

Narrowing the Gap

Where you live in Tulsa can determine how long you live. Babies born a few miles apart might have lifespans that differ by 10 years or more. How can two babies with seemingly similar beginnings experience such a drastic difference in how long they may live? More importantly, how can the community come together to improve health and demonstrate change is possible?



Life expectancy generally refers to the average number of years a person may expect to live when they are born. Life expectancy is one of the most fundamental measures of the health of a community. However, many other factors determine one's quality of life, including the social, economic and environmental conditions in which a person lives.

It's important for policy and decision makers, public health officials and community leaders to consider life expectancy in the context of the health of the community. While the population of a community, however it's defined (by a ZIP code, demographic attributes, culture group, region, neighborhood or behavioral characteristics), can shift or change over time, analyzing trends of health indicators in conjunction with life expectancy can paint a picture of the population, its challenges and potential for change.

The purpose of this report is to shed light on life expectancy improvements in specific areas of the community that historically experienced some of the greatest disparities in Tulsa County.

A tale of two ZIP codes

The Tulsa Health Department and several key partners recently completed a retrospective analysis of life expectancy, to include an assessment of the well-known disparities among the 43 Tulsa County ZIP codes, specifically concentrating on two ZIP codes with drastically different life expectancies: 74137 and 74126.

ZIP code 74137, located in south Tulsa and mostly in the Jenks school district, had the 11th lowest percentage of the population below poverty and one of the highest reported median incomes in 2013: \$81,322. In sharp contrast, 74126 is comprised of neighborhoods in north Tulsa and had one of the highest percentages of the population living below poverty and the third lowest reported median income for the same year: \$25,191.

In the retrospective study of life expectancy between these two ZIP codes, researchers found a 13.8 year disparity in 2000 – 2002. ZIP code 74137's life expectancy during this time was 80.6 years; whereas, 74126's was 66.8.

However, in 2011 – 2013, the life expectancy in 74126 saw the greatest improvement over time and increased considerably to 69.7, an overall increase of 4.3% – whereas 74137 saw little change, reporting 80.4 years.

Because of this improved life expectancy, the disparity between 74126 and 74137 has narrowed to 10.7 years.

How did this happen?

In 2006, public health officials, community partners, city leaders, philanthropists and universities deemed the health disparities between these two ZIP codes unacceptable and set out to make improvements.



Community organizers engaged residents of north Tulsa to glean input and buy-in for change. Several health initiatives have been made since that time – including the construction of the Tulsa Health Department’s North Regional Health and Wellness Center, the OU Wayman Tisdale Specialty Health Care facility, Morton Comprehensive Health Services clinic, and the stabilization of the OSU teaching hospital in downtown Tulsa – which have contributed to increasing access to health care for this vulnerable population.

The significant improvement in 74126 illustrates the power of collective impact when partners’ initiatives and investments align with the needs of the community.

Room for improvement

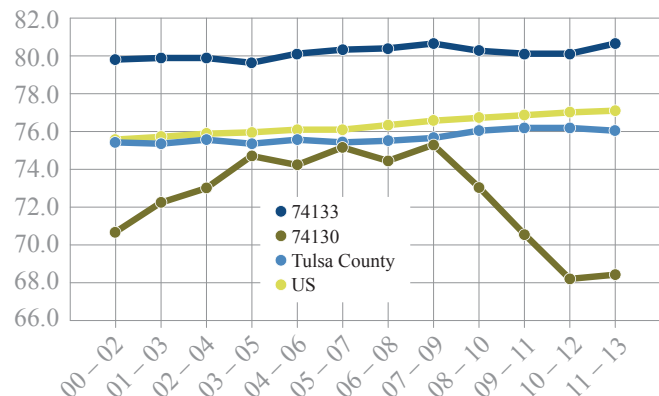
While the improvement in life expectancy in 74126 is certainly commendable, significant disparities still exist. In the 2011 – 2013 analysis, ZIP codes 74130 and 74133 now have the largest life expectancy disparity gap with 12.3 years difference between the two. 74130 located in the north Tulsa area had the lowest life expectancy at 68.5 years, while 74133, located in south Tulsa, had the highest life expectancy at 80.7 years.

