Supplemental Digital Content

The current computer code that can be used for implementation is located on a Google Drive location accessible from http://FDshort.com/CallReturnTime

The files included are:

File Name	Description
CallFromHome.py	Python file to compute the driving times. Instructions are included in the header of this file
DrivingTimesConfiguration.txt	Parameters for the CallFromHome.py file
StateZipCodes.xlsx	List of GPS coordinates for all US zip code tabulation areas, adjusted for locations from which the Google Matrix Distance API cannot compute a driving distance. The zip codes in the state of interest should be copied from this file into the file ZipCodeFileIn.txt
ZipCodeFileIn.txt	Example of the input file for a calculation
ProcessDrivingTimes.xlsm	Macro enabled Excel workbook to analyze the output of the CallFromHome.py program.
DrivingTimes.txt	Output from the CallFromHome.py program (default name, can be changed)

Implementation steps:

1. Install Python v3.4.4 or higher on your computer
2. Obtain a Google Matrix Distance API from https://developers.google.com/maps/documentation/roads/get-api-key
3. Copy the files from the Google Drive location to the c:\ folder on your computer
4. Open the CallFromHome.py file in python
5. Modify the DrivingTimeConfiguration.txt file to set parameters, file and folder locations, and the hospital name and GPS locations based on instructions in the CallFromHome.py file
6. Open StateZipCodes.xlsx and select the zip codes to be considered using the filters in the first row; then copy column E to the file ZipCodeFileIn.txt
7. Run CallFromHome.py
8. Open the macro enabled workbook ProcessDrivingTimes.xlsm
9. Open the csv output file from CallFromHome.py (default name is DrivingTimes.txt) in Excel as a comma delimited file and past the data into ProcessDrivingTimes.xlsm
10. Run the macro MacroAnalyzeData in the ProcessDrivingTimes.xlsm workbook
11. View the report of acceptable and unacceptable postal codes in the Report worksheet