreme anger	579	(45.8)
Poor judgement, cannot function independently	241	(19.1)
Poor self control, disorganized, unpredictable	238	(18.8)
Poor social skills	147	(11.6)
Poor parenting skills by patient	9	(0.7)
Problem with learning in school		
Learning disabilities, cognitive delays	400	(31.7)
Poor memory, does not learn from experience	117	(9.3)
Speech and language problems	99	(7.8)
Short attention span	360	(28.5)
Mental health concerns		
Depression, low self esteem	91	(7.2)
Medical concerns		
Face suggests a syndrome	138	(10.9)
Poor growth	40	(3.2)
Minor neurologic concerns	80	(6.3)
Physical or health concerns	122	(9.7)
Concerns about exposure		
Knowledge of alcohol exposure in utero	164	(13.0)
Ongoing drug/alcohol abuse by patient	31	(2.5)
Other		
Relation of possible FAS to a legal matter	32	(2.5)
Relation of possible FAS to placement	24	(1.9)
Patient with possible FAS is pregnant	1	(0.1)

*Among the 1260 (92%) caregivers who responded to this question. The caregiver could list more than one concern.

Fetal Alcohol Syndrome — Continued

alcohol exposure and organic brain damage. Only one of these 39 had FAS previously diagnosed.

The mothers of the 238 persons with both in utero alcohol exposure and signs of organic brain damage constitute a high-risk population for intervention to prevent subsequent affected offspring. Most (88%) of these women were aged ≤45 years (i.e., reproductive aged). Although only 51 (21%) birth mothers were living with the affected persons at the time of the diagnostic evaluation, the questionnaire provided sufficient information (i.e., name and location) for FAS DPN to identify 219 (92%) birth mothers.

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Editorial Note: This report documents one program's efforts to identify a population likely to have undiagnosed effects of in utero alcohol exposure. The birth mothers of these persons are a high-risk target population for primary prevention, although neither the mothers nor their health-care providers may realize their potential for producing subsequent affected children. The University of Washington is implementing a primary prevention intervention for these women that will rely on identification through early diagnosis of FAS in their children. For most patients in this study, an alcohol-related diagnosis had never been considered in any other medical or mental health setting, and only 22% were referred by a health-care care provider for further diagnostic services. This may be because the syndrome manifests itself in ways that may not be recognized in the traditional medical setting (*9*). As a result, multidisciplinary diagnostic clinics staffed by a physician, psychologist, language pathologist, occupational therapist, and social worker may facilitate the proper diagnosis of conditions in patients who have not been appropriately identified in other clinical settings.

The effectiveness of this approach relies on primary health-care providers being aware of the importance of diagnostic referral and on the availability of diagnostic resources. In 1993, the American Academy of Pediatrics (AAP) recommended increased awareness among pediatricians and health-care providers of FAS and other alcohol-related effects and the evaluation of children thought to have such conditions by a pediatrician skilled in the evaluation of neurodevelopmental and psychosocial problems (*10*). This report documents the need for continued efforts to implement these AAP recommendations, including forging stronger communication among parents and health-care providers about prenatal alcohol effects and providing or arranging access to skilled diagnostic assessment. This approach will increase the potential for primary prevention in avoiding subsequent exposures and will be a major protective factor in preventing secondary conditions among affected children (*9*).

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Notice to Readers

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A Continuing Medical Education (CME) component is available in the paper and electronic versions of the October 16, 1998, *MMWR Recommendations and Reports* (Vol. 47, no. RR-19), *Recommendations for Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-Related Disease*. This component has been planned and implemented by CDC according to the Essentials and Standards of the Accreditation Council for Continuing Medical Education. CDC is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

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