

Social and Economic Cost of Fetal Alcohol Spectrum Disorder

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Issue:

Fetal Alcohol Spectrum Disorder (FASD) encompasses a broad array of physical defects, cognitive, behavioural, emotional, and adaptive functioning deficits, as well as congenital anomalies that are the direct result of prenatal alcohol exposure (Chudley et al., 2005). The complexity and chronicity of FASD impacts both the individual and their family, and requires a wide range of assistance from services including health care, community services, remedial education and others. As a result, FASD has a substantial economic and societal impact, as these impairments can have lifelong implications.

Background:

The costs associated with FASD, especially over the lifespan, are central to describing the extent of the problem and to evaluating the benefits of prevention programs, which is critical for informing public policy (Harwood & Napolitano, 1985; Bloss, 1994; PHAC, 2008). According to the revised *International Guidelines for Estimating the Costs of Substance Abuse* (Single et al., 2003), cost estimates help to prioritize substance abuse issues, provide useful information for targeted programming and can be used to identify knowledge gaps. With improved cost estimates, more complete cost-benefit analyses of policies and programs aimed at reducing the harm associated with the use of psychoactive substances can be conducted.

To date, there are only a few FASD cost evaluation studies that have been conducted in Canada (Stade et al., 2006, 2009; Thanh & Jonsson, 2009) and the United States (Abel & Sokol, 1987, 1991a, 1991b; Harwood, 2000, 2003; Harwood et al., 1984, 1998; Harwood & Napolitano, 1985; Rice, 1993; Rice et al., 1990, 1991; Weeks, 1989). The existing studies are limited in the number of cost components included and contain methodological inconsistencies that make it difficult to compare and generalize as a true reflection of the situation (Popova et al., 2011).

In 2012, Popova and colleagues developed a model to calculate a comprehensive, evidence-based picture of the economic impact of FASD in Canada (Popova et al., 2012a). Using this model, economic estimates of the cost drivers attributable to FASD in Canada in 2013 were calculated (these studies [i.e., model development and model implementation] were both initiated and supported by the Public Health Agency of Canada). These cost drivers include:

- Direct cost of health care (speech-language interventions, prescription drug use, acute inpatient care, psychiatric care, emergency department and day surgery visits, screening and diagnosis, and specialized addiction treatment);
- Direct cost of law enforcement (corrections);
- Other direct costs (children and youth in care, supportive housing, long-term care, special education, and prevention and research); and
- Indirect costs (productivity losses due to morbidity and premature mortality of individuals with FASD).

The cost associated with FASD (based on the aforementioned cost drivers) totaled approximately \$1.8 billion Canadian dollars (CND), ranging from about \$1.3 billion to \$2.3 billion CND. This study used the most conservative assumptions (meaning that the estimated costs were the minimal costs associated with FASD for Canada), and therefore, the cost is most likely an underestimate. The **highest** contributor to the overall FASD-attributable cost was the cost of productivity losses due to morbidity and premature mortality – ranging from about \$532 million to \$1.2 billion CND. This represented 41% of the total FASD-attributable cost in Canada. The **second** highest contributor to total cost was the cost of corrections (not including costs of policing and courts), which accounted for \$378.3 million CND and 29% of the total cost of FASD. Finally, the **third** highest contributor was the cost of health care – ranging from \$128.5 million to \$226.3 million CND, representing 10% of the total cost. For a comprehensive description of the different cost components in this study please see Popova et al. (2012b, 2013a,b, 2014a,b, in press) and Easton et al. (in press).

It is clear that FASD is a significant public health and social problem that consumes a large amount of resources, both economic and societal, in Canada. However, additional “costs” associated with FASD are non-monetary (or intangible) such as, pain, suffering, and stress, which are very difficult to quantify. The intangible costs are borne not only by the individuals with FASD themselves, but also by their parents/caregivers, siblings, and other family members (e.g., guilt of birth mothers, bereavement, and stigmatization).

Appreciating the significant burden and costs associated with FASD is critical for policy makers and stakeholders as they develop programs and services aimed at improving the lives of individuals with FASD and their families, and that prevent further alcohol-exposed pregnancies. Many of the costs associated with FASD can be reduced with the implementation of effective social policies and the availability of intervention programs.

Recommendations:

- A collaborative provincial and territorial infrastructure would enable the collection of FASD-specific data from various sectors. This could be aligned within existing medical record practices and databases, but would share common data fields to enable comparisons across Canada.

- Support studies that evaluate the cost of prevention initiatives compared to the cost of interventions. Although complex, these studies could provide valuable cost-saving statistics that would be highly relevant to policy makers.
- Facilitate and support discussions with the World Health Organization and the American Psychiatric Association in an effort to recognize FASD as a medical diagnosis in the International Classification of Diseases (ICD) and the Diagnostic and Statistical Manual of Mental Disorders (DSM), respectively. This would provide an opportunity not only to improve awareness among clinical fields, but also for comparing the FASD situation on a global scale.
- Recommend the inclusion of mandatory FASD training within existing professional school curriculums and certification programs, as appropriate (e.g., Medicine, Clinical Psychology, Nursing, Law, Physical and Occupational Therapy, Education, and Social Work).
- Support prevention campaigns that are aimed at promoting healthy pregnancies and destigmatizing FASD diagnoses. By improving awareness about the detrimental consequences of alcohol and drugs on the developing fetus, the importance of good nutrition, hygiene, and regular antenatal care can reduce the risk of birth defects and complications. This in turn can reduce the costs associated with supporting affected children and their families throughout the life span.

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