

# Prevalence of prenatal alcohol use among Aboriginal and non-Aboriginal women in the Northern Territory, Australia: estimate from perinatal, emergency, and admission datasets

## Abstract

Prenatal Alcohol Use (PAU) has detrimental effects on mothers and children. Robust prevalence estimates and information on associated factors are critical for informing interventions to reduce PAU's health and social impacts. This study aims to determine the prevalence and associated factors for PAU among women living in the Northern Territory (NT). We used individual-level, linked data from the NT perinatal data register, hospital admissions and emergency department presentations to estimate PAU for all 19,588 births to Aboriginal and non-Aboriginal women from 2013-2017. Permutation analysis was used to create four PAU categories – a record of no PAU, early PAU only, continued PAU, and “extreme” PAU. A multinomial logit model was used to explore factors associated with PAU. PAU prevalence for births to Aboriginal women was 13.11% (95% CI: 12.17, 14.04), including 5.91% early PAU, 4.34% continued PAU, and 2.86% “extreme” PAU. The total prevalence for non-Aboriginal women was 2.34% (95% CI: 2.06, 2.63), including 1.73%, 0.53% and 0.08% for each category, respectively. However, 17.97% (n=3520) of pregnancies missed records related to PAU. Age, smoking, and substance misuse-related hospitalisation were associated with an increased risk of PAU among both populations. Being a victim of violence was an additional risk among Aboriginal women. Having more than five antenatal care (ANC) visits was associated with less PAU. The study provides refined prevalence estimates for PAU across groups with increasing risk of harm. Early identification and effective engagement with women at risk of alcohol consumption during pregnancy is critical for improving outcomes for mothers and their children. The response should include targeted interventions to reduce PAU among high-risk women. Strengthening data collection is a core component of an effective response.