2016-2019

CENTRAL OREGON REGIONAL HEALTH IMPROVEMENT PLAN

A Message from the Central Oregon Health Council Board of Directors

Central Oregon health system partners are making important strides to improve the health of residents. These strides will continue to be facilitated by partnerships among healthcare providers, local governments, educators, community-based and non-profit organizations, citizen groups and other entities in the region. To further our vision of a healthier Central Oregon, regional partners have collaborated to create the Central Oregon Regional Health Improvement Plan (RHIP).

The nature of Central Oregon's economy varies among and within communities and the region is sensitive to fluctuations in the state and national economic conditions. In Central Oregon, many people enjoy an elevated quality of life, experience the natural beauty of the great outdoors, and pursue their dreams. Creating a healthier Central Oregon is critical to our region's continued success. This plan offers a roadmap through which this can be achieved.

As the Central Oregon Health Council (COHC) Board of Directors, we are committed to the following:

- Pursuing the priorities, goals and strategies described in this plan.
- Continuing to build a health system that supports these priorities and meets the needs of our region.
- Aligning plans of our respective organizations with the priorities and goals of the RHIP.
- Facilitating partnerships to achieve these goals.

To the extent these goals are achieved, there will be a healthier Central Oregon and healthier citizens to enjoy the special place in which we live, work, and play!

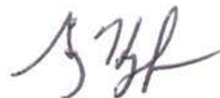
Tammy Baney, Chair
Commissioner, Deschutes County

Mike Shirtcliff, DMD, Vice Chair
President, Advantage Dental

Mike Ahern
Commissioner, Jefferson County

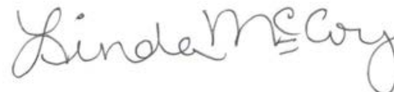
Ken Fahlgren
Commissioner, Crook County

Megan Haase, FNP
CEO, Mosaic Medical



Greg Hagfors
Chair Finance Committee
CEO, Bend Memorial Clinic

Stephen Mann, DO
Chair, Provider Engagement Panel
Central Oregon IPA Representativee



Linda McCoy
Chair, Community Advisory Council

Joseph Sluka
CEO, St. Charles Health System

Dan Stevens
Executive VP, PacificSource Health Plans

Table of Contents

Acknowledgements **4**

Introduction **6**

What is a Health Improvement Plan? 6

Factors that Affect Health 6

Clinical-Community Linkages 7

Community Input 8

How This Plan Is Organized 8

Implementation and Accountability 9

Behavioral Health: Identification and Awareness **10**

Behavioral Health: Substance Use and Chronic Pain **14**

Cardiovascular Disease **18**

Diabetes **21**

Oral Health **25**

Reproductive and Maternal Child Health **29**

Social Determinants of Health Part One: Education & Health **33**

Social Determinants of Health Part Two: Housing **38**

Appendix A: Acronyms **44**

Appendix B: References **44**

Behavioral Health 44

Cardiovascular Disease 44

Diabetes 44

Oral Health 45

Reproductive and Maternal Child Health 45

Social Determinants 46

Acknowledgements

Thank you to the following people for their contribution to this document

Name	Title	Organization
Alison Little	Medical Director for Medicaid (PEP Member)	PacificSource Community Solutions
Brad Hester	Owner	Bend Family Dentistry
Bruce Abernethy	Grant Writer (CAC Member)	Bend-La Pine School District
Bruce Brundage	Retired Cardiologist	Professor Emeritus UCLA
Channa Lindsay	Quality Improvement Specialist	Deschutes County Health Services
Charla DeHate	Chief Executive Officer (OPs Member)	La Pine Community Clinic
Christine Pierson	Medical Director (PEP Member)	Mosaic Medical
Christy McLeod	Chief Operating Officer (OPs Member)	Bend Memorial Clinic
Chuck Keers	Executive Director (CAC Member)	Family Resource Center
Dan Stevens	Executive Vice President (Board Member)	PacificSource Community Solutions
Dana Perryman	Pediatrician (PEP Member)	Central Oregon Pediatric Associates
David Holloway	Chief Medical Officer (PEP Member)	Bend Memorial Clinic
DeAnn Carr	Behavioral Health Deputy Director (OPs Member)	Deschutes County Health Services
Divya Sharma	Medical Director (PEP Member)	COIPA and Mosaic Medical
Donna Mills	Executive Director	Central Oregon Health Council
Doug Kelly	Division Chief (OPs Member)	Redmond Fire & Rescue
Elaine Knobbs	Director of Programs & Development (CAC Vice-Chair)	Mosaic Medical
Elizabeth Schmitt	(CAC Member)	Community Advisory Council
Gary Allen	Dental Director (PEP Member)	Advantage Dental
Greg Hagfors	Chief Executive Officer (Board Member)	Bend Memorial Clinic
Harold Sexton	Director (Board Member & PEP Member)	Deschutes County Behavioral Health
Heather Simmons	Dental Services Program Manager	PacificSource Community Solutions
Jane Smilie	Director (OPs Member)	Deschutes County Health Services
Jeff Stewart	Administrator (OPs Member)	East Cascade Women's Group
Jeff White	(CAC Member)	Community Advisory Council
Jenn Welander	Chief Financial Officer (Finance Member)	St. Charles Health System
Jessica Jacks	Prevention Coordinator	Deschutes County Health Services
Joseph Sluka	President and Chief Executive Officer (Board Member)	St. Charles Health System
Julie Rychard	Personal Agent (CAC Member)	Full Access High Desert
Kathe Hirschman	Administrative Supervisor	Deschutes County Health Services
Karen Steinbock	Health Quality Program Director (OPs member)	Central Oregon Independent Practice Association
Kat Mastrangelo	Executive Director (OPs Member)	Volunteers in Medicine
Kathy Drew	Community Member	Gero-Leadership Alliance
Kate Wells	Director of Community Health Development	PacificSource Community Solutions
Ken Fahlgren	Commissioner (Board Member)	Crook County
Ken House	Director of Data and Analytics	Mosaic Medical
Ken Wilhelm	Executive Director (CAC Member)	United Way of Deschutes County
Kim Swanson	Clinical Psychologist (PEP Member)	St. Charles Medical Group
Kristin Powers	Manager of Health Integration	St. Charles Health System

Acknowledgements

Thank you to the following people for their contribution to this document

Name	Role	Organization
Kyle Mills	Pharmacist (PEP Member)	Mosaic Medical
Laura Gratton	Regional Medical Director	Mosaic Medical
Laura Pennavaria	Medical Director (PEP Member)	La Pine Community Health Center
Leslie Neugebauer	Central Oregon CCO Director (OPs Member)	PacificSource Community Solutions
Linda McCoy	(Board Member & CAC Member – Chair)	Community Advisory Council
Lindsey Hopper	Vice President of Medicaid Programs	PacificSource Community Solutions
Lori Wilson	Virtual Assistant	Central Oregon Health Council
MaCayla Arsenault	Operations Assistant	Central Oregon Health Council
Maggie O'Connor	Community Benefit and Wellness Manager	St. Charles Health System
Malia Ladd	Inclusion Coordinator (CAC Member)	NeighborImpact
Mary Ann Wren	Regional Manager & Community Liaison (OPs Member)	Advantage Dental
Megan Haase	Chief Executive Officer (Board Member)	Mosaic Medical
Miguel Herrada	Health Equity Coordinator	PacificSource Community Solutions
Mike Ahern	Commissioner (Board Member)	Jefferson County
Mike Franz	Medical Director of Behavioral Health	PacificSource Community Solutions
Mike Shirtcliff	President (Board Member)	Advantage Dental
Muriel DeLaVergne-Brown	Public Health Director (PEP & OPs Member)	Crook County Health Department
Nicole Rodrigues	Coding Supervisor (CAC Member)	St. Charles Health System
Nikole Zogg	Central Oregon Regional Manager (OPs Member)	Advantage Dental
Pamela Ferguson	Nurse Program Manager	Deschutes County Health Services
Paul Andrews	Deputy Superintendent (OPs Member)	High Desert Education Service District
Penny Pritchard	Tobacco Prevention Coordinator	Deschutes County Health Services
Rebeckah Berry	Operations and Project Manager	Central Oregon Health Council
Regina Sanchez	Enrollment Assister (CAC Member)	Crook County Health Department
Rick Koch	Director of Echocardiography	Bend Memorial Clinic
Rick Treleaven	Executive Director (OPs Co-Chair)	BestCare Treatment Services
Robert Ross	Medical Director of Community Health Strategy (PEP Member)	St. Charles Medical Group
Robin Henderson	Chief Behavioral Health Officer & Vice-President of Strategic Integration (OPs Member)	St. Charles Health System
Sarah Worthington	Chronic Disease Program Manager	Deschutes County Health Services
Scott Willard	Executive Director (OPs Member)	Lutheran Social Services
Sean Ferrell	Program Manager (CAC Member)	Forest Service
Sharity Ludwig	Director of Community Dental Programs (PEP Member)	Advantage Dental
Stephen Mann	Medical Director (Board Member & PEP Chair)	High Lakes Healthcare
Steve Strang	Director of Operations (OPs Co-Chair)	Bridges Health by Mosaic Medical
Suzanne Browning	Executive Director (CAC Member)	Kemple Memorial Children's Dental Clinic
Tammy Baney	Commissioner (Board Chair)	Deschutes County
Therese McIntyre	Patient Population Specialist	Mosaic Medical
Thomas Kuhn	Community Health Program Manager	Deschutes County Health Services
Tom Machala	Public Health Director (OPs Member)	Jefferson County Health Department
Wade Miller	Chief Executive Officer (OPs Member)	COPA

Introduction

What is a Health Improvement Plan?

