HEALTHY LIVING

JEFFERSON COUNTY CHRONIC DISEASE PREVENTION: ACTION PLAN

2020 -2024

MADRAS   **OREGON**

Jefferson County

Public Health
Prevent. Promote. Protect.

JEFFERSON COUNTY PUBLIC HEALTH

CONTENTS

Contact Information:

745 SW.4th Street, Suite C, Madras, OR 97741

Michael K. Baker Ph.D.
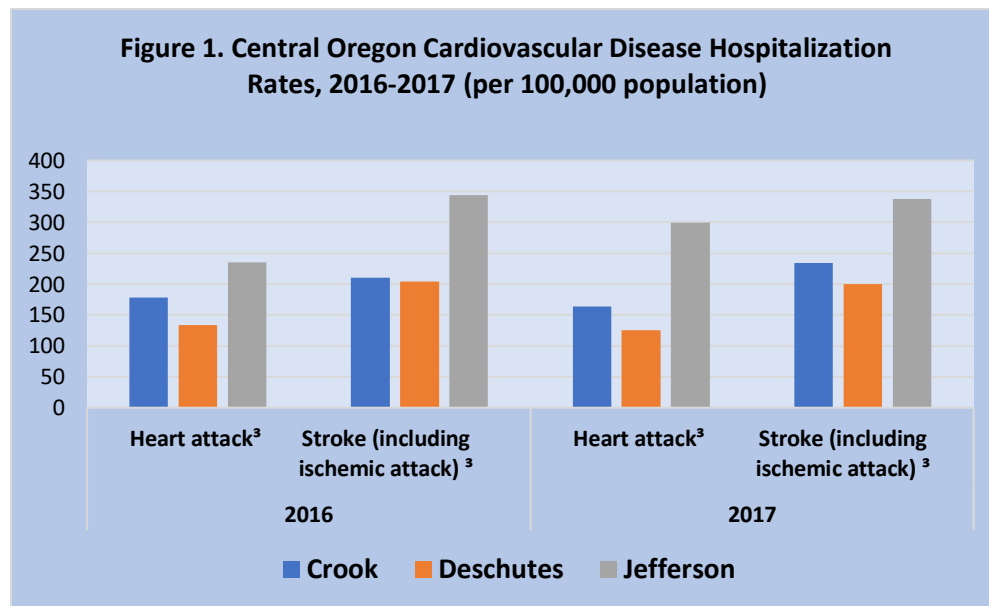Michael.Baker@publichealth.jeffco.net

Nansalmaa Conway Ph.D.
Nansalmaa.Conway@publichealth.jeffco.net

Background

      Chronic diseases such as diabetes, asthma, cardiovascular disease, and certain cancers such as lung cancer and prostate cancer are common in Jefferson County. Our data analysis showed that the prevalence of arthritis, asthma and diabetes in Jefferson county was higher than the Oregon state rate for 2016-2017 (Oregon Public Health, 2018). OHA (2019) reported that 7,963/100,000 cases of potential life lost to age 75 years are estimated to occur in Jefferson county. This had an increasing trend from 2016 to 2018. This is also 1.3 times higher than the average rate for Oregon. People who are living at risk of chronic health problems are more vulnerable to suffer from such illnesses in this county because of unhealthy lifestyle and a high prevalence of poverty. Thus, we need an action plan to reduce the most common disease incidence/prevalence and associated risk factors (particularly preventable ones).

Chronic Disease Assessment Summary

Figure 1. Central Oregon Cardiovascular Disease Hospitalization Rates, 2016-2017 (per 100,000 population)

[3] — Includes only adults ages 18 and over.

The Jefferson County heart attack rate increased slightly, but stroke was still consistent in 2017 compared with 2016.

Heart attack and stroke are leading causes of life-threatening disability among adults requiring medical emergency aid. But these are preventable if people adopt healthy lifestyles that prevent diabetes, high blood pressure, etc. and do not smoking.

