HEALTH OUTCOMES

Mortality

Infant Mortality
Overall Mortality
Life Expectancy
**Infant Mortality**

**Definition:**
Infant mortality is defined as any death of an infant before his or her first birthday. Infant mortality is often expressed as the rate of infant deaths per 1,000 live births. For this assessment, infant deaths and births were combined across 10 years to create a more stable rate due to local infant deaths varying so drastically year to year.

**Data Sources:**
Centers for Disease Control and Prevention, National Vital Statistics System; Healthy People 2020; Minnesota Department of Health, Center for Health Statistics

**Community Health Importance:**
The loss of an infant carries a heavy social burden, may carry a heavy economic burden, and results in many years of life lost. Infant mortality is often used to compare the adequacy of health care and community resources in developed, industrialized and world leader countries.

High rates of infant mortality indicate the existence of broader issues pertaining to access to care and maternal and child health – ultimately issues that are changeable, making infant mortality preventable.

**What Led to This Health Outcome?**
Infant mortality has been linked to many community factors including health literacy, access and use of early and adequate prenatal care, socioeconomic status and health beliefs. In addition, infant mortality is associated with specific birth outcomes including premature births and low weight births.

**Current Community Percepcion:**
Current community perception regarding infant mortality is unknown.

**Current Level of Community Capacity:**
Olmsted County has one of the highest rates of physicians per capita in the United States. Clinicians for both low risk and high risk pregnancy management are available locally. In addition to two Level II nurseries, a neonatal intensive care unit is locally available.

Current community initiatives and organizations that work towards decreasing infant mortality rates and associated maternal and child health issues include: Birthright; March of Dimes; Mayo Clinic; Olmsted County Public Health Services; Olmsted Medical Center; Planned Parenthood; United Way of Olmsted County.

**Area of Greatest Opportunity:**
There is a need to continue work around prenatal classes and home visits. Further research is needed at the local level to identify the causes in the apparent racial disparities that exist.

*NOTE: Infant Mortality is an important health indicator for Olmsted County; however, some sections are currently blank due to limited, local data sources.*
Trend Data with Goal:
Infant mortality rates (IMR) have progressively decreased since the mid 1900s; however, the trend at a national level slowed during the last decade – hovering around a rate of 7 infant deaths per 1,000 live births. The state of Minnesota consistently sees a slightly lower IMR; recent data (2001-2010) has the state’s IMR at 5.4.

Olmsted County has averaged six infant deaths per 1,000 live births over the last decade (2001-2010).

[Intepret data with caution due to data aggregation. Infant deaths substantially vary year to year at a county level – to get a more stable rate, 10 years of data was combined.]

Healthy People 2020 has a broad maternal, infant, and child health goal of improving the health and well-being of women, infants, children, and families. One specific objective is to reduce the rate of all infant deaths by 10% – from the baseline of 6.7% (2008) to 6.0%.

Health Inequities:
National, State and Olmsted County level data demonstrates a chronically higher level of infant mortality among black infants. The infant mortality rate among black babies in Olmsted County is 2.5 times higher than white babies (14.2 vs. 5.7, respectively).
Overall Mortality

**Definition:**
Mortality, or death, is often used as a metric of overall health and well being of a community. It is most useful when separated into categories that can be compared such as mortality by age groups, by age and gender groups, by age, gender and race/ethnicity groups, or by causes of death. For this assessment overall mortality rates are presented as deaths per 100,000 population. Mortality rates are presented by age, gender, and leading causes of death.

**Data Sources:**
Centers for Disease Control and Prevention, National Vital Statistics System; Healthy People 2020; Minnesota Department of Health, Center for Health Statistics; Olmsted County Community Health Needs Assessment (CHNA) 2013 Survey

**Community Health Importance:**
The overall rate of mortality in a community is of modest importance, a more valuable way to look at mortality rates is to determine if disparities exist among certain subpopulations. Disparities in early deaths or in causes of death by age, race, gender or socioeconomic status may highlight areas of importance to address in improving community conditions or access to specific types of health care services.