The Centers for Disease Control and Prevention defines a health improvement plan as "a long-term, systematic effort to address public health problems on the basis of the results of health assessment activities and the health improvement process." System partners to address priorities coordinate efforts and target resources will use the Central Oregon Regional Health Improvement Plan (RHIP). A health improvement plan is critical for developing policies and taking actions that promote health. It defines the vision for the health of the community through a collaborative process and offers strategies to improve the health status of that community.

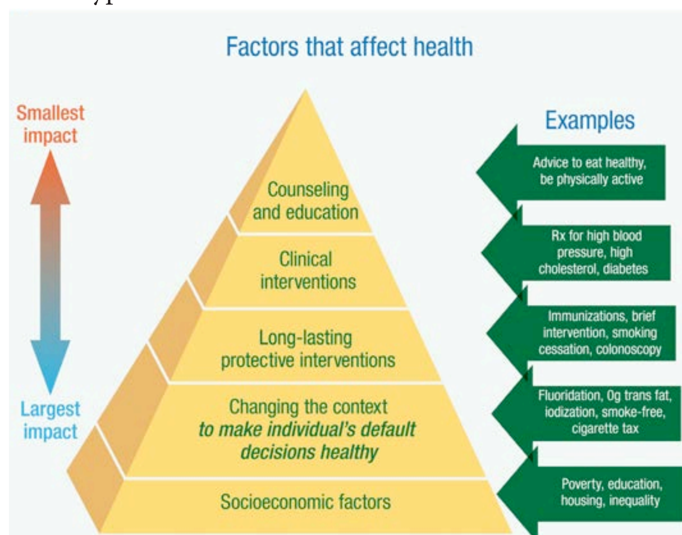
In 2015, Central Oregon health system partners created the Central Oregon Regional Health Assessment (RHA). A health assessment gives organizations comprehensive information about the community's current health status, needs, and issues. This information provided the central guidance for creation of this health improvement plan.

Benefits of a health assessment and improvement process and plan include:

- Improved organizational and community coordination and collaboration
- Increased knowledge about health and the interconnectedness of activities
- Strengthened partnerships within local health systems
- Identified strengths, weaknesses, and gaps to address quality improvement efforts
- Measured benchmarks for public health and healthcare practice improvement

Factors that Affect Health

A person's health is determined largely by social and economic factors, although prevention and healthcare services contribute substantially to maintaining health. According to the World Health Organization (1948), "Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." Where we live, go to school, and work affects our overall health, as does the safety and livability of our communities, whether we are economically stable or struggling to get by, and whether we have strong social connections. These factors are called social determinants of health and help explain why certain segments of the population experience better health outcomes than others. They also explain how external factors influence our ability to live healthy. The public health and healthcare systems implement strategies on multiple levels to improve the health of individuals and families, as well as the population at large. The five-tier pyramid, shown below, illustrates how different types of interventions affect health.



Source: Thomas R. Frieden, MD, MPH. A Framework for Public Health Action: The Health Impact Period. American Journal of Public Health. 2010 April; 100(4): 509-595. Doi:10.2105/ALPH.2009.185652 PMCCID: PMC2836340

Factors that Affect Health (continued)

The Central Oregon RHIP necessarily incorporates strategies from all levels of the pyramid. Interventions in the top two tiers of the pyramid commonly occur in a healthcare setting. These interventions are essential to protect and improve an individual's health, but they often have a limited impact on the population's achievement of optimal health.

Interventions in the middle and at the base of the pyramid are geared toward improving the health of the entire population by focusing on prevention, making health resources readily available, ensuring the healthcare system is equipped to address health needs, and enacting policy that makes healthy choices the default and addressing socioeconomic factors that affect health. These interventions can have the greatest potential to affect health because they influence the entire population, in contrast to focusing on one individual at a time. However, it may take generations to see the effects of interventions designed to change socioeconomic factors.

Clinical-Community Linkages

Clinical-community linkages receive special attention because they are required to ensure the success of strategies identified in the RHIP. The Agency for Healthcare Research and Quality (AHRQ) recommends clinical-community linkages that help to connect healthcare providers, community organizations, and public health agencies. Creating sustainable, effective linkages between the clinical and community settings can improve patients' access to preventive and chronic care services by developing partnerships between organizations that share a common goal of improving the health of people and the communities in which they live. These linkages connect clinical providers, community organizations, and public health agencies.

The goals of clinical-community linkages include:

- Coordinating healthcare delivery, public health, and community-based activities to promote healthy behavior.
- Forming partnerships and relationships among clinical, community, and public health organizations to fill gaps in needed services.
- Promoting patient, family, and community involvement in strategic planning and improvement activities

Strategies that improve access to clinical preventive services (such as screening and counseling), community-level activities, and appropriate medical treatment have been shown to reduce and prevent disease in communities.

Introduction

Community Input

The Operations Council of the Central Oregon Health Council (COHC) used a community driven strategic planning process, "Mobilizing for Action through Planning and Partnership (MAPP)," to guide creation of the Central Oregon RHA and RHIP. The RHA includes data and information that describes the health status of Central Oregon residents. Input on the assessment was solicited from the COHC's Board of Directors, Community Advisory Council, Provider Engagement Panel, county and regional health-related advisory boards and groups, and during community meetings in Crook, Deschutes, and Jefferson counties. During June through August 2015, partners completed a series of regional community and professional meetings to understand community, partner, and stakeholder perceptions related to health issues and forces of change that influence Central Oregon. The input and information gathered from these meetings established the RHIP priority areas and laid the foundation for the plan.

Two documents summarize results of the RHA: the "2015 Central Oregon Regional Health Assessment" and "Community Conversations: Creating the Regional Health Assessment and Health Improvement Plan, 2015." Both of these documents can be found at this link: http://cohealthcouncil.org/regional-assessments/.

From September through December 2015, the Operations Council developed the RHIP with input solicited from local experts, the COHC's Board of Directors, Community Advisory Council, Provider Engagement Panel, and health-related advisory boards and groups in Crook, Deschutes, and Jefferson counties. Evidence-based goals and strategies to address the priority areas were developed with input from Operations Council members, and with external expert guidance and support. These priorities, goals, and strategies became the outline for the RHIP. To ensure new information aligns with community perception, community input and collaboration will be an ongoing activity.

How This Plan Is Organized

The health issues addressed in this plan were identified by a number of processes. Healthcare professionals and community stakeholders from the Operations Council completed the initial process with a scoring method using assessment data and information. The second process was completed by members of the Community Advisory Council using selection criteria based on intimate knowledge of communities and the region. The third process was a combined meeting with members of the COHC Board of Directors, Community Advisory Council, and the Operations Council. During this meeting these members reviewed the highest priorities from the Operations Council and the Community Advisory Council meetings. The health improvement priorities that surfaced during the joint meeting were:

- Behavioral Health (Identification & Awareness/Substance Use & Chronic Pain)
- Cardiovascular Disease
- Diabetes
- Oral Health
- Reproductive and Maternal/Child Health
- Social Determinants of Health

How this Plan is Organized (continued)

The plan includes evidence-based strategies to address the health improvement priorities arranged as follows:

- Prevention/health promotion
- Clinical
- Policy
- Health equity
- Health system/access
- Childhood health

This plan has the requisite focus to ensure efforts are not so diluted as to become ineffective, but also attends to the interrelationships among the health improvement priorities selected. Arranging the plan as described above highlights where strategies impact more than one health condition and where addressing one health behavior can impact more than one health condition. For example, a prevention and health promotion strategy in Behavioral Health Identification and Awareness is alcohol, tobacco, and other drug health curriculum consistently and accurately being taught in schools to align with Oregon Department of Education (ODE) standards for health and evidence-based practice. This strategy aligns with prevention and health promotion efforts for cardiovascular disease as well, due to the linkages between tobacco and cardiovascular disease. Furthermore, while the plan focuses on specific priorities, the final chapter emphasizes the need to address the broader social determinants of health, where we have the greatest potential to impact the health of the entire population and "whole person" health.

