Supplementary Material

The tobacco retail outlet proximity analysis was based solely on Euclidean ("straight line")

distance between tobacco retail outlets. The random "lottery" process we used was carried out on

the statewide ALE list and on each of the three HSHC county lists individually. First, a

proximity relationship table was created in ArcMap listing all of the tobacco retailers within 500

feet of another tobacco retailer. Second, Python programming language was written to randomly

select one proximity relationship from the table. Each proximity relationship consisted of two

tobacco retail outlets. Third, following selection of the pair, one of the two retailers in the pair

was randomly selected to be deleted from the master list. Fourth, because the distance to the

nearest retailer changes each time a store is removed from the list, a new proximity relationship

table was calculated after each deletion. The process continued iteratively until the proximity

relationship table returned zero tobacco retail outlets within 500 feet of another retailer (see

Figures 1 and 2). Throughout the process, only random selection was used to keep or delete

retailers. This random-choice removal proximity analysis would yield different results each time

the process is run to completion, and certainly the exact stores that were deleted could vary

greatly each time. In order to anticipate this discrepancy of result, the process was run 1,000

times and the mean number of retailers removed was taken as the final result for each list.