Map 1. Jefferson County Age Adjusted Heart Disease Hospitalization Rate including heart attack compared with Central Oregon Counties, 2017 (per 100,000 population)
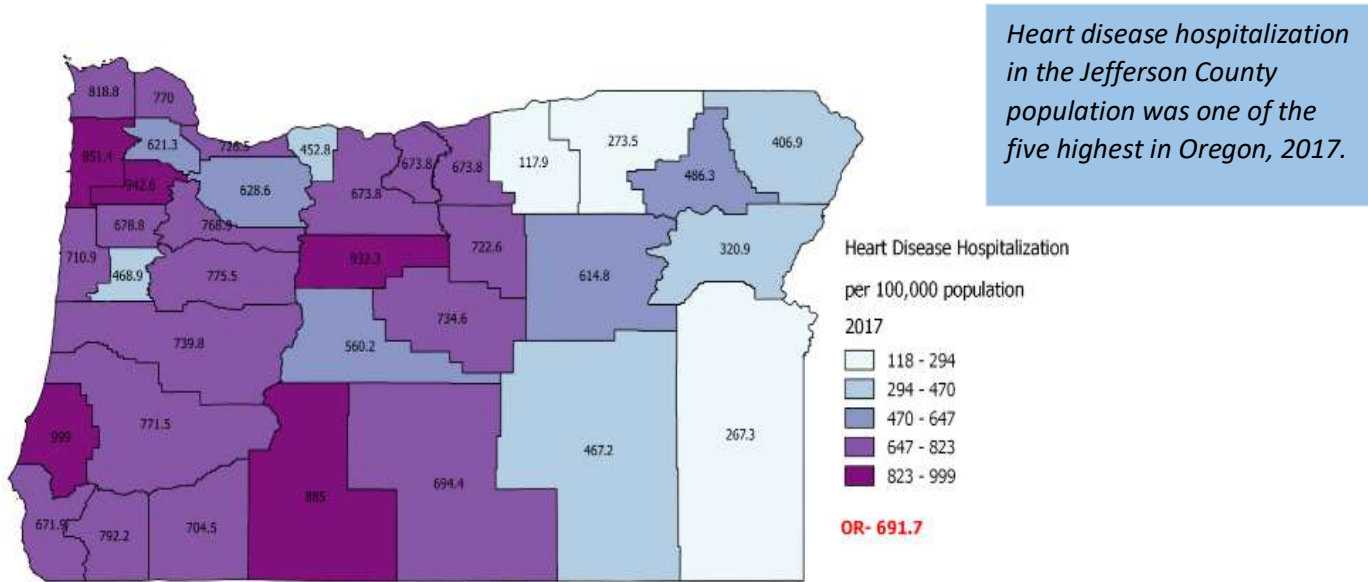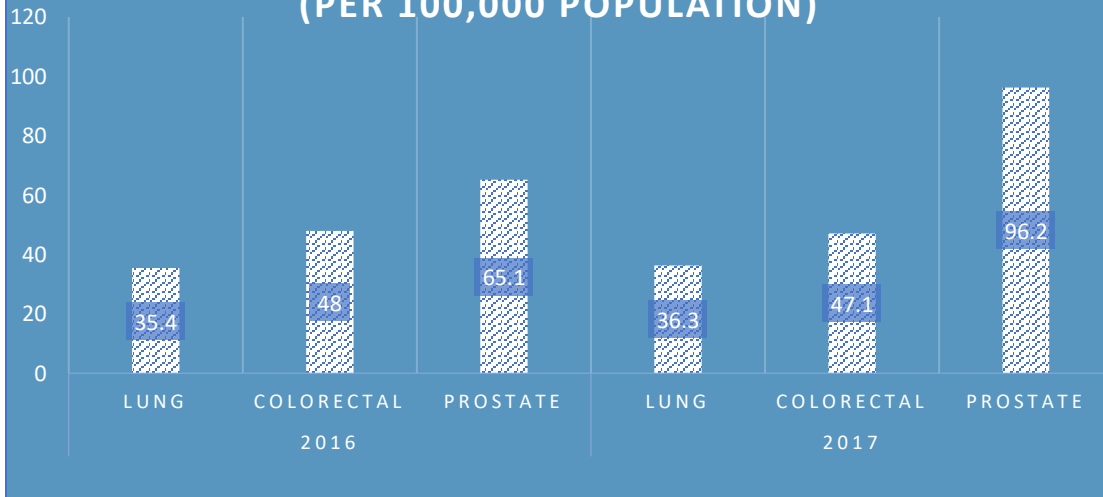

Heart disease hospitalization in the Jefferson County population was one of the five highest in Oregon, 2017.