Implementation of the plan will require further integration of public health, healthcare, behavioral health and human services at the individual, provider, system, community and regional levels. It is also intended to encourage positive change in our delivery systems to improve access, encourage efficiency, improve quality, and achieve measurable improvements in health outcomes.

The COHC did not identify workforce development as a priority area of the RHIP—largely because it is implicit in all of the work outlined in this guiding document. The COHC acknowledges that none of the work proposed in the RHIP to address regional health improvement priorities or address social determinants of health will be possible without the work conducted by community partners to recruit, train, and educate employees. The COHC, working by and through its community partners, is eager to participate in efforts to expand workforce development opportunities. It is not possible to overstate the connection between stable and living wage jobs for a well-developed workforce and a healthier Central Oregon.

Implementation and Accountability

The RHIP includes specific measurable health indicators for each of the priority areas that will be addressed from 2016 through 2019. This will allow us to track our progress, celebrate achievements, and change course when desired outcomes are not being met.

Work plans with specific timelines will guide implementation of strategies and will document progress made. The COHC and its committees will take the lead on implementing and tracking progress and will provide updates to the community. Further, regional health system partners have committed to use the RHIP as a guiding document for developing their organization-specific strategic plans.

Behavioral Health Identification and Awareness

The Problem

Stigma and the lack of integrated care pathways lead to a dramatic under-assessment and treatment of behavioral health issues in primary care settings.

There is considerable overlap between poor outcomes for chronic diseases and significant mental health and substance use problems. Approaches for preventing or treating chronic diseases need to address the whole person and their environment, particularly targeting screenings and support for mental health and substance use issues. Per capita costs among Medicaid-only beneficiaries with disabilities for coronary heart disease is nearly triple for people who also have co-occurring mental health and substance use disorders (SUDs) compared with people without either (Boyd, et al., 2010). Per capita costs are 3.8 times higher for diabetics with co-occurring mental health and substance use disorders than for diabetics with neither mental health nor substance use disorders (Boyd, et al., 2010). Individuals with depression average twice as many visits to their primary care doctor than do non-depressed patients and have nearly twice the annual healthcare costs. (Mauer & Jarvis, 2010).

The risk factors for depression and chronic diseases are bi-directional, with chronic diseases increasing the risk of depression, and conversely, depression increasing the risk of chronic diseases. Depression and unhealthy alcohol use is present in a significant percentage of people with diabetes and cardiovascular disorders. Depression has been proven to be such a risk factor in cardiac disease that the American Heart Association has recommended that all cardiac patients be screened for depression (AHA 2008). The presence of Type 2 diabetes nearly doubles an individual's risk of depression and an estimated 28.5% if diabetic patients meet criteria for clinical depression (Mauer & Jarvis, 2010). People with mental illness, substance use disorders (SUDs), or both are at increased risk for developing diabetes. Untreated behavioral health disorders can exacerbate diabetes symptoms and complications. In addition, companion features of behavioral health disorders – such as poor self-care, improper nutrition, reduced physical activity, and increased barriers to preventive or primary care – can adversely affect management of co-occurring diabetes (SAMHSA Advisory, 2013).

The majority of people who use alcohol at levels that impact their physical health and behavioral health do not meet dependency criteria and are inappropriate for specialty treatment programs. Screening, Brief Intervention and Referral to Treatment (SBIRT) is an evidence-based practice that targets patients in primary care with nondependent substance use. It is a strategy for intervention prior to the need for more extensive or specialized treatment. The utilization rate of SBIRT in Central Oregon remains at a fraction of the State benchmark, blunting the impact of this evidence-based practice. When primary care practitioners do identify a severe substance use disorder in a patient, the rate of successful referral to specialty SUD care remains very low, mainly due to low readiness-to-change in the patient, no system to develop the motivation, and close collaboration necessary for a successful treatment referral.

Behavioral Health
Identification and Awareness

Goals

Clinical Goals

1. Increase screenings for depression, anxiety, suicidal ideation, and substance use disorders.
2. When screenings are positive, increase and improve primary care-based interventions, and, when appropriate, referrals and successful engagement in specialty services.

Prevention Goal

Normalize the public's perception of accessing resources for depression, anxiety, suicidal ideation, and substance use.

Health Indicators by 2019	QIM Measure	State Measure	HP 2020
1. Number of SBIRT/CRAFFT screenings provided in healthcare settings shall exceed 12% (Oregon Health Authority, 2015).	✓		
2. Number of Depression screenings and follow-up care provided in healthcare settings shall exceed 25% (Oregon Health Authority, 2015).	✓		
3. First year develop a baseline of successful referral and engagement in specialty care from primary care. Second year develop performance improvement benchmarks.			

Action Area	Strategy
Prevention and Health Promotion	• Implement a program like the "Mind Your Mind" campaign. • Social/emotional health curriculum taught in schools aligned with Oregon Department of Education (ODE) standards for health and evidence based practice. • Alcohol, tobacco, and other drug health curriculum taught in schools aligned with ODE standards for health and evidence based practice. • Implement a low risk drinking guideline (compliment to SBIRT) in the community.

Behavioral Health
Identification and Awareness

Action Area	Strategy
Clinical	• Create a comprehensive identification and response system that is reflective of the entire primary care practice (from appointment scheduling to office visit). • Use SBIRT/CRAFFT, PHQ 2 & 9, GAD-7, and other evidence-based screening tools within healthcare settings. • Create a common response matrix that clinics could adopt, including physician intervention, BHC intervention, short-term BH intervention at PCP clinic, and referral to specialty BH services. • Create pathway/mapping for referral to specialty care. • Create clear referral and communication protocols. • Health information shared with primary care coordination team for review and provider follow up. • Ongoing regional trainings in screening tools and brief intervention response.
Policy	• Promote policies that support routine screening and follow-up care for Substance Use, depression and anxiety. • Promote policies that support public awareness and acceptance of mental health and substance use wellness strategies.
Health Equity	• Screenings, interventions, and specialty services need to be culturally and linguistically specific in order to be successful. • Please refer to the chapter on social determinants of health for additional strategies.
Health System/ Access	• The creation of a common response matrix to screenings (i.e., brief provider intervention, BHC, or referral to specialty clinic) will improve the number of screenings and spread the cost-effective utilization of behavioral health interventions in healthcare settings. • Increased public awareness of the role of behavioral health wellness in overall wellness will improve patient acceptance of behavioral health screenings. • Assessment of resource needs within the community that will be addressed in partnership through multiple organizations, such as payees, public health, hospital, etc.

Behavioral Health
Identification and Awareness

Action Area	Strategy
Childhood Health	• Substance use and depression are significant contributors to poor childhood health. Regular screening and follow-up care will increase childhood health outcomes.

Examples of Key Partnerships

- Health systems and healthcare providers
- Public health departments
- High schools (school nurses, school-based health centers)
- School boards
- Places of worship
- Employers
- Colleges
- Addictions and treatment centers
- State health promotion and prevention programs

Behavioral Health
Substance Use and Chronic Pain

The Problem

People with severe Substance Use Disorders (SUDs) also carry a high medical burden and respond poorly to medical interventions, leading to extremely high utilization rates. The current disjointed practice pattern between medical care and specialty SUD services actually contributes to poor medical and behavioral health outcomes and increases the number of people with Opioid Use Disorder.

In a large-scale review of adult Medicaid beneficiaries in six states in 1999, between 16% and 40% of beneficiaries had diagnoses of moderate to severe substance use disorders (SUDs). In all states SUDs, were associated with higher rates of hospitalization for inpatient psychiatric and medical care. Importantly, beginning at age 50, medical costs for persons with SUDs almost doubled (Clark, Samnaliev, & McGovern, 2009). People with moderate-to-severe SUDs have nine times greater risk of congestive heart failure (Mertons, et al., 2003), likely due to poor nutrition, little exercise, and high rates of smoking in combination with the impact of their substance use. The comorbid combination of alcohol abuse, depression, and diabetes is often common in homeless and Native American populations (Am Indian Alsk Native Mental Health Rev, 2007). According to a 2008 study by the Oregon Division of Addiction and Mental Health, people with co-occurring mental health and SUDs have an average age at death of 45 years. Providing SUD treatment to those who need it has been shown to slow disease progression and growth in medical costs (Mancuso & Felver, 2010).

