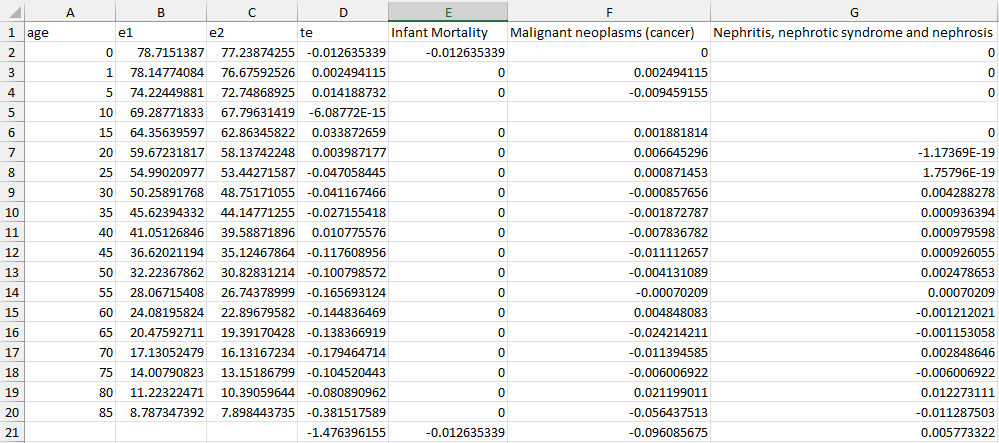
Assume a LE decomposition result table:



age: Minimum age of each stratum

e1: expected years of life remaining in each age stratum for population 1 (as you defined it in SAS)

e2: expected years of life remaining in each age stratum for population 2

cell B2: life expectancy at birth in population 1

cell C2: life expectancy at birth in population 2

TE: stands for "total effect"; the total effect on the life expectancy gap for each age stratum. In Arriaga decomposition, the difference in life expectancy between two groups is partitioned first by age, then by cause within each age stratum. Therefore, each age-specific TE is equal to the sum of cause-specific effects for that row.

cell D21: total size of life expectancy gap between population 1/population 2; the sum of cells D2:D20; the sum of cells in row 21 (from column E rightward)

Row 21, cells E and beyond: Total cause-specific effect on the life expectancy gap for each defined cause. For each cause, the value in row 21 is the sum of values in rows 2-20. Cause-specific effects with the same sign as cell D21 are increasing the size of the gap (mortality higher in the more disadvantaged group).

**Tips and Tricks**

Columns may be given generic names by the macro, or you may wish to add similar categories together (for example: combine heart disease and cancer into a “chronic disease” category for graphing). To do this, edit your reference file with additional columns containing your alternate labels. For an example, see the Group1 and Group2 columns in the Chicago CODs sheet of the reference file included with this toolkit.

To use alternate labels, open your reference file in Excel, copy the cells containing the labels you want to use, highlight the first cell containing category labels (cell E2 in the example), and use the transpose paste option. [Link to Microsoft documentation](https://support.microsoft.com/en-us/office/transpose-rotate-data-from-rows-to-columns-or-vice-versa-3419f2e3-beab-4318-aae5-d0f862209744#section-1_tabControl-OfficeVersion=Windows).

All of the table output is potentially relevant depending on the purpose of your investigation. To make it easier to digest, we highly recommend using conditional formatting for a first look at these tables. Applying a color scale to the range D2:D20 will show you the age groups in which mortality disparities contribute most to the LE gap. Applying a color scale to the range E21 onward to the right will highlight the causes of death which contribute the most to the LE gap. If you choose to use an “all other causes of death” category, it may be helpful to have that be the last cause and exclude it from your color coding.

If you have results for multiple years, you can combine them like so:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Year | Group 1 LE (e1) | Group 2 LE (e2) | Gap size (cell D21) | Cause 1 | … | Cause N |
| 2024 | 72.25 | 81.63 | 9.38 | 0 |  | 1.4 |
| 2023 |  |  |  |  |  |  |

This format will facilitate making stacked bar graphs and line graphs in Office, and stacked bar graphs in SAS. It will also make it easy to rank causes of death.