

# Knowledge of Clinical Assessment, Diagnosis, and Treatment of Fetal Alcohol Syndrome: How Much is Taught in a PA School Curriculum?

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**Abstract:** The effects of maternal alcohol use on unborn children have been observed for millennia. These effects include abnormal facial variations, growth retardation, neurological or behavioral problems, decreased cognitive functioning, poor socialization skills, and attention and distractibility problems. Patients may have any degree of symptoms, from mild to severe, or any combination thereof, thus presenting health care providers with the dilemma of correct diagnosis. The purpose of this study is to evaluate the curricula of the Physician Assistant education programs regarding clinical assessment, diagnosis and treatment of fetal alcohol syndrome. Design – Cross sectional, evaluative survey. Participants – all US PA programs. Measurement - A responder from each PA program [either Director or faculty member] will be asked a series of 5 questions concerning knowledge of the disorder, diagnosis and treatment, and adequacy of the training provided. Data Analysis - Data will be analyzed using standard statistical estimates. Results - Analysis should reveal data that can be compared between schools, or saved for future research. Limitations of this study may include inadequate number of responses, unknowledgeable responder, intentional false answering, and/or design error.

## **1. Introduction**

The science and practice of medicine is constantly advancing, including the knowledge and understanding of diseases and conditions. One such example is Fetal Alcohol Syndrome (FAS). While not actually described as a Syndrome until 1973 [1], the effects of maternal alcohol use on unborn children have been observed for millennia, even by patriarchs in medicine such as Aristotle and Plutarch [2]. Today, health care providers consider several characteristics of each patient before making a diagnosis. These include abnormal facial variations: a short palpebral fissure, an indistinct philtrum, a flat upper lip with a thin vermilion border, flat midface, and a short nose [3]. Also growth retardation, including: abnormally low birthweight, failure to gain and maintain appropriate weight, and disproportional weight to height ratio. FAS patients may have neurologic or behavioral problems that will affect both patient and family, as well as future teachers, friends, co-workers, and spouses. Decreased cognitive functioning, poor socialization skills, attention and distractibility problems, and psychiatric problems are common [4,5]. Autopsy results and MRI studies have shown structural differences in the corpus callosum, cerebellum, and basal ganglia, although the affects of these are not completely understood [3].

While some of these characteristics are easy to see, patients may have any degree of symptoms, from mild to severe, or any combination thereof. This presents health care providers with the challenge of making a correct diagnosis. In a 2002 survey of physicians regarding their knowledge regarding FAS, from a list of associated features, only 8% were able to identify the three most important [6]. When the physicians were asked about their own perceived competency at diagnosing FAS, 81% felt that their training was inadequate [6]. Although this is only one study, it shows consistent results with the general idea that physicians are not properly trained to diagnose this easily preventable disease. To make up for these shortcomings, various educational courses have been developed by the Center for Disease Control (CDC) for health care providers that address one or more aspects of FAS diagnosis, treatment, and prevention [7]. However, to date, no cumulative global curriculum has ever been created. The CDC has developed FAS regional training centers (RTCs) that began in 2002 identifying a comprehensive set of core competencies that would be the foundation for a variety of educational and training programs [7]. These RTCs are currently diligently working to create and implement a working program that will incorporate training of healthcare providers as well as a complete diagnosis, treatment, and prevention plan concerning FAS. Despite these efforts, the incidence of FAS in the US is estimated to be 9.1 per 1000, while annual costs of FAS patient care range from \$74.6 million to \$9 billion [8,9].

Review of literature was undertaken using Medline, FirstSearch, and ERIC databases from 1973, when FAS was first recognized, to the present. The search was conducted using the keywords fetal alcohol, education, knowledge, physician, physician assistant, and curriculum. Most of the studies that have already been done concerning healthcare providers addressed multiple specialties within healthcare, including family physicians, pediatricians, OB/GYN, and nurse practitioners, but in regard to physicianassistants, no studies have been completed. Rather than assuming that the data concerning physicians' awareness of FAS holds true regarding physician assistants' awareness of FAS, the lack of data gives cause to further investigation. The purpose of this study is to evaluate what is being taught in PA education programs regarding clinical assessment, diagnosis and treatment of fetal alcohol syndrome.

### 3. Experiment, Results, Discussion, and Significance

#### Design

This cross-sectional, evaluative study will be administered through the Department of Physician Assistant at Wichita State University between November and December 2006. The Physician Assistant Education Association (PAEA) will provide assistance with identification of the PA sample group. The survey to be used is a condensed version of one previously used and approved by the CDC, and consequently already peer reviewed and approved as valid.

#### Participants

The survey will be conducted via telephone. It will be presented to the Program Director, who may choose to answer or defer to one faculty member in charge of that part of the curriculum. This will be determined by each program director, so that the responder is someone who is most familiar with the program's curricula and how much is being taught to current students.

#### Measurement

A responder from each PA program will be asked a series of 5 questions concerning knowledge of the disorder, diagnosis and treatment, and adequacy of the training provided.

#### Data Analysis

Data will be analyzed using standard statistical estimates. Significant relationships will be discerned and recorded for future use. By discovering, documenting and comparing what PA's are currently being taught this survey can be used as a basis of knowledge for future research. Hopefully, by finding the missing links in education now, we can make an impact on the health of children in the future.

#### Results

The purpose of this study is to evaluate each PA Program's curriculum, and document what is being taught regarding clinical assessment, diagnosis and treatment of FAS. Analysis should reveal data that can be used to make recommendations for curricula improvement, comparison between schools, or saved for future research. Limitations of this study may include but are not limited to: inadequate number of responses, unknowledgeable responder, intentional false answering, design error

### 3. Conclusions

It is anticipated that Physician Assistant students are not getting enough education in awareness of FAS. Programs like the one being implemented by the CDC are being created out of necessity to make up for this lack in education. The findings of this study are important and may have an impact on the future curricula of PA schools. From a larger perspective, this may spread to the curricula of nurse practitioners and physicians, and could globally change the FAS protocols followed today.

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