There has been a dramatic increase in opioid prescription drug availability over the past 15 years, which has resulted in an equally dramatic increase in prescription drug abuse and the related increase in heroin use in Central Oregon. In this manner, prescription practices by physicians can have serious public health consequences. The opioid-related unintentional prescription drug mortality rate has tripled in Oregon since 2000. The 5-year average age-adjusted opioid-related unintentional prescription drug mortality rate in Central Oregon was 3.6/100,000 population (95% CI 2.5-5.1) (CDC Wonder, 2009-2013). The 5-year average rate in Oregon during this time period was 4.1/100,000 population (95% CI 3.8-4.4). Injection drug users are the largest single risk group for Hepatitis C (CDC Surveillance for Viral Hepatitis 2013). Surveys have indicated that within one year of use, 50-80% of injection drug users test positive for the Hepatitis C antibody. Nationally, there was a 151.5% increase in acute Hepatitis C cases from 2010 to 2013, largely attributed to drug use (CDC 2013). With Central Oregon experiencing a significant increase in prescription opiate and heroin use, the region can expect to see an increase in Hepatitis C rates. Finding alternative resources to opioids for people suffering from chronic, non-cancer pain is one of the highest priorities identified by local physicians. To decrease the chronic over-availability of prescription opiates in our community requires, in part, providing evidence-based holistic approaches to chronic, non-cancer pain.

Behavioral Health
Substance Use and Chronic Pain

Goals

Clinical Goal
Create a bi-directional integration approach for people with severe substance use disorders.

Prevention Goal
Implement a community standard for appropriate and responsible prescribing of Opioids and Benzodiazepines.

Health Indicators by 2019	QIM Measure	State Measure	HP 2020
1. Increase the rate of successful referrals from medical settings to specialty SUD services of people with moderate-to-severe SUDs.			✓
2. First year develop a baseline on the pharmacy, hospital, acute psychiatric, and emergency department expense related to people with moderate-to-severe SUDs. Second year set performance improvement benchmarks.		✓	
3. First year develop a baseline for number of people receiving greater than 120 mg morphine equivalent for more than three months.		✓	

Action Area	Strategy
Prevention and Health Promotion	• Expand Prescription Drug Monitoring Program (PDMP) use by primary care providers. • Develop plan for implementing alternative & complimentary pain treatment therapy. • Compassionate care education for community providers. • Expand needle exchange programs. • Expand the availability of Naloxone. • Expand medication disposal programs. • Develop a process and care path for affected family and children to impact ACEs and behavioral health factors.

Behavioral Health

Substance Use and Chronic Pain

Action Area	Strategy
Clinical	• Develop high functioning patient pathways from hospital and primary care settings into SUD specialty care. • Create a "Hub and Spoke" model for Medication Assisted Treatment (MAT) that links the MAT specialty provider with (a) other SUD and mental health providers, and (b) primary care providers. • Create an efficient, effective, and coordinated system of outreach, engagement, and care coordination services to medically significant populations, including: pregnant women who still use drugs, people who use illicit IV drugs, identified high utilizers of medical and pharmacy services, identified utilizers of mental health acute care services, and identified hospital patients. • Provision of cost-effective medical/nursing support and alternative chronic pain management/chronic disease management skills training in selected SUD specialty care programs. • Implementation of an outcomes system for each of the above four strategies focused on engagement and retention in specialty SUD services and on patterns of healthcare utilization.
Policy	• Support the efforts of the Chronic Pain Task Force to educate physicians to best practice standards and to support alternative pain management strategies. • Advocate with OHA to make alternative and complimentary pain treatment therapy a reimbursable service. • Support legislation to make Naloxone available through the pharmacy without a physician's prescription. • Expand needle exchange and harm reduction education for people injecting illicit drugs. • Expand prescription drug return programs.
Health Equity	• Cultural and language specific treatment strategies for Latino clients. • Safe and sober housing availability. • Intentional Peer Support outreach for severely disadvantaged people with SUDs, including people who are homeless, Native American, public inebriates, IV drug users, and pregnant women who use drugs. • Support employment strategies for people with criminal records. • Please refer to the chapter on social determinants of health for additional strategies.

Behavioral Health
Substance Use and Chronic Pain

Action Area	Strategy
Health System/ Access	• Make available SUD engagement services at hospitals and primary care clinics. • Identification of clients in SUD services who have high medical burden and develop, with the PCP, a whole healthcare and support plan. • Development of alternative and complementary pain programs widely available in the community. • Develop a community care plan for impacted children and family.
Childhood Health	• Substance use is a significant predictor to all of the Adverse Childhood Events (ACEs). Treating the parent, who has a severe substance use disorder, decreases the number of ACEs a child experiences and increases that child's resiliency, thus improving long-term health status.

Examples of Key Partnerships

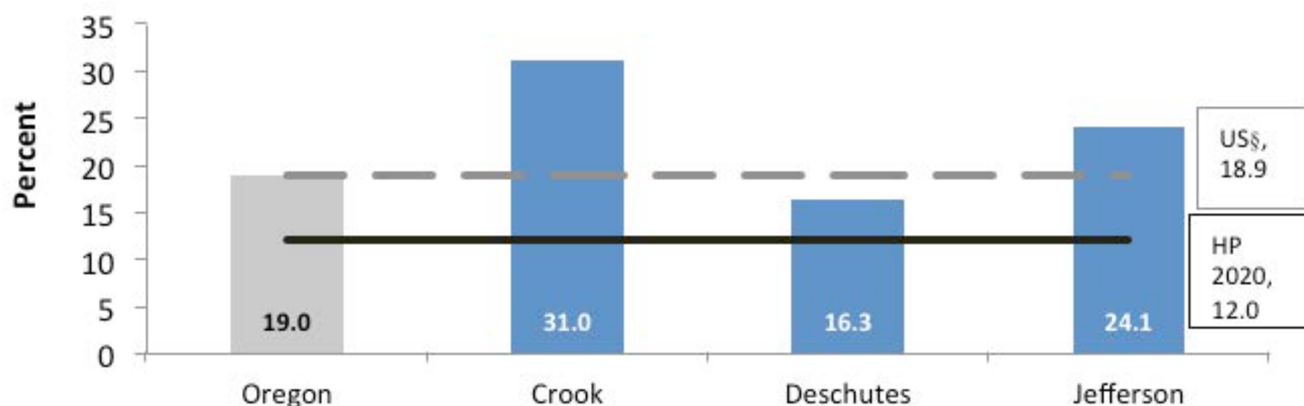
- Health systems and healthcare providers
- Public health departments
- High schools (school nurses, school-based health centers)
- School boards
- Places of worship
- Employers
- Colleges
- Addictions and treatment centers
- State health promotion and prevention programs
- Sheriff and Police Departments in Central Oregon

Cardiovascular Disease

The Problem

Cardiovascular disease (CVD) is a classification of diseases of the heart and blood vessels that includes chest pain, heart attack, and other conditions that affect the heart muscle, rhythm, or valves. Cardiovascular diseases are preventable with good nutrition and exercise, and by remaining tobacco free. People with cardiovascular disease or who are at high cardiovascular risk (due to the presence of one or more risk factors such as hypertension, diabetes or hyperlipidemia) need early detection and management using counseling and medications, as appropriate.

Smoking causes one of every three deaths from CVD, according to the 2014 Surgeon General's Report on smoking and health. It is a leading cause of preventable death in the US and doubles a person's risk for stroke (USDHHS, 2014). Nearly one in three adults in Crook County, one in six adults in Deschutes County, and one in four adults in Jefferson County report smoking tobacco.



The most common type of CVD in the United States is coronary artery disease, which affects the blood flow to the heart. It is one of the leading causes of death in Oregon and the US. In fact, among males and females admitted to St. Charles facilities in Central Oregon, 21% and 14%, respectively, were for CVD events (St. Charles Health System, 2014).

Cerebrovascular disease is another major form of CVD that affects blood flow in the brain. Stroke is one of the cerebrovascular diseases and is a leading cause of death and disability. A stroke is caused by a blood vessel breaking or an artery becoming clogged in the brain, which leads to reduced blood flow and brain damage. Knowing the signs and symptoms of stroke can save lives.

Cardiovascular Disease

Goals

Clinical Goal

Improve hypertension control.

