

Supplementary Figure 2. Directed Acyclic Graph evaluating the change in estimate of autism prevalence based on potential confounding variables. The model implies the following conditional independences: 1) Aerial pyrethroids  $\bot$  Gender, 2) Aerial pyrethroids  $\bot$  Low Birth Weight Incidence | Socioeconomic Status, 3) Aerial pyrethroids  $\bot$  Low Birth Weight Incidence | Prematurity Incidence, 4) Aerial pyrethroids  $\bot$  Low Birth Weight Incidence | Geographic Location, 5) Aerial pyrethroids  $\bot$  Prematurity Incidence | Geographic Location, 6) Aerial pyrethroids  $\bot$  Race | Geographic Location, 7) Aerial pyrethroids  $\bot$  Socioeconomic Status | Geographic Location, 8) Aerial pyrethroids  $\bot$  Neonatal Death Rate | Prematurity Incidence. Based upon this model the minimal sufficient adjustment sets for estimating the direct effect of aerial pesticide exposure on autism prevalence include: 1) Geographic location, total pesticide exposure; 2) Prematurity incidence, race, total pesticide exposure; 3) Race, socioeconomic status, total pesticide exposure. These sets were used to inform a linear regression model of the data.