**Directions:** Complete the code in either R or Stata for the perfect and bad doctor treatment assignment then fill out the following information. Your code should create all of these and br replicable.

|  |  |  |
| --- | --- | --- |
|  | **Perfect Doctor** | **Bad Doctor** |
| **Causal Parameter** |  |  |
| ATE |  |  |
| ATT |  |  |
| ATU |  |  |
|  |  |  |
| **Selection bias terms** |  |  |
| E[Y0 | D=1] |  |  |
| E[Y0 | D=0] |  |  |
| Selection bias |  |  |
|  |  |  |
| **Calculations** |  |  |
| Pi (share on vents) |  |  |
| SDO manual |  |  |
| SDO OLS |  |  |
| SDO Decomposition |  |  |
| Obs |  |  |

**Perfect doctor:** assigns vents to patients for whom the treatment effect is greater than zero and no ventilators to those for whom the treatment effect is non-positive. After filling out the table with all the information requested, were you able to estimate the ATE, ATT, or the ATU using the simple difference in mean outcomes either with a regression or manually? Why/why not?

**Bad doctor:** assigns vents to the first 5,000 patients he sees and no vents to the next 5,000 patients he sees. After filling out the table with all the information requested, were you able to estimate the ATE, ATT, or the ATU using the simple difference in mean outcomes either with a regression or manually? Why/why not?

**Discussion**: What kind of treatment assignment mechanism is implied by the perfect versus the bad doctor in your opinion and where might we see these in real life?