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Research article

Maternal alcohol use disorder and subsequent child protection contact: A record-linkage population cohort study

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ABSTRACT

We examined the relationship between a maternal alcohol-use diagnosis, and the timing of diagnosis, and child protection outcomes in a Western Australian population cohort. This analysis made use of routinely collected linked administrative health and child protection data. Those in scope for the study were women who had a birth recorded on the Western Australian Midwives Notification System (1983–2007). Women with an alcohol related diagnosis (ICD 9/10) on relevant datasets formed the exposed group. The comparison cohort were frequency matched to the exposed cohort. Generalized linear mixed models and a proportional hazards model were used to examine the relationship between a maternal alcohol-use diagnosis and subsequent child protection contact. Children of women with an alcohol-use diagnosis were at significantly increased risk of a substantiated child protection allegation (OR = 2.92, 95%CI = 2.71–3.14) and entry into out-of-home care (OR: 3.78, 95% CI = 3.46–4.13). The highest risk of child protection contact was associated with diagnoses received during pregnancy, and in the years immediately pre- or post-pregnancy. Children whose mothers have an alcohol-use diagnosis are at increased risk of contact with child protection services. Despite current public health recommendations, some women continue to drink heavily during pregnancy. Additional work is required to identify effective strategies to reduce heavy alcohol use in this population. Further, women who have been identified to have alcohol use issues require additional support, from multiple agencies, to reduce the potential negative impacts on their child.

1. Background

Child maltreatment can include physical, emotional, psychological, or sexual abuse, exposure to family violence, or neglect (Tomison, 2000). The Australian Institute of Health and Welfare reported that, in 2014, almost 152,000 children across Australia received child protection services, and 54,000 were living in out-of-home care (Australian Institute of Health and Welfare, 2016).

The impact of child maltreatment is well documented, and the effects are often substantial and long term (Lansford et al., 2002). A number of factors have been identified to contribute to increased risk of maltreatment in families. These include intergenerational patterns of abuse, where violent or inappropriate coping behaviours are learned, unstable family structures, financial stress, and social isolation (Berlin, Appleyard, & Dodge, 2011; Drake & Jonson-Reid, 2014; Stith et al., 2009). In addition, poor parenting

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practices, parental alcohol use/misuse, parental mental health problems, and family and domestic violence have been identified as parental level factors which contribute to an increased risk of child maltreatment (Brown, Cohen, Johnson, & Salzinger, 1998; Herrenkohl, Sousa, Tajima, Herrenkohl, & Moylan, 2008; Leek, Seneque, & Ward, 2009). Child level factors include chronic health needs or physical disabilities, child behavioural problems, and intellectual disabilities or developmental delays (Finkelhor & Baron, 1986; Jones et al., 2012; Maclean et al., 2017).

Children of parents with alcohol-use problems are reported to be at substantially increased risk of child maltreatment and, in particular, neglect (Leek et al., 2009). In an examination of child protection applications in Western Australia in 2004, Leek et al. identified that parental alcohol and drug use/misuse was a significant factor in more than half of cases (Leek et al., 2009). Intoxication impairs the ability of a parent to provide adequate care for a child. This includes providing for the child's needs, particularly young children, being emotionally responsive, maintaining regular routines, consistent disciplinary strategies, and ensuring safety (Dawe, Harnett, & Frye, 2008). Further, comorbid issues, such as mental health problems or financial stress, a greater likelihood of a parent suffering abuse themselves, inappropriate parenting behaviours or a lack of parental supervision have been identified to contribute to increased risk of contact with child protection services (Leek et al., 2009; Regan, Ehrlich, & Finnegan, 1987; Sheridan, 1995).

This study aims to quantify the relationship between a maternal alcohol use diagnosis, which provides a proxy for heavy drinking, and child protection outcomes in a Western Australian population cohort using de-identified linked administrative datasets. Further, we sought to examine the impact if the timing of alcohol diagnosis relative to pregnancy, which may provide an indication of the intensity of alcohol dependence, on risk of child protection contact.

2. Methods

2.1. Cohort

This analysis made use of administrative linked data from the Western Australian Data Linkage System. All women who had a birth recorded on the Midwives Notification System (MNS) between 1983 and 2007 were in-scope for the study.

2.2. Alcohol use

Mothers who had an alcohol-related diagnosis, based on the International Classification of Diseases (ICD) Revisions 9/10) formed the exposed cohort. Alcohol related diagnoses were identified in administrative datasets including the Hospital Morbidity data system; Mental Health Inpatients and Outpatients; and the Drug and Alcohol Office. Diagnoses included those related to mental health and behavioural disorders, as well as diseases which were entirely due to alcohol use. A list of the ICD codes used for cohort selection has been published previously (O'Leary, Watson, D'Antoine, Stanley, & Bower, 2012). An alcohol-related diagnosis recorded on the administrative data provided a proxy for heavy alcohol use, but is limited to alcohol use that has come to the attention of health or social services.

The timing of the alcohol related diagnosis was also of interest. This information was categorised hierarchically with diagnoses identified during pregnancy prioritised. The following categories were used: (a) any alcohol related diagnosis during pregnancy. This group may include women who had an additional diagnosis before and/or after pregnancy. (b) A diagnosis within the year before pregnancy. This group may include women with an additional exposure recorded more than one year before pregnancy or any exposure post-pregnancy; (c) A diagnosis up to one year after pregnancy. This may include women who had a diagnosis more than one year before or after pregnancy; (d) more than one year before pregnancy, and this could include exposure greater than one year post pregnancy; and (e) more than one year post pregnancy. This has been described previously (O'Leary et al., 2012).

A random selection of mothers who had a registered birth between 1983 through 2007 and who had no alcohol related diagnoses on the Hospital Morbidity Data System, Mental Health Outpatients, or Drug and Alcohol dataset formed the comparison cohort. Comparison mothers were frequency matched with exposed mothers with an alcohol-related diagnosis on maternal age within race, and child year of birth. Mothers were matched at 1:3 and 1:2 exposed to comparison mothers for non-Indigenous and Indigenous mothers respectively. This meant in the non-Indigenous cohort approximately three comparison mothers were selected for each exposed mother identified on the administrative data, with each comparison mother being selected from mothers without an alcohol-related diagnosis but having the same race, maternal age and child year of birth as the exposed mother In the Indigenous cohort two comparison mothers were matched for each identified exposed mother.

2.3. Child protection

In Australia child protection is the responsibility of the states, with each state having its own legislation and processes. Contacts made to the relevant department of child protection regarding concerns for child welfare, whether due to abuse or neglect, are referred to as 'notifications'. These notifications are assessed and, if required, an investigation follows in which the notification is 'substantiated' or 'not substantiated'. In Western Australia in 2014 approximately 2400 children were the subject of a substantiated maltreatment notification. This represented around 30 percent of reported notifications of concern for the welfare of a child (Australian Institute of Health and Welfare, 2016). Of note, notification figures reflect reported cases of maltreatment only, and the rate of non-reported maltreatment in Australia is unknown.

The Department for Child Protection and Family Support data which was included in the analysis spanned 1990–2010. The