**Current Community Perception:**
Specific risk factors (i.e. obesity, smoking, diet) and causes (i.e. heart disease, cancer) of premature death were listed as pressing health issues impacting Olmsted County (2013 CHNA Survey).

Chronic disease and infectious diseases were mentioned as two major community health concerns during the community listening sessions.

**Current Level of Community Capacity:**
There are many current community initiatives and organizations that work towards decreasing mortality rates and associated health risk behaviors, including: Mayo Clinic; Olmsted County Public Health Services; Olmsted Medical Center.

**Area of Greatest Opportunity:**
Cancer and heart disease continue to be leading causes of death. Prevention is key – heart disease and cancer are preventable through better use of health care resources and better lifestyle choices (i.e. diets, physical activity, tobacco use).

**What Led to This Health Outcome?**
Deaths, specifically premature deaths, are caused by different conditions throughout the age spectrum. Before the age of 45, many premature deaths are caused by injuries – both unintentional (i.e. motor vehicle accidents) and intentional (i.e. suicide). After the age of 45, the majority of premature deaths are due to preventable disease – with tobacco use and obesity being high on the list of underlying risk factors.
Trend Data with Goal:
Overall mortality rates continue to decline on a national basis – and are also apparent within local data. Olmsted County has a current mortality rate of 583 deaths per 100,000 population (2006-2010, age-adjusted); a decrease of approximately 20% since the early 1990s.

Heart disease, cancer, chronic lower respiratory disease, and stroke have been the leading causes of death for many decades, with heart disease being the number one cause of death in the United States. In Minnesota and Olmsted County cancer has actually eclipsed heart disease and is now the leading cause of death.

According to the most recent data available (aggregate 2008-2010), Olmsted County averages approximately 900 deaths per year; cancer (26%) and heart disease (20%) account for nearly half of all the deaths in the County.

[Interpret presented data with caution due to aggregating numerous years of data to have valid data points.]

Many of the Healthy People 2020 goals have objectives related to cause-specific mortality (i.e. reduce homicide, cancer, heart disease, etc.; mortality rates); however, there is no objective related to reducing overall mortality.

Leading Causes of Death by Age Groups
Olmsted County, 2008-2010

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Total Deaths</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>2,663</td>
<td></td>
</tr>
<tr>
<td>0 -- 4</td>
<td>49</td>
<td>45%</td>
</tr>
<tr>
<td>5 -- 14</td>
<td>2</td>
<td>50%</td>
</tr>
<tr>
<td>15 -- 24</td>
<td>32</td>
<td>41%</td>
</tr>
<tr>
<td>25 -- 44</td>
<td>105</td>
<td>19%</td>
</tr>
<tr>
<td>45 -- 64</td>
<td>430</td>
<td>17%</td>
</tr>
<tr>
<td>65 +</td>
<td>2,045</td>
<td>17%</td>
</tr>
</tbody>
</table>

Health Inequities:
Limited local data is available related to health inequalities across race and ethnicity groups due to the relatively small number of deaths (population) in these groups; however, there is an abundance of information based on gender and age groups. Females continue to have a substantially lower death rate than males (497 vs. 688, age-adjusted).

Leading causes of death among adolescents and young adults continue to be unintentional injuries (i.e. car accidents), accounting for 41% of all deaths in this age group. Suicide is the second leading cause of death among both 15-24 year olds (28%) and 25-44 year olds (19%) age cohorts.
Life Expectancy*

Definition:
Life expectancy is often used to describe the overall health status of a population, and is a summary mortality measure. Life expectancy is defined as the average number of years a population of a certain age would be expected to live, given a set of age-specific death rates. For this assessment, life expectancy is given as a measurement at birth (i.e. on average, how long a newborn is expected to live).