Prevention Goal

Increase awareness of the risk factors for cardiovascular disease including tobacco use, uncontrolled hypertension, high cholesterol, obesity, physical inactivity, unhealthy diets, and diabetes.

Health Indicators by 2019	QIM Measure	State Measure	HP 2020
1. Increase the percentage of OHP participants with high blood pressure that is controlled (<140/90mmHg) from 64% to 68% (Baseline: QIM NQF 0018 - Controlling high blood pressure, 2014).	✓		✓
2. Decrease the prevalence of cigarette smoking among adults from 18% to 16% (Baseline: Oregon BRFSS, 2010-13; QIM Cigarette Smoking Prevalence).	✓		✓
3. Decrease the prevalence of smoking among 11th and 8th graders from 12% and 6%, respectively to 9% and 3%, respectively (Baseline: Oregon Healthy Teens Survey, 2013).			✓
4. Decrease the prevalence of adults who report no leisure time physical activity from 16% in Crook County, 14% in Deschutes County and 17% in Jefferson County to 14%, 12%, and 15 % respectively (Baseline: Oregon BRFSS, 2010-13).			
5. Decrease the prevalence of 11th graders and 8th graders who have zero days of physical activity from 11% and 6% to 10% and 5%, respectively (Baseline: Oregon Healthy Teens, 2013)			

Action Area	Strategy
Prevention and Health Promotion	• Encourage healthcare providers to increase referrals, including electronic referrals, to the Oregon Tobacco Quit Line. • Promote the Oregon Health Authority statewide Smokefree Oregon campaign for youth. • Offer training and assistance to healthcare providers to implement "2As and R" or "5As" tobacco cessation counseling. • Implement a community-based educational campaign on blood pressure control (i.e., Measure Up/Pressure Down). • Engage community-based organizations (schools, dentists, colleges, employers, hospital, etc.) in an educational program/campaign around BP control and monitoring and CVD relationship. • Engage employers to offer worksite health promotion programs that support improved employee weight status by targeting nutrition and physical activity

Cardiovascular Health

Action Area	Strategy
Clinical	• Implement evidence-based guidelines for the control of hypertension. • Provide assistance to patients to self-monitor blood pressure, either alone or with additional support. • Increase referrals to the Oregon Tobacco Quit Line. • Implement “2As and R” or “5As” tobacco cessation counseling.
Policy	• Implement a tobacco retail licensing program that will eliminate illegal sales to minors, prevent retailers from selling tobacco within 1000 feet of schools, raise the age of purchase to 21, and eliminate sales of flavored tobacco products. • Increase the number of schools using the CDC School Health Index to improve their health policies and programs. • Encourage healthy community design and policies that increase opportunities for physical activity, access to healthy foods, and other health-enhancing features.
Health Equity	• Identify, develop and implement culturally competent materials and programs such as Smokefree Oregon ads for culturally disparate populations. • Please refer to the chapter on social determinants of health for additional strategies.
Childhood Health	• Engage schools to promote CVD prevention using best-practice, school-based model.

Examples of Key Partnerships

- Health systems and healthcare providers
- Public health departments
- High schools (school nurses, school-based health centers)
- School boards
- Places of worship
- Employers
- Colleges
- State health promotion and prevention programs
- Farmers markets
- Grocery stores

Diabetes

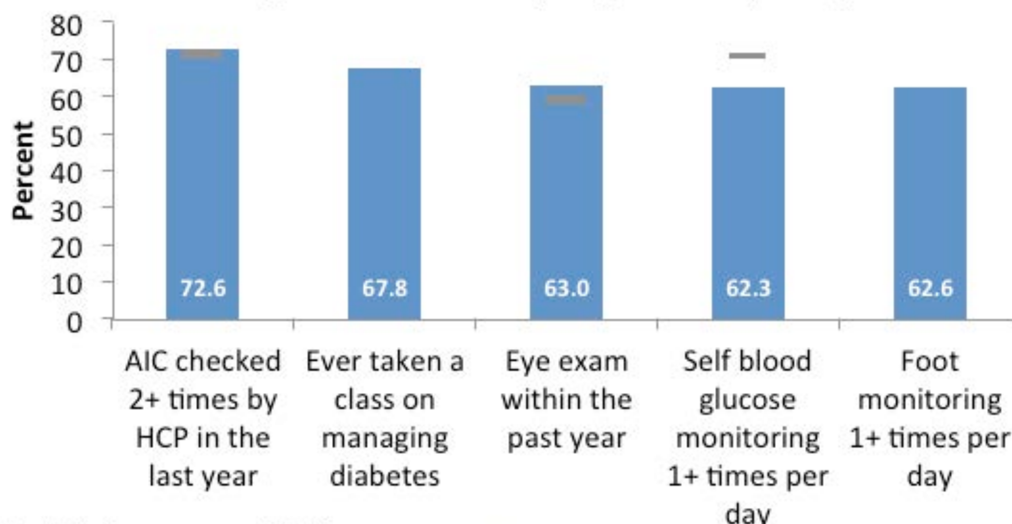
The Problem

Diabetes is characterized by having high blood sugar levels and can lead to serious adverse outcomes if left untreated. There are several types of diabetes, including type 1, type 2, and gestational diabetes. Type 1 diabetes is an autoimmune disorder usually diagnosed at an early age. Type 2 diabetes, which makes up 95% of diabetes cases, is often diagnosed in adulthood (Lloyd-Jones D, et al., 2009). Gestational diabetes is a condition that affects pregnant women and often goes away once the baby is born. If left untreated, gestational diabetes may cause problems for the mother and baby. In addition, gestational diabetes puts women at increased risk for later developing type 2 diabetes. Prediabetes is a condition in which an individual has blood sugar levels that are elevated but not high enough to be considered diabetes.

In all cases, a diagnosis of diabetes has significant impacts on quality of life. If left untreated or poorly managed, diabetes can lead to major life-threatening and costly complications including kidney disease, blindness, cardiovascular disease and lower extremity amputations.

Many of the risk factors for prediabetes, diabetes and cardiovascular disease are the same and include physical inactivity, overweight/obesity, high blood pressure, tobacco use, and an unhealthy diet. This means that many individuals can focus on adopting the same healthy strategies to prevent the most common chronic health problems. Strong evidence shows that lifestyle interventions for persons at risk for developing diabetes significantly reduces risk of developing type 2 diabetes (DPP Research Group, 2009). These programs include coaching and counseling to maintain a healthy weight, increasing physical activity, eating healthy, and controlling hypertension, and can reduce the risk of developing type 2 diabetes as well as cardiovascular disease.

In Oregon, 9% of adults reported having diabetes in 2013, reflecting a doubling in prevalence over the past 20 years (Oregon Health Authority, 2015). For these adults, a key element of diabetes control is self-management education. Recent studies estimate that more than 1 out of 3 US adults (38%) – or 1 million Oregon adults have prediabetes; 9 out of 10 adults with prediabetes are not aware they have it (CDC, 2014). American Indians/Alaska Natives, African Americans and Latinos have a higher prevalence of diabetes than non-Latino Whites.



Diabetes

Goals

Clinical Goal

Improve control of type 2 diabetes.

Prevention Goal

Decrease the proportion of adults and children at risk for developing type 2 diabetes.

Health Indicators by 2019	QIM Measure	State Measure	HP 2020
1. Decrease the prevalence of adults who are overweight (BMI 25 to 29.9) from 33% to 31% (Baseline: Oregon BRFSS 2010-13).			✓
2. Decrease the prevalence of 11th graders and 8th graders who are overweight from 14% and 16%, respectively, to 13% and 14%, respectively (Baseline: Oregon Healthy Teens, 2013).			✓
3. Decrease the percentage of OHP participants 18-75 years of age with diabetes who had HbA1c >9.0% from a baseline of 14.7% to 11% (Baseline: QIM NQF 0059 - Diabetes: HbA1c Poor Control, 2014).	✓		✓
4. Increase the percentage of OHP participants 18-75 years of age with diabetes who received an annual HbA1c test from a baseline of 77% to 87% (Baseline: NQF 0057 - Oregon State Performance Measure, 2014).	✓	✓	✓
5. Decrease the percentage of OHP participants with BMI greater than 30 from 31.5% to 30.9% (Baseline: Oregon State Core Performance Measure, MBRFSS 2014).		✓	✓

Action Area	Strategy
Prevention and Health Promotion	• Implement a Diabetes Prevention Program (DPP). • Increase availability of diabetes self-management programs. • Engage employers to offer worksite health promotion programs that support improved employee weight status by targeting nutrition and physical activity. • Partner with grocery stores and farmers markets to increase pre-diabetes and diabetes awareness programs. • Develop targeted strategies to improve Diabetic Medication Adherence (i.e.: refrigeration, MedMinders, etc.). • Create partnership with Parks and Recreation offices to offer peer led exercise sessions.

