Death Report in the United States in 2015

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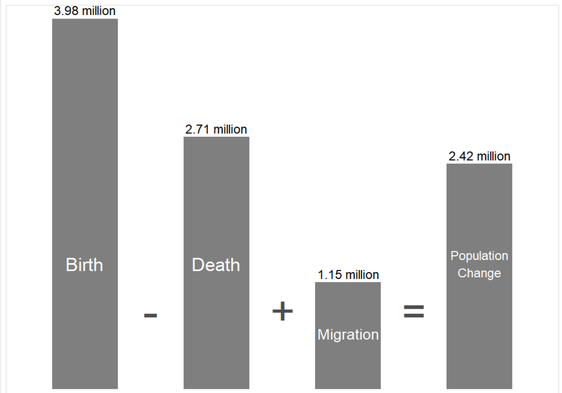
Background

According to the U.S. Census Bureau's annual projections, the United States will enter 2015 with 321 million people. Meanwhile, the net birth rate also reached to a new peak. The U.S. welcomed 3.98 million births, and experienced 2.71 million people dead this year. Including migration, the net population change 2.42 million people compared to 2014.



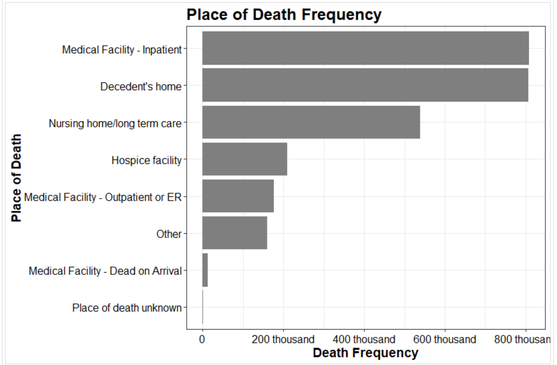
Introduction of data

The dataset comes from the "Detailed Mortality" database available on *https://wonder.cdc.gov/*. The data contain 6940 observations and 12 variables, mostly about the place where people die, and the cause of death.

Place of Death Frequency

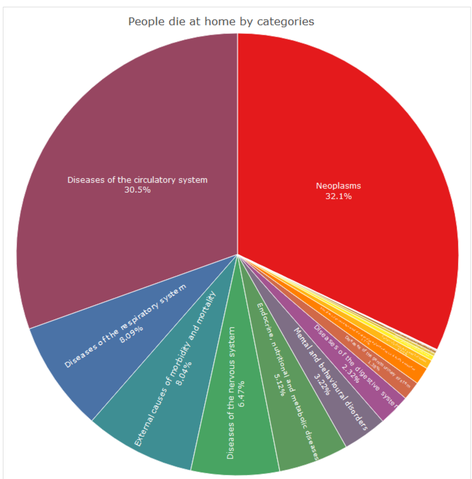
Half of decedents pass away in medical facility and their own home, and small part of them end their life during long term care at nursing home.

The other places just take quite small part of the statistics.
The number of people die at home is found uncommonly high, since it's not a reliable recovery place for patients or the elders compared to hospital. So it's necessary to explore what kind of diseases take decedents away at their home.



People die at home by ICD Chapters

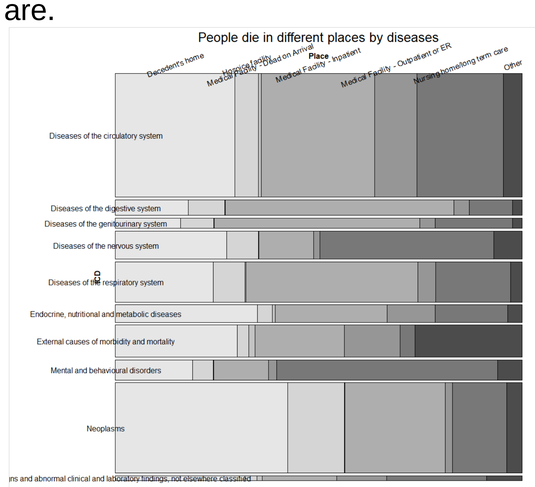
The top two killer are 'Disease of the circulatory system' and 'Neoplasm', both take almost one third of the whole data.



The most common sub chapter of disease of circulatory system is Ischaemic heart diseases, which also known as sudden heart attack.
In neoplasms chapter, Malignant neoplasms is the largest cause of death.
Based on this chapter, we guess, the reason why people choose to stay at home instead of hospital is that the probability to cure the malignant neoplasms is too minimal.
Thus, we should explore further what is the deaths percent of these two chapter at other places.

People die in different places by diseases

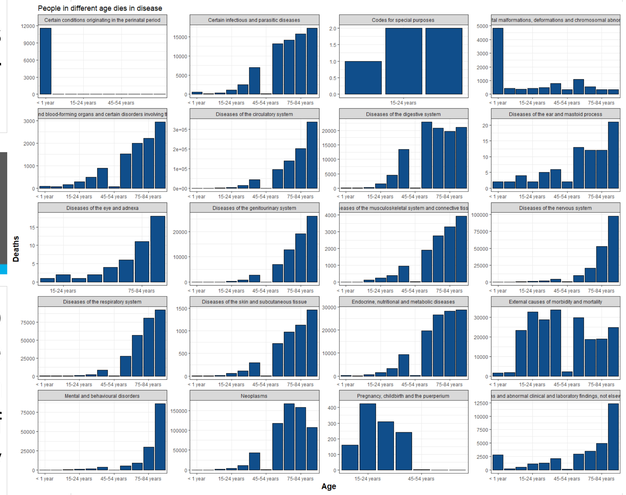
The mosaic graph connect two categories, one is place of death and the other one is diseases. The size of each sqaure illustrate the number of decedents die where and caused by what kind of disease.
It's quite clear that disease of circulatory system and neoplasms are the two largest causes of death, wherever they are.



Therefore, it can be explained partly that lots of people who had neoplasms choose to stay at home instead of going to hospital, because the death rate is too high to get over.

Abnormal observation of Age

The following graph shows the relationship between age and disease.



Something weird is, every time when the age comes to group '45-54 years old', the number of deaths drops dramatically. One reason may be the data has something wrong. The other reason is that, back to the time they were born,, the birth rate was extremely low, or large-scale war killed almost all of them when they grew up.

Conclusion

The top two killers are 'Disease of the circulatory system' and 'Neoplasm', not only take people away from the world, but also erase the hope of being alive early, leaving patients to die at home.