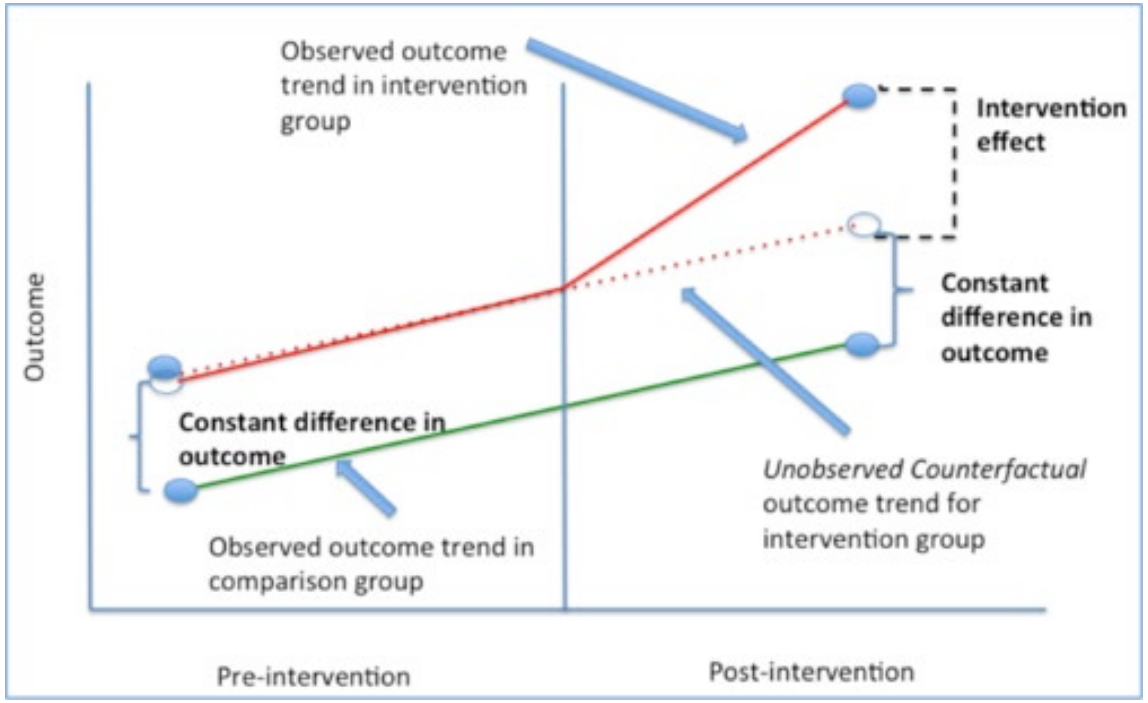
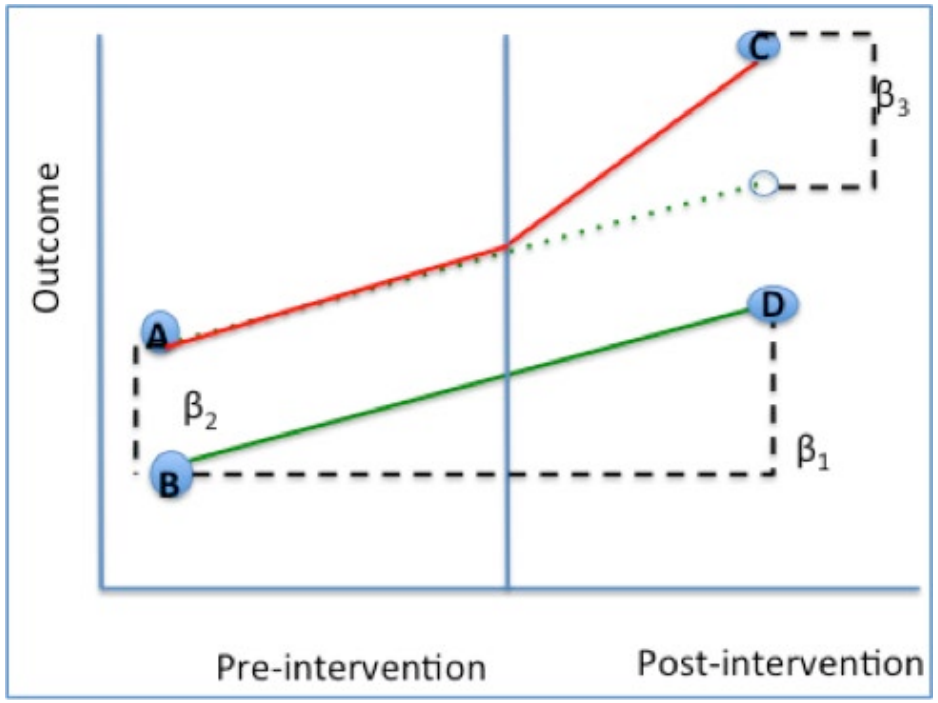
Standard DD: treatment and control groups have parallel trends in the pre-treatment period