Diabetes

Action Area	Strategy
Clinical	• Increase referrals to diabetes self-management and prevention programs. • Improve medication adherence among patients with diabetes. • Increase postpartum screening and follow-up for patients with gestational diabetes. • Increase the use of case management interventions for patients with diabetes with CCO support for clinic innovations. • Improve coordination between medical and dental providers to provide the tools and education needed about the correlation between oral health and diabetes (i.e.: Dental Medical Integration (DMI) Project).
Policy	• Increase the number of schools using the CDC School Health Index to improve their health policies and programs.
Health Equity	• Increase provider and community referrals to the Spanish language Tomando Control chronic disease self-management program. • Create diabetes awareness campaigns that are culturally aligned, health literate, and community specific. • Encourage healthy community design and policies that increase opportunities for physical activity, access to healthy foods, and other health-enhancing features. • Please refer to the chapter on social determinants of health for additional strategies.
Health System/ Access	• Engage health systems to implement systematic EHR referrals to diabetes self-management and prevention programs. • Improve provider and community awareness of diabetes self-management programs.

Childhood Health	• Promote coordinated school health programs that prevent risk behaviors that contribute to heart disease and stroke:
	    o Maintain or establish enhanced physical education classes.
	    o Prohibit withholding recess as punishment.
	• Engage schools to provide evidence-based interventions to promote physical activity and nutrition education in schools.

Diabetes

Examples of Key Partnerships

- Health systems and healthcare providers
- Public health departments
- Grocery stores
- Farmers markets
- Schools (policies around PE and physical activity during school hours)
- Parks and Recreation officials
- Pharmacies
- Employers
- Health clubs
- Places of worship
- Non-profit organizations

Oral Health

The Problem

The health of the mouth and surrounding structures is central to a person's overall health and well-being. Dental caries (cavities) is a communicable infectious disease most frequently caused by the bacterium Streptococcus mutans. Preventing the transmission from one person to another or controlling bacteria load in the mouth is possible and can eliminate or decrease tooth decay.

Dental caries is the most common chronic disease among children and is 5 times more common than asthma (American Academy of Pediatric Dentistry, n.d.). Untreated decay or other oral health problems in children can result in attention deficits, learning and behavior challenges in school, and problems speaking, sleeping and eating (The California Society of Pediatric Dentistry and California Dental Association, n.d.). In Central Oregon, one-quarter to one-half of first and second graders that were screened in selected Central Oregon schools had untreated tooth decay (Kemple Memorial Children's Dental Clinic, n.d.). Moreover, between 71.7% and 76.3% of Central Oregon 8th graders reported having at least one cavity, and between 4.8% and 6.4% missed one or more hours of school due to going to the dentist because of tooth or mouth pain (Oregon Health Authority, 2015).

Among adults, poor oral health may negatively affect a person's ability to obtain or keep a job and form relationships (National Institute of Dental and Craniofacial Research, 2000). In Central Oregon, one safety net clinic reported 40% of low-income patients seeking care for their physical health had dental issues that impacted their ability to eat or sleep (Volunteers in Medicine, 2013). Nationally, employed adults lose more than 164 million hours of work each year due to dental disease and dental visits (Centers for Disease Control and Prevention, 2006). Poor oral health is also associated with adverse pregnancy outcomes and other disease and conditions such as diabetes, cardiovascular disease, stroke and respiratory disease (National Institute of Dental and Craniofacial Research, 2000). Limited data exists regarding the older population but the 2014 Strategic Plan for Oral Health states that 33% of Oregonians ages 33-44 still have all of their teeth, while 37% of individuals age 65 and over have lost six or more teeth (Oregon Oral Health Coalition, 2014). Minorities and low-income populations are significantly more likely to report oral health problems (World Health Organization, 2012).

Oral Health

Goals

Clinical Goal

Improve oral health for pre and post-natal women.

Prevention Goal

Keep children cavity-free.

Health Indicators by 2019	QIM Measure	State Measure	HP 2020
1. By 2019, increase the percent of pre and postnatal women who had a dental visit from 55.2% to 60% (Baseline: PRAMS, 2011).			✓
2. By 2019, increase the percent of children 6-14 years who received a dental sealant to 20% (Baseline: Oregon Health Authority, 2015).	✓	✓	✓
3. By 2019, decrease the percent of 1st and 2nd graders with untreated dental decay in schools that participate in the School Dental Sealant Program by 5% (Baseline: School Dental Sealant Program, 2013-2014).			✓
4. By 2019, decrease the percent of 8th graders who missed one or more hours of school due to going to the dentist because of tooth or mouth pain by 0.5% (Baseline: Oregon Health Teens Survey, 2013).			
5. By 2019, increase the percent of children 0-5 years who received a dental service within the reporting year to 40% (Baseline: PRAMS, 2011).			✓

Action Area	Strategy
Prevention and Health Promotion	• Partner Dental Care Organizations (DCOs) with pediatricians to provide post-natal moms with oral hygiene instruction and 90 day supply of xylitol at two-week post-natal visit. • Provide education to providers asking the One Key Question® regarding importance of a dental visit prior to pregnancy. • Decrease fear of the dentist by increasing provider awareness of Adverse Childhood Experiences (ACEs). • Work with schools to ensure children receive toothbrush kits on a regular basis. • Work with community-based entities to increase outreach, education, and intervention to underserved individuals. • Assess oral health literacy. • Implement Brush, Book, Bed (AAP). • Provide nutrition counseling. • Provide tobacco cessation resources.

Oral Health

Action Area	Strategy
Clinical	• Patients who indicate they plan to get pregnant in the next year get referred into dental care. • Deliver preventive dental services to children and pregnant women in non-traditional settings. • Primary care clinician prescribes oral fluoride supplementation starting at 6 months of age for children whose water supply is deficient in fluoride. • Primary care clinicians apply fluoride varnish to the primary teeth of all infants and children starting at the age of primary tooth eruption.
Policy	• Develop policies and practices to fast track pregnant women into dental care. • Work with legislators to include fluoridated toothpaste in the SNAP benefits. • Work with legislators to get fluoridated toothpaste to be covered as a prescription benefit for OHP members. • Adopt trauma-informed care model policies within dental practices. • Adopt a policy to see patients in the first year of life within dental practices. • Establish optimally fluoridated community water systems.
Health Equity	• Business practices and services will be culturally and linguistically competent in all dental locations. • Please refer to the chapter on social determinants of health for additional strategies.
Health System/ Access	• Integrate oral healthcare into the standard practice of care for all healthcare settings. • All providers, including school-based health centers, shall adopt a minimum of two questions to assess oral health status and refer as appropriate. • All primary care providers and primary care dentists shall adopt the One Key Question® and make appropriate referrals based on intent to become pregnant. • All primary care providers, behavioral health professionals, and primary care dentists will administer or have knowledge of their patients' ACEs score. • OB/GYN practices shall adopt policies/practices to assess oral health and refer to care. • Expand comprehensive community-based oral health. • Expand First Tooth program beyond clinic providers to include home visitors and lay persons such as licensed childcare workers and school nurses.

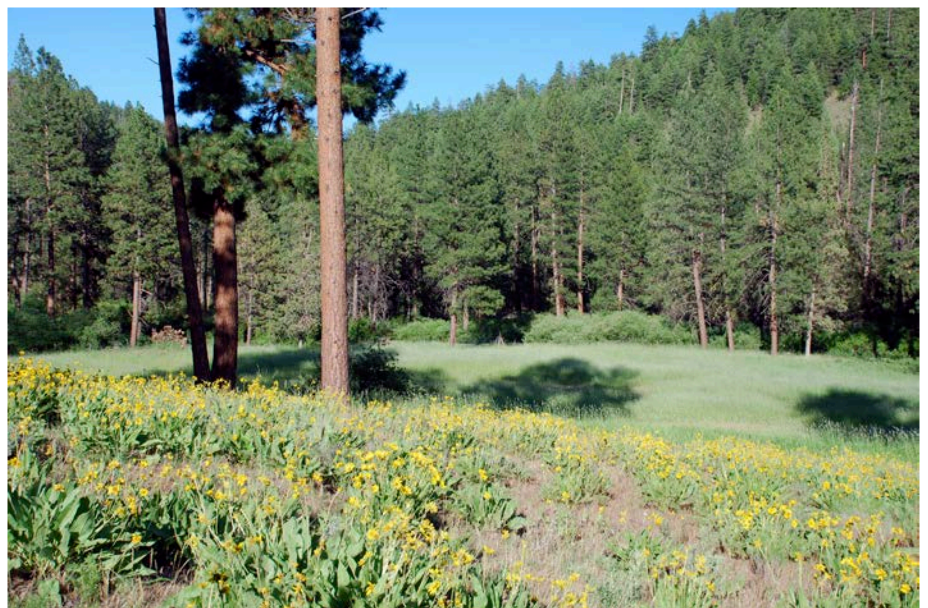
Oral Health

Action Area Strategy

Action Area	Strategy
Childhood Health	• See previous Oral Health Action Areas and Strategies that address Childhood Health through their efforts.

