Appendix 3 (as supplied by the authors): Use of Directed Acyclic Graph (DAG) to illustrate structure of confounding with maternal infections

To illustrate the structure of confounding with this variable, we used a Directed Acyclic Graphs (DAG) described by Greenland for epidemiological research.[1]

See below.

As you can see in the graph, the effect of antibiotic exposure on the risk of spontaneous abortion (SA) will be confounded if "having a urinary tract infection (UTI) measured before and during pregnancy" is a cause of both being exposed to antibiotics and having SA.

***Given that our ultimate goal is to provide an unbiased estimate of the association between antibiotic exposure and SA**, we need to block the backdoor path (Y-X-Z) to remove confounding.*

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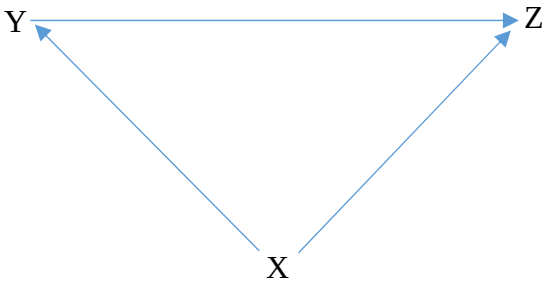

Y: Antibiotic exposure

Z : SA

X : UTI

Reference

1. Greenland S, Pearl J, Robins JM. Causal diagrams for epidemiologic research. Epidemiology (Cambridge, Mass) 1999;10:37-48.