Additionally, Tulsa County has an overall lower life expectancy in comparison to the United States. During 2011 – 2013, the national life expectancy was 77.2 years and Tulsa County’s life expectancy was 76.0 years. While both the Tulsa County and national life expectancies have increased in recent years, the national life expectancy has increased 2.1% while Tulsa County’s life expectancy has increased 0.8%.

While this life expectancy study does not contain any causation analysis, it does raise the question of how to continue to affect change and develop ways to measure how those causative agents (like infrastructure, health programming, etc.) will impact health over time.

Now, decision makers, community partners, and public health officials have an opportunity to delve deeper into the issues of disparity across Tulsa County communities.

Life Expectancy Over Time



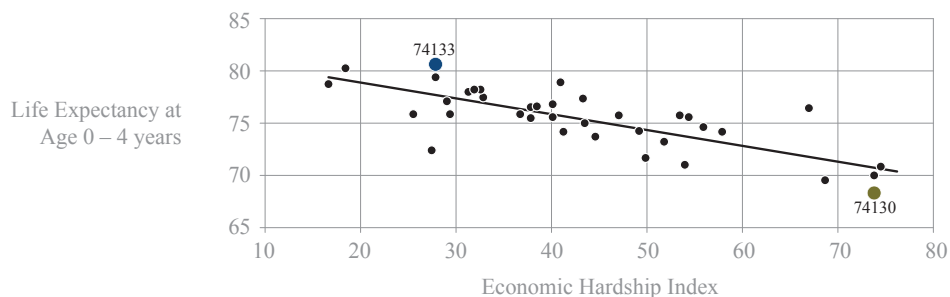
Socioeconomics

A strong correlation exists between socioeconomic factors and life expectancy. By analyzing the socioeconomic trends of a community, associations between health and economic indicators can be observed. Tulsa Health Department completed an Economic Hardship Index (EHI) analysis, based on a similar study conducted by the County of Los Angeles Public Health Department in 2010. The EHI is made of up a ratio of several socioeconomic measures: crowded housing, population living below poverty, unemployment, low educational attainment, dependency, and per capita income. A higher EHI represents less favorable socioeconomic outcomes. This ratio is then compared to the life expectancy of a ZIP code. When a large group of ZIP codes' EHI is graphed against the life expectancy, a significant trend emerges:

As EHI increases, life expectancy decreases.

The same methodology can be used on a variety of other variables that impact health (mortality data, quality of life indicators, disease incidence, etc.) to highlight their association with life expectancy. Additionally, EHI and life expectancy can be mapped over time, in order to demonstrate how changes in EHI in a community can affect life expectancy. Both of these tools can then guide decisions on where to focus economic development, educational opportunities, job creation and social services.

Association of Life Expectancy and Economic Hardship Index in Tulsa County ZIP Codes | 2011 – 2013



Where to go from here?

Life expectancy improvements in ZIP code 74126 have shown that change is possible, but there is a new set of considerations: How is causality measured and what are the next steps?

As previously stated, ZIP codes 74130 and 74133 now have the largest life expectancy disparity gap of 12.3 years. There is also a gap between their associated EHIs: the EHI in 74130 is third highest and 74133 is sixth lowest. Additional data like mortality, population shift, quality of life and economic indicators need to be assessed in order to determine the best solutions for improving life expectancy in 74130 and the additional ZIP codes with the life expectancies and highest EHIs.

Because ZIP code 74126 has had the greatest overall improvement, we know that change is possible. However, 74126 still has a long way to go and continued efforts to improve life expectancy must continue. Strengthening partnerships, utilizing data associations, analyzing trends over time, developing methods to measure causality moving forward: these are the studies of our population that can assist our community leaders to make the best choices for continued community-wide improvement.