**Directionality of iRCT**

When determining causality, the outcome should be the value you are trying to determine whether it is a direct cause of the treatment. This is due to iRCT and matching estimators/average treatment effect being a representation of the effect of causes rather than the causes of effects. This is shown by the outputs below when treatment and outcome are switched. However, it should be noted that when switching ED\_Visit and Dyspnea both values are relatively close. Values to determine causality should be dependent on the dataset, in this case anything above .15 could be considered a direct cause, however, it will vary from dataset to dataset.

Treatment = Dyspnea, Outcome = ED\_Visit

Value = 0.16384187340250986

Treatment = ED\_Visit, Outcome = Dyspnea

Value = 0.11081961503383671

Treatment = COVID, Outcome = Dyspnea

Value = 0.7165481689737879

Treatment = Dyspnea, Outcome = COVID

Value = 0.07430022366699932

Treatment = COVID, Outcome = ED\_Visit

Value = 0.003574244207772261

Treatment = ED\_Visit, Outcome = COVID

Value = 0.0048169494095434235

**About rFCI and FGS**

This package is on an older version of python and thus will require one of two solutions

1. If these are to be used with in our own package a virtual environment would be required
2. Or we can recreate these from scratch in order to be applied and up to date with the latest version of python.