Heart Disease Hospitalization
per 100,000 population
2017

	Range
	118 - 294
	294 - 470
	470 - 647
	647 - 823
	823 - 999

OR- 691.7

FIGURE 2. JEFFERSON COUNTY CANCER HOSPITALIZATION RATES, 2016-2017 (PER 100,000 POPULATION)

	LUNG	COLORECTAL	PROSTATE	LUNG	COLORECTAL	PROSTATE
	35.4	48	65.1	36.3	47.1	96.2
		2016			2017	

Cancer is a leading cause of population deaths throughout the world.
In Jefferson County's 48 persons died due to cancer in 2018.
In 2017, colorectal cancer rates decreased slightly along with increased rates of prostate and lung cancer from 2016 to 2017.

Figure 3. Jefferson County Asthma & Chronic Obstructive Pulmonary Disease (COPD), 2016-2017 (per 100,000 population includes all ages)

Legend: ■ Crook ■ Deschutes ■ Jefferson
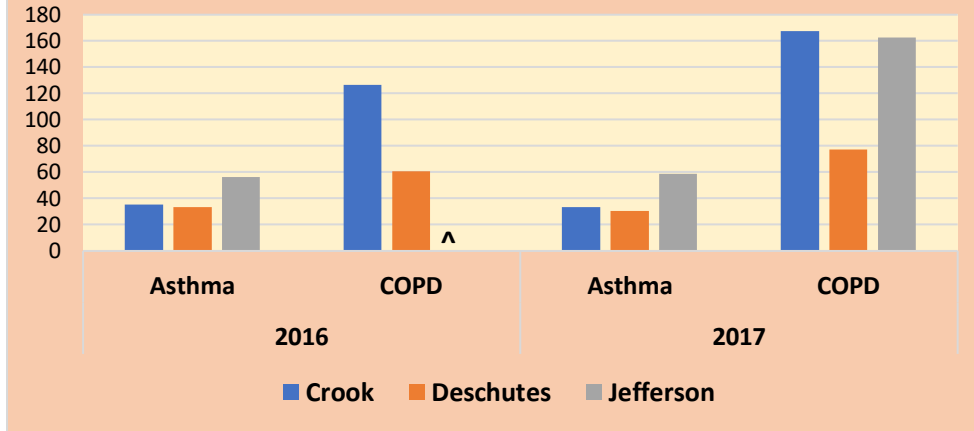
COPD is a chronic respiratory condition. Asthma can be an acute, recurring, or chronic disease. This figure shows that the number of Jefferson County adults who have been hospitalized with these chronic diseases is higher than in the other Central Oregon Counties.

