A Simple Algorithm for Estimating the Propensity Score

1. Start with a parsimonious logit specification to estimate the score.
2. Sort data according to estimated propensity score (ranking from lowest to highest).
3. Stratify all observations such that estimated propensity scores within a stratum for treated and comparison units are close (no significant difference); for example, start by dividing observations into strata of equal score range (0–0.2, . . . , 0.8–1).
4. Statistical test: for all covariates, differences in means across treated and comparison units within each stratum are not significantly different from zero.
   a. If covariates are balanced between treated and comparison observations for all strata, stop.
   b. If covariates are not balanced for some stratum, divide the stratum into finer strata and reevaluate.
   c. If a covariate is not balanced for many strata, modify the logit by adding interaction terms and/or higher-order terms of the covariate and reevaluate.