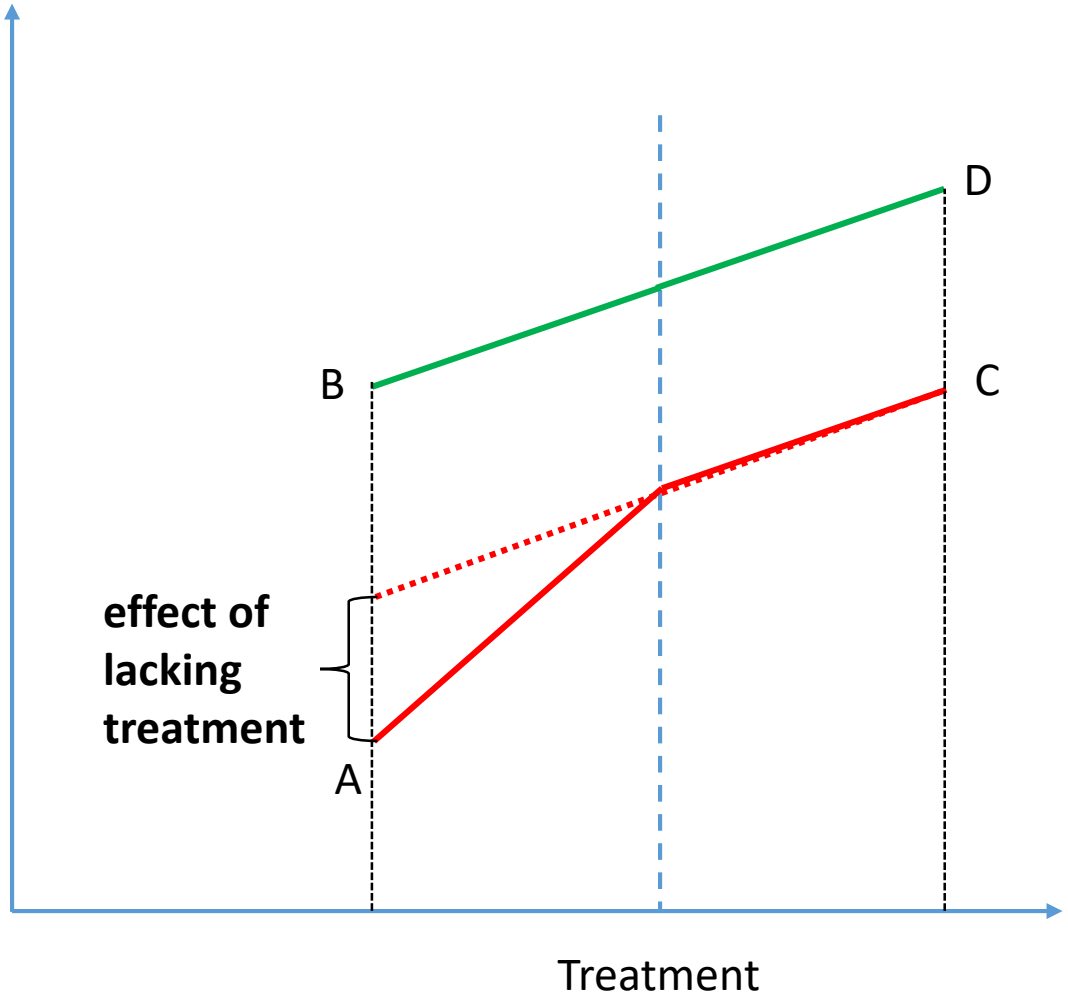


DD estimate = (C-A)-(D-B).