^ – This number may be statistically unreliable

Map 2. Jefferson County Age-Adjusted Diabetes Rate compared with Central Oregon Counties, 2017 (per 100,000 population)
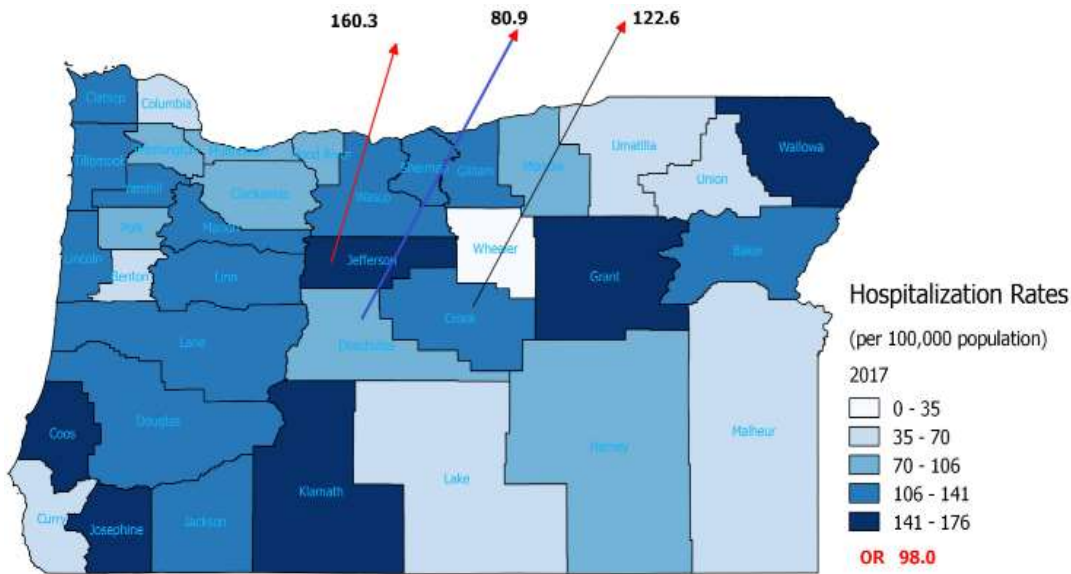
Diabetes is a public health priority in Jefferson County. In this Map, our county's rate of people (age 18 and over) hospitalized due to diabetes was the highest among Central Oregon Counties. Moreover, in our project survey (JCPHD, 2020) among American Indians and Hispanic community members, 55% of participants stated that they have one or more chronic diseases and 28.6% of those 55% responded that have been previously diagnosed with diabetes.

Figure 4. Maternal Diabetes and Hypertension in Jefferson County (by percent of births) 2015-2017

Maternal Diabetes (Prepregnancy Diabetes)	Maternal Hypertension(Eclampsia)
2015: 2.5, 2016: 2.1, 2017: 1.9	2015: 0.7, 2016: 1.8, 2017: 1.1

Maternal diabetes brings a greater risk of having many birth complications which also increase risk for the future baby' health. Maternal hypertension is a critical condition that can lead to mother and baby deaths. This figure showed that Jefferson County pre-pregnancy diabetes among mothers had a decreasing trend between 2015 and 2017.

However, deaths due to diabetes mellitus were common among American Indians and Hispanic population aged 50 and over in 2018 (OHA, 2018).

Map 3. Jefferson County Age-Adjusted Arthritis Rate compared with Central Oregon Counties, 2017 (per 100,000 population)

Arthritis Rate, 2017
(Hospitalization)
per 100,000 population
(Age Adjusted)
- 135 - 236
- 236 - 337
- 337 - 437
- 437 - 538
- 538 - 639

Arthritis is one of the major causes of individual disabilities and can be a chronic and reoccurring condition. It is often related to other multiple chronic diseases and conditions. In this Map 3, Central Oregon's arthritis rate is among the highest Oregon counties in 2017.

Risk Factors

Many risk factors including health conditions and behaviors may increase the frequency of diabetes, asthma, heart disease and arthritis.
Under our project, "Promoting a Healthy Environment among American Indians and Hispanic population in Jefferson County, "a Knowledge, Attitude, & Behavioral (KAB, 2019-2020) survey identified the most common risk factors which we can manage and change:

Table 1. Risk Factors Contributing to Jefferson County Chronic Diseases
(Jefferson County KAB Survey, 2020)

WHAT IS A RISK FACTOR? *Person's unhealthy circumstance and/or action leads to a higher likelihood that they could become ill with a chronic disease with negative outcome*	LIST OF MAJOR RISK FACTORS	KAB SURVEY FINDINGS IN JEFFERSON COUNTY
	Inadequate nutrition	29.3% of survey participants (113) answered that they did not consume vegetables in past seven days as a part of their meals. Nearly 60% of Warm Springs' participants have barriers to shopping more distant (but better-stocked) stores.
	Physical Inactivity	16.7% of participants answered that they did not do physical exercise daily or even weekly.
	Smoking	16.5% of Warm Springs' participants answered that they currently smoke.
	Uncontrolled Sodium Consumption	42.3% of participants did not try to decrease sodium consumption.

Moreover, Centers for Disease Control and Prevention (CDC) emphasizes that sodium reduction is a national priority. Researchers found that too much sodium leads to high blood pressure influencing cardiovascular diseases such as heart disease and stroke.