Examples of Key Partnerships

- Health systems and healthcare providers
- Public health departments
- High schools (school nurses, school-based health centers)
- School boards
- Places of worship
- Employers
- Colleges
- State health promotion and prevention programs



Reproductive & Maternal Child Health

The Problem

Maternal and child health indicators describe the health and well-being of mothers, infants, children, and families. A mother's health and well-being before, during, and after pregnancy has direct and sometimes lifelong effects on the health of her child.

As a focus of maternal child health, low birth weight (LBW) is a serious public health challenge. Babies who have very LBW can be at higher risk of death and other complications as they grow up. LBW infants are more likely to die before their first birthday and more likely to suffer from cognitive development issues and chronic health conditions, such as high blood pressure and asthma. The problems associated with LBW also continue into adulthood: Compared to their peers, LBW individuals attain less education and earn less income. LBW is associated with tobacco, alcohol, and drug use; lack of early prenatal care, lack of maintaining a healthy weight.

In Central Oregon, 77.9% of infants received prenatal care in the first trimester as compared to 77.8% in Oregon (OHA – Performance Measures, 2015). Differences between the counties in 2014 show Deschutes at 81%, Crook at 70.4%, and Jefferson at 68.5% (OHA, 2014). Timeliness of prenatal care is a current quality incentive measure for the CCO.

The rate per 1000 for smoking during pregnancy was six times higher among women enrolled in OHP in Central Oregon than those with private insurance as demonstrated by the inset table. Cigarette smoking prevalence is a 2016 CCO quality incentive measure.

Table 1. Percent of women on OHP versus private insurance who smoked during pregnancy

	Oregon	Crook	Deschutes	Jefferson	Central Oregon
OHP	19.1	28	17.7	14.4	17.9
Private	3.9	6.6	2.5	3.1	2.8

Unintended pregnancy refers to pregnancies that are mistimed, unplanned, or unwanted. About 51% of pregnancies in the United States are unintended (Guttmacher Institute, 2015). Measuring rates of unintended pregnancy helps gauge a population's needs for contraception and family planning. Unintended pregnancy is associated with increased risk of health problems for the baby as the mother may not be in good health or delay prenatal care upon learning of the pregnancy. Almost 50% of pregnancies in Oregon are unintended, and have been for more than three decades (Finer & Kost, 2011). In 2011, the most recent year for which there is state-level data on pregnancy intentions, there were 45,136 births, 37% of which were considered unintended. That year there were 9,567 elective abortions. Also in 2011, the unintended pregnancy rate was 36.6% for Oregon, 38.8% for Central Oregon, 37.7% for Deschutes County, and 35.3% for Jefferson County. The total unweighted denominator for Crook County was too small to report. (OHA, 2011; PRAMS, 2011).

A published study in 2013 found that Medicaid paid for approximately 63% of unintended births in Oregon (Sonfield & Kost, 2013). Among women ages 19 and younger, more than four out of five pregnancies were unintended. The proportion of unintended pregnancies is highest among teens younger than 15 years, with 98 percent of these pregnancies being unintended (Finer and Zolna, 2014).

Immunizations are a key public health measure for preventing the spread of disease. A series of immunizations are delivered to children to ensure their immunity to many diseases. The trend over the past few years has shown a decrease in the immunization rates and there have been outbreaks throughout the nation. Central Oregon's rates have decreased to a point of concern. As noted in the 2015 Regional Health Assessment, two-year-olds in Jefferson County were more frequently up to date with immunizations than were two-year-olds in Crook and Deschutes County. Central Oregon practices and public health departments who provide vaccinations should assess and develop approaches to increase immunization rates in their practices to improve the health of Central Oregon children.

Reproductive & Maternal Child Health

Goals

Clinical Goal

Reduce the prevalence of low birth weight among live-born infants by improving prenatal/postnatal care for mothers and infants.

Prevention Goals

Prevent unintended pregnancies.
Improve immunization rates of children birth to two years.

Health Indicators by 2019	QIM Measure	State Measure	HP 2020
1. By 2019, increase the number of women in Central Oregon who receive prenatal care beginning in the first trimester from 86% to 90% (Baseline OHA: Performance Measures – Central Oregon Region – PS – May 2015; Oregon Health Authority 2013: Crook (77.8) Deschutes (81.0) Jefferson (66.3) (Baseline: Healthy 2020 – 70.8%).	✓	✓	✓
2. By 2019, decrease the percent of tobacco use among Central Oregon pregnant women from an average of 12.1% to 7.0% (Baseline: Oregon Health Authority Annual Report, 2013; Crook (15.0%) Deschutes (9.8%) Jefferson (11.4%) (Tobacco Smoking Prevalence – 2016 Metric).	✓		✓
3. By 2019, reduce low birth weight (LBW) (less than 2500 g {less than 5 lbs. 8 oz.}) to an incidence of no more than 5% of live-born infants in Central Oregon (Baseline: OHA, 2014; Healthy People 2020 - Goal).			✓
4. By 2019, increase effective contraceptive use among women of childbearing age in Central Oregon from 31.4% to 50% (Baseline OHA: Performance Measure – Central Oregon Region – PSCS – May 2015).	✓		✓
5. By 2019, increase the Central Oregon State Performance Measure – Child Immunization Status rate (0-24 months) (NQF 0038) from 62.1% to 80% (Baseline OHA: Performance Measure – Central Oregon Region – PS – May 2015; Immunization Rates, Oregon, 2014 (4.3.1.3.3.1.4) Crook (63%) Deschutes (60%) Jefferson (70%); Healthy People 2020 – 80%.	✓	✓	✓

Reproductive & Maternal Child Health

Action Area	Strategy
Prevention and Health Promotion	• Increase 2-year-old children immunization rates by implementing the Central Oregon Regional Immunization Rate Improvement Project (IRIP) in Deschutes, Crook and Jefferson County using the AFIX Program in Coordinated Care Organization (CCO) participating clinics. • Expand prenatal and postnatal home visiting services to high-risk women in Central Oregon (NQF 1517). • Provide home visits with the intent of educating on topics that include vaccinations, tobacco, alcohol, and key referrals for community resources. • Screen women for their pregnancy intention on a routine basis by implementing "One Key Question© with all providers in Central Oregon. • Support and promote contraception immediately following pregnancy. • Provide referral to oral health services in pregnancy. • Provide evidence-based community messaging and curricula to adolescents focusing on preventing unintended pregnancy, HIV/AIDS, and STIs. • Ensure timely access to contraceptives and STI support. • Support the initiation and sustainment of breastfeeding for new mothers with programs such as WIC, home visiting and "Baby-Friendly" hospitals.
Clinical	• Screen 100% of pregnant women and refer them to appropriate medical, dental, behavioral and social services. • Implement the "2As and R" and "5As" tobacco cessation and counseling in all healthcare settings. • Increase referrals of pregnant women who use tobacco to the Oregon Tobacco Quit Line.
Policy	• Promote the inclusion of age appropriate, medically accurate sexual health education in our schools (ODE, HB2509 – ORS336.455). • Promote policies that support barrier free access to contraceptives. • Promote policies that increase access to prenatal care with equity and rural concerns considered. • Promote policies that support the use of LARC (long acting reversible contraceptives) as the most effective birth control option for women at highest risk for pregnancy.
Health Equity	• Please refer to the chapter on social determinants of health for additional strategies.

Reproductive & Maternal Child Health

Action Area	Strategy
Health System/ Access	• Implement universal nurse home visiting (Family Connects) as part of a regional perinatal continuum of care system in partnership with public health, primary care medical providers and the CCO. • Expand access/marketing to improve effective contraceptive rates in primary care and public health.
Childhood Health	• Reduce child maltreatment using evidence-based home visiting programs (i.e., Family Connects, Healthy Families) that work to improve family well-being and to reduce child maltreatment by coordinating services for high-risk families. • Provide referrals that link clients to community services, resources and support (Early Learning Metric).

