

## Step 4. Estimation and Inference using TMLE + SL

Case study 1: Evaluating safety and efficacy with **high dimensional RWD**

$$\psi_{RD}^{stat} = E[E(Y | A = 1, W)] - E[E(Y | A = 0, W)]$$

### Challenges

- Lack of baseline randomization
- How to model propensity score and outcome regression?
  - Thousands of covariates in linked EHR + claims
  - Traditional parametric model too high dimensional, unknown functional form