Reducing the consumption of sodium (salt intake) is an important risk factor to prevent chronic diseases and conditions and deaths.

In addition, other lifestyle habits (behavioral risk factors) such as excessive drinking of alcohol, drug use and other environmental factors may also cause numerous health problems. Thus, there is a need to conduct behavioral risk factor surveys locally and contribute these results to the Jefferson County public health assessment.

Much scientific evidence supports that if we reduce health risk factors, we can live without or delay the onset of chronic diseases.

For example, in this figure: if we can manage to avoid many risk factors such as high blood pressure, smoking, sedentary lifestyle, obesity, high fat consumption, etc. (except for some genetic conditions), we may live without diabetes.

 People can change some risk factors such as second-hand smoke exposure, smoking, obesity, overweight, inadequate fruit, and vegetable consumption, and lack of physical exercise.

Planning
By taking community-based action, we may prevent many chronic disease occurrences.
Researchers and health experts emphasize that prevention of chronic diseases includes each person's action to change diet and lifestyles.
For prevention of chronic diseases and conditions, not only do individuals need to take responsibility for their health, but also public health needs to take responsibility to play a central role in health promotion and environmental and system change.
Thus, a goal-based plan could promote healthy lifestyles and create a healthier environment.

This Action Plan for Prevention of Chronic Diseases, 2020- 2024 is focused on reduction of risk factors that affect population health.

Action Plan to Prevent Chronic Diseases for 2020-2024

GOALS	PRIORITY	NEXT 2020-2022	LATER 2022-2024
	Reduce chronic disease prevalence and hospitalization	Asthma hospitalization: reduce by 3% from 58.8 (OHA, 2018) to 55.8 per 100,000 population	By 2024 reduce the percentage of adults aged 18 or over hospitalized with asthma: By 4% from 55.8 to 51.8 per 100,000 population
		Diabetes hospitalization: Decrease by 4% from 160.3 (OHA, 2018) to 153.8 per 100,000 population	By 2% from 153.8 to 150.7 per 100,00 population
		Arthritis hospitalization: decrease by 4.5% from 639.1 (OHA, 2018) to 610.3 per 100,000 population	By 3% from 610.3 to 591.9 per 100,000 population
		Heart disease hospitalization: stroke reduction by 3.5% from 338.0 (OHA, 2018) to 326.2 per 100,000	By 3 % from 326.2 to 316.4 per 100,000 population
		Cancer hospitalization: Lung cancer by 2.5% from 96.2 (OHA, 2018) to 93.7 per 100,000 population	By 3.5% from 93.7 to 90.4 per 100,000 population

Continue:

<table>
<tr>
<td rowspan="6" style="writing-mode:vertical">ACTIONS TO REACH GOALS</td>
<td>Reduce risk factors for chronic illnesses and conditions.
Baseline data:

Physical Activity outside of work:
OR-78.7% (2017)
_____</td>
<td>**Increase physical activity:**
the percentage of adults (age ≤18) who participate in leisure-time physical activity outside of work: 6% from 70.9 (BRFSS, 2014-2017) to 76.9%</td>
<td>Increase 6% from 76.9 to 82.9% among adults</td>
</tr>
<tr>
<td>*Fresh produce consumption:*
OR- 22.4 (8th graders)
16.4% (11th graders),
OHA_2019
_____</td>
<td>**Increase fresh produce consumption among students:**
by 5% from 31% (Oregon HTS, 2019) to 36% among 8th graders who consume fruit/vegetables at least 5 serving per day
by 5% from 15% to 20% among 11th graders</td>
<td>7% from 36% to 43% among 8th graders

7% from 20% to 27% among 11th graders</td>
</tr>
<tr>
<td>*Tobacco use among mothers during pregnancy:*
OR- 8.4% (2018)
_____
Current cigarette smokers:
OR-16.2% (2017)</td>
<td>**Reduce smoking:**
Reduce tobacco use by mothers during pregnancy:
3% from 14.3% (OHA, 2018) to 11.3%</td>
<td>3% from 11.3% to 8.3% among mothers
Reduce the current cigarette smokers among adults: by 5% from 12.6% (BRFSS, 2014-2017) to 7.6%.</td>
</tr>
<tr>
<td>*Reduced sodium consumption:*
OR- 86.8%