A similar metric is premature deaths, which is usually reported as years of potential life lost (YPLL). YPLL is a summary measure of premature mortality. It represents the total number of years not lived by people who die before reaching a given age. Deaths among younger persons contribute more to the YPLL measure than deaths among older persons. For this assessment YPLL is assessed for anyone dying before the age of 75 (people who die before age 75 are defined as having lost some potential years of life) by specific cause of death category.

Data Sources:
Centers for Disease Control and Prevention, National Vital Statistics System; Healthy People 2020; Minnesota Department of Health, Center for Health Statistics; World Health Organization

Community Health Importance:
Life expectancy is often used as a proxy for the community’s health status. Longer life expectancy is associated with a healthier community. When compared across various racial/ethnic groups or between genders or across gender by racial/ethnic groups, it can be used as a proxy for health disparities.

Similar assessments can be made using years of lost life. In addition, the years of lost life can be equated with years of lost productivity.

What Led to This Health Outcome?
Individual characteristics and health behaviors, access to and use of health care services including early detection and preventive services, environmental factors, and poverty all influence life expectancy and premature death.

Current Community Perception:
Specific risk factors (i.e. obesity, smoking, diet) and causes of premature death (i.e. heart disease, cancer) were listed as pressing health issues impacting Olmsted County (2013 CHNA Survey).

Chronic diseases and infectious diseases were mentioned as two major community health concerns during the community listening sessions. During the listening sessions, there appeared to be awareness of the need for several preventive approaches to these problems.

Current Level of Community Capacity:
Current community initiatives and organizations that work towards increasing life expectancy include: Mayo Clinic; Olmsted County Public Health Services; Olmsted Medical Center; Zumbro Valley Mental Health Center.

Area of Greatest Opportunity:
No specific opportunity regarding life expectancy was identified during the CHNA process.

*NOTE: Life expectancy is an important health indicator for Olmsted County; however, some sections are currently blank due to limited, local data sources.
**Trend Data with Goal:**

Nationwide, life expectancy at birth continues to increase; the latest estimates from 2011 are at just under 79 years of life. On average, a baby born in the United States is estimated to live approximately 79 years. There is a slight increase in this estimate for Minnesota, at 80.9 years of life.

Olmsted County’s estimated life expectancy is even greater – at 82.4 years. Residents of Olmsted County are expected to live, on average, about 4 years longer than a typical US resident.

Excluding perinatal and congenital conditions, homicide, suicide, HIV/AIDS, and unintentional injuries are the leading causes of death that impact premature death (contribute to significant years of life lost). For example, a person committing suicide, on average (2010), would lose approximately 36 years of life – or would die when he or she was 39 years old.

![Life Expectancy at Birth](chart)

**Olmsted County Premature Death**

<table>
<thead>
<tr>
<th>COD - 2010</th>
<th># Deaths</th>
<th>Avg. YPLL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perinatal</td>
<td>5</td>
<td>72.5</td>
</tr>
<tr>
<td>Homicide</td>
<td>2</td>
<td>63.8</td>
</tr>
<tr>
<td>Congenital</td>
<td>8</td>
<td>46.6</td>
</tr>
<tr>
<td>Suicide</td>
<td>17</td>
<td>35.9</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>2</td>
<td>30.0</td>
</tr>
<tr>
<td>Unint. Injury</td>
<td>41</td>
<td>16.7</td>
</tr>
<tr>
<td>Cirrhosis</td>
<td>12</td>
<td>14.2</td>
</tr>
<tr>
<td>P&amp;Flu</td>
<td>13</td>
<td>8.7</td>
</tr>
<tr>
<td>Cancer</td>
<td>234</td>
<td>6.9</td>
</tr>
<tr>
<td>Diabetes</td>
<td>9</td>
<td>4.4</td>
</tr>
</tbody>
</table>

**Health Inequities:**

Limited local data is available related to health inequities across race and ethnicity groups; however, differences across gender groups are easy to detect. Olmsted County females continue to have a substantially higher life expectancy than males (84.1 vs. 80.1, age-adjusted).