Flu Near You – SAS Program: FluNearYou.sas

SAS Program: FluNearYou.sas
Description: Descriptive analyses for Arizona Flu Near You data
Purpose: Import and analyze Flu Near You data
  Importation of Flu Near You Data
  Requested by the Flu Near You Epi-hack group
  Date of program start: 9/29/2015
  This program can be done in three steps:
    Step 1. Jurisdiction defines 3 variables
    Step 2. Import data
    Step 3. Clean data / create variables
    Step 4. Create summary datasets for all data, state data, and county data

Pre-requisite: FluNearYou data from datasets dashboard.

Original Variables:
- week_of = "Weeks starting Monday"
- state = "State"
- zip = "Zip code"
- participants = "Total participants"
- users = "Total users"
- household = "Total household members"
- ili = "ILI syndrome(N)"
- other = "Other symptoms(N)"
- no_symptoms = "No symptoms (N)"
- fever = "Fever (N)"
- cough = "Cough (N)"
- sore_throat = "Sore throat (N)"
- chills = "Chills (N)"
- fatigue = "Fatigue (N)"
- nausea = "Nausea (N)"
- diarrhea = "Diarrhea (N)"
- bodyache = "Body aches (N)"
- headache = "Headache (N)"
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User needs to define 4 variables (highlighted below):

1. Folder where the file is located (make sure file is named FNY.csv)
2. State abbreviation
3. County abbreviation
4. Zip codes

(If your jurisdiction is not interested in county-level data, then the code will need to be updated. Delete county-related code)

Jurisdiction defines 3 variables:

/*Jurisdiction defined. Place file named "FNY" in a folder and indicate folder's path below*/
%let filename = \pubhs-filesrv03\dctr13\EPI\Syndromic Surveillance\Syndrome-specific Files - Influenza-like Illness\Flu Near You\Data Files;

/*Jurisdiction defined. Change state and county information to meet needs*/
%let state = AZ;
%let county = Maricopa; /*Place county name here and define zip codes in county*/

/*Jurisdiction defined. Create county or jurisdiction variable*/
/*Create county variable using zip codes*/
...

IF FNY_zip IN (85001, 85002, 85003, 85004, 85005, 85006, 85007, 85008, 85009, 85010, 85011, 85012, 85013, 85014, 85015, 85016, 85017, 85018, 85019, 85020, 85021, 85022, 85023, 85024, 85025, 85026, 85027, 85028, 85029, 85030, 85031, 85032, 85033, 85034, 85035, 85036, 85037, 85038, 85039, 85040, 85041, 85042, 85043, 85044, 85045, 85046, 85392, 85395, 85396) THEN FNY_county = "&county";

...
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SAS Program creates datasets:

- **work.rawFNY**
  - All raw data (all states; all dates)
  - Renames variables to begin with “FNY_”
  - Formats variables & adds labels

- **work.FNY**
  -Eliminates observation with missing zip or date
  - Defines zip
  - Assigns MMWR weeks to dates
  - Adds leading zero to single digits MMWR weeks
  - Creates new variables for flu season and year
  - Creates a year/MMWR week variable
  - Creates ILI% (ILI cases/total participants)
  - Creates non-ILI count

- **National datasets (all states):**
  - FNY_1213 | FNY_1314 | FNY_1415 | FNY_1516
    - Selects distinct MMWR weeks
    - Sums FNY_ili to make variables FNY_ili_1213, FNY_ili_1314, FNY_ili_1415, FNY_ili_1516
    - Sums FNY_participants to make variables FNY_participants_1213, FNY_participants_1314, FNY_participants_1415, FNY_participants_1516
    - Makes non-ili count variable (FNY_participants – FNY_ili): FNY_nonili_1213, FNY_nonili_1314, FNY_nonili_1415, FNY_nonili_1516
    - Finds proportion of ILI participants ((FNY_ili/FNY_participants)*100): FNY_ili_pct_1213, FNY_ili_pct_1314, FNY_ili_pct_1415, FNY_ili_pct_1516

- **State datasets (defined state):**
  - FNY_1213_state | FNY_1314_state | FNY_1415_state | FNY_1516_state
    - Selects distinct MMWR weeks
    - Sums FNY_ili to make variables FNY_ili_1213_state, FNY_ili_1314_state, FNY_ili_1415_state, FNY_ili_1516_state
    - Sums FNY_participants to make variables FNY_participants_1213_state, FNY_participants_1314_state, FNY_participants_1415_state, FNY_participants_1516_state
    - Makes non-ili count variable (FNY_participants – FNY_ili): FNY_nonili_1213_state, FNY_nonili_1314_state, FNY_nonili_1415_state, FNY_nonili_1516_state
    - Finds proportion of ILI participants ((FNY_ili/FNY_participants)*100): FNY_ili_pct_1213_state, FNY_ili_pct_1314_state, FNY_ili_pct_1415_state, FNY_ili_pct_1516_state
• **County datasets (defined county):**
  FNY_1213_county | FNY_1314_county | FNY_1415_county | FNY_1516_county
  - Selects distinct MMWR weeks
  - Sums FNY_ili to make variables FNY_ili_1213_county, FNY_ili_1314_county, FNY_ili_1415_county, FNY_ili_1516_county
  - Sums FNY_participants to make variables FNY_participants_1213_county, FNY_participants_1314_county, FNY_participants_1415_county, FNY_participants_1516_county
  - Makes non-ili count variable (FNY_participants – FNY_ili): FNY_nonili_1213_county, FNY_nonili_1314_county, FNY_nonili_1415_county, FNY_nonili_1516_county
  - Finds proportion of ILI participants ((FNY_ili/FNY_participants)*100): FNY_ili_pct_1213_county, FNY_ili_pct_1314_county, FNY_ili_pct_1415_county, FNY_ili_pct_1516_county

• **Work.FNY_mergesummarys:** Combines summaries for national, state, & county data

• **Work.FNY_tot1:** data for MMWR week 1 - 20

• **Work.FNY_tot2:** data for MMWR week 40 – 53

• **Work.FNY_fluseason_data:** combines work.FNY_tot1 and work.FNY_tot2
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