_____
Overweight
(BMI ≥25)
OR- 63.8%
(2017)</td>
<td>**Sodium Reduction:**
Increase limited sodium consumption among adults who consume fewer than 7 (non-diet) sodas per week
By 5% from 86.7% (BRFSS, 2014-2017) to 91.7%</td>
<td>5% from 91.7% to 96.7</td>
</tr>
<tr>
<td>_____
Obesity (BMI ≥30):
OR- 29% (2017)

(Metrics based on Oregon average & RHIP).</td>
<td>Reduce overweight (BMI ≥25) by 5% from 73% (BRFSS, 2014-2017) to 68%
Reduce obesity (BMI ≥ 30) by 3% from 42.2 (BRFSS, 2014-2017) to 39.2%</td>
<td>5% from 68% to 63% (overweight)

3% from 39.2% to 36.2% (obesity)</td>
</tr>
</table>

Continue:

ACTIONS TO REACH GOALS	**Health Promotion and Public Health Interventions**	Create accessible environment to basic opportunity conditions to live healthful and equal.	**Increase the number of healthy schools, communities, neighbors etc. in Madras and Warm Springs** **Create more places to be active in communities and tribes combined with encouragement and incentive programs**
		Identify high risk groups and communities, e.g., those who are more likely to smoke, stay physically inactive, and become overweight, have difficulty accessing nutritious food, and having unhealthy behaviors such as sugary drink consumption, uncontrolled sodium consumption, alcohol and substance use.	**Focus group discussions on public health interventions such as developing weekly healthy eating menu, weight measurement, messaging, and face-to-face training among American Indians and Hispanic mothers and other family members.** **Decrease the number of children and adults consuming one or more sugary drink per day**
		Focus group discussions with people who are experiencing the highest rates of chronic diseases such as diabetes, heart disease, asthma etc.	**Increase focus group discussions among Hispanic and American Indian populations, including school children.**
		Identify tobacco-related health disparities and prevent youth and young adults from starting to smoke	**Improve focus group discussions among school children and reproductive age women to prevent and stop any kind of tobacco use.**
		Promote Centers for Disease Control and Prevention, Oregon Health Authority sites and other electronic supplementary guidelines and materials to community members	**For example, Dietary Guidelines for Americans, Child Nutrition Program, MyPlate, Active People, Healthy Nation by 2027, Obesity Prevention Strategy, The Smoke Cessation Toolkit, Oregon etc.**

References

Ana-Lucia Mayén., et al. (2016). Interventions promoting healthy eating as a tool for reducing social inequalities in diet in low- and middle-income countries: a systematic review.
Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5180409/

CDC & USDA (2015). Dietary Guidelines for Americans, 2015-2020
Retrieved from https://www.dietaryguidelines.gov/sites/default/files/2019-05/2015-2020_Dietary_Guidelines.pdf

CDC & U.S. Department of Health and Human Services (2018). The Physical Activity Guidelines.
Retrieved from https://health.gov/sites/default/files/2019-09/Physical_Activity_Guidelines_2nd_edition.pdf

CDC (2011). Strategies to Prevent Obesity and Other Chronic Diseases: The CDC Guide to Strategies to Increase Physical Activity in the Community.
Atlanta: U.S. Department of Health and Human Services.
Retrieved from https://www.cdc.gov/obesity/downloads/PA_2011_WEB.pdf

CDC (2017). Best Practices for Cardiovascular Disease Prevention Programs.
A Guide to Effective Health Care System Interventions and Community Programs Linked to Clinical Services. Atlanta, GA: Centers for Disease Control and Prevention & US Dept of Health and Human Services.

OHA (2017). Health Promotion and Chronic Disease Prevention: 2017-2025 Strategic Plan
https://www.oregon.gov/oha/PH/DISEASESCONDITIONS/CHRONICDISEASE/Documents/hpcdp-strategic-plan.pdf

OHA (2015, 2016, 2017). Chronic Disease Hospitalization.

OHA (2016, 2017, 2018). Public Health Data Tools.

JEFFERSON COUNTY PUBLIC HEALTH DEPARTMENT