Interpretation: effect of treatment

Source: Columbia University, school of public health.
https://www.publichealth.columbia.edu/research/population-health-methods/difference-difference-estimation

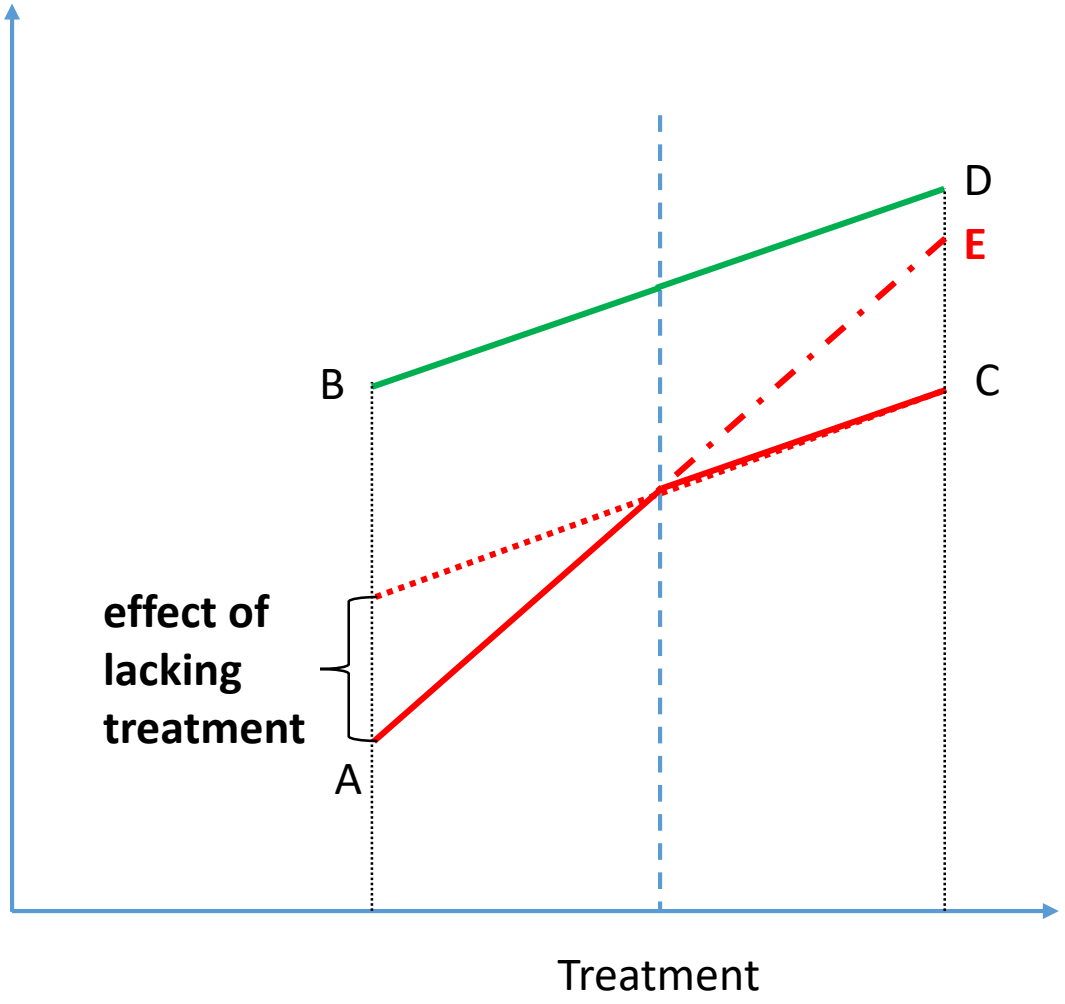
Variant of DD: treatment and control groups have parallel trends in the post-treatment period



DD estimate = (C-A)-(D-B).

Interpretation: effect of lacking treatment

Variant of DD: treatment and control groups have parallel trends in the post-treatment period



DD estimate = (C-A)-(D-B).
Interpretation: effect of lacking treatment

E: where the treated group would be if there were no treatment
C – E = effect of treatment
= –[(C-A)-(D-B)]
= –DD estimate

Chemin and Wasmer (2009) uses such an approach in their study.