Examples of Key Partnerships

- Health systems and healthcare providers
- Public health departments
- High schools (school nurses, school-based health centers)
- School boards
- Places of worship
- Employers
- Colleges
- State health promotion and prevention programs

Social Determinants of Health Part 1
Education and Health

The Problem

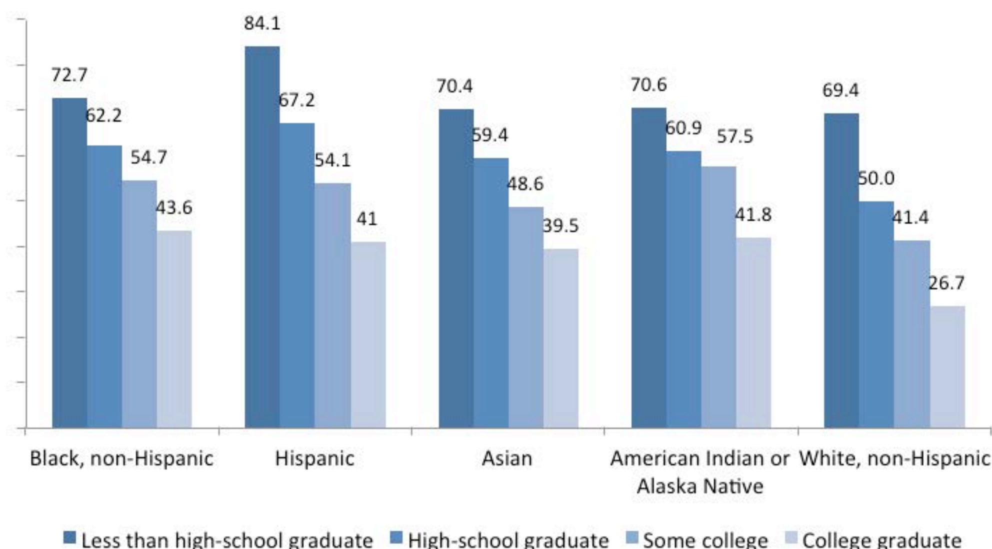
Healthy People 2020 highlights the importance of addressing the social determinants of health (SDOH) by including “create social and physical environments that promote good health for all” as one of its four overarching goals for the decade. The initiative has created a “place-based” organizing framework that categorizes SDOH into five (5) key areas:

- Economic Stability
- Education
- Social and Community Context
- Health and Healthcare
- Neighborhood and Built Environment

The SDOH span a wide range of complex and intertwined social conditions. Few, however, would argue that without a good education, people are significantly less likely to find stable employment with living-wage earnings. They are more likely to be living in poverty – which involves unstable/low-quality housing, unsafe neighborhoods, limited access to healthcare, transportation disadvantages and limited access to basic needs like affordable, healthy food (Low et al, 2005). While this is logical, what may be less intuitive is how strongly educational attainment is linked to health outcomes.

The Robert Wood Johnson Foundation, arguably the largest and most powerful think tank related to SDOH in the United States, commissioned a white paper in 2011 highlighting strong evidence that consistently connects educational attainment and health, even when other SDOH factors, such as income, are taken into account (Mirkowsky et al, 1999 and 2003). The study examined the interrelated pathways in which education is linked with health, including health knowledge and behaviors; employment and income; and social and psychological factors, including sense of control, social standing, familial context and social networks. One could conclude from this study that to impact SDOH at a population level, educational achievement should be a primary focus.

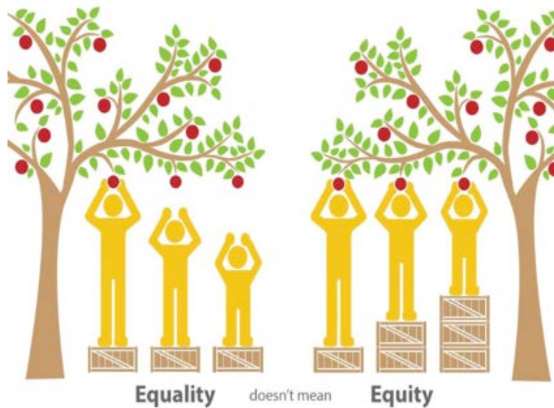
Figure 1. Percent of adults, ages 25-74 years, in less than very good health*



§ Source: Behavioral Risk Factor Surveillance System Survey Data, 2005-2007.
† Based on self-report and measured as poor, fair, good, very good or excellent.
* Age-adjusted.

Social Determinants of Health Part 1
Education and Health

Kindergarten Readiness and Third-grade Reading Scores



There are several early milestones that are closely linked to a child's future academic achievement. In elementary school, these include kindergarten readiness, third grade reading and fourth grade math. Data from across the states suggest that as a child's kindergarten readiness scores improve, the later milestone scores rise accordingly (Duncan et al, 2008). Furthermore, third grade reading level scores has been linked to high school graduation rates (Silver and Saunders, 2008). Both kindergarten readiness and third-grade reading are key indicators of future success because children with low scores at these milestones face a confounding learning disadvantage going forward (Maryland Department of Education, 2010).

Equity, Disparities and Vulnerable Populations

There are a variety of SDOH factors that are barriers to educational achievement. These include adverse family context, food insecurity, culture and language differences and presence of childhood trauma (toxic stress). Though we know less education is linked with worse health across all racial and ethnic sub-groups (see Figure 1), there are populations that have different experiences and levels of exposure to these barriers.

Many school boards across Oregon struggle to meet the needs of students and families who have cultural or linguistic needs, special needs, live in poverty or have other barriers such as adverse family situations. Just as healthcare reform highlights the need for an equity lens as a key strategy, education reform has a similar calling. This focus on equity on both sides means that programs and policies aimed at outcomes such as increasing educational achievement should take all differences between and within subgroups into account and all programs should be tailored to address such differences.

In Central Oregon, geographic differences also need to be examined and any programs and efforts to address educational achievement need to be in balance with community needs and demographics. For example, the 501J School District in Jefferson County is one of the most diverse in the state. One-third of students are Latino, one-third White non-Hispanic, and one-third Native American.

Early Childhood Adversity, Toxic Stress, and the Role of Community

Neuroscience is catching up with what we have long suspected about social determinants of health affecting children's learning and development. The original study on Adverse Childhood Experiences (ACEs) was published almost 20 years ago in collaboration between the CDC and Kaiser Permanente. Recently, growing understanding of the science behind toxic stress outcomes is generating renewed interest and investment, resulting in a push for strategies and practices that would prevent ACEs by targeting protective changes in the child's early life context. The American Academy of Pediatrics (AAP) calls these contexts "early childhood ecology." In their 2012 policy statement, the AAP states: "The effective reduction of toxic stress in young children could be advanced considerably by a broad-based, multi-sector commitment in which the profession of pediatrics plays an important role in designing, implementing, evaluating, refining, and advocating for a new generation of protective interventions."

Social Determinants of Health Part 1
Education and Health

Opportunity-Connecting the Dots

Central Oregon has the right combination of state and local healthcare, community-based, public health and education system reform initiatives that if properly aligned, could have the potential to change health-shaping contexts for children and families. The following initiatives are either in development or being implemented regionally:

- Coordinated Care Organizations (CCO) – transformation of the Medicaid delivery system (60+% children, disproportionate poverty).
- Cradle to Career: Early Learning Hub/Regional Achievement Coalition (Better Together).
- Health and housing.
- Public health/primary care partnership (Perinatal Collaborative) to improve outcomes for at-risk moms, children and families.
- A growing interest in addressing Adverse Childhood Experiences (ACEs) and toxic stress (EL Hub, United Way of Deschutes County, PacificSource CCO).

Rather than coming at ACEs, child development and education from separate silos, what if all these stakeholders were to come together and adopt one, unified and powerful goal – that all children in Central Oregon enter kindergarten ready to learn, graduate from high school and go on to college? Given the strong and conclusive evidence that intertwines ACEs, educational achievement and long-term health, impact indicators, such as kindergarten readiness, could be easily tracked – with positive results giving us good confidence that we are removing SDOH barriers for both children and their families. Furthermore, if the perinatal population is targeted and children and their families are followed through their first 4-5 years with strong evaluation supports in place, the community will learn and improve upon how our multi-sectoral approach is performing with data and information as soon as the end of this RHIP cycle.

COMMUNITY SPOTLIGHT
United Way & ACES

United Way in Central Oregon is pursuing collective impact methods to heighten its impact on important social determinant needs and issues. As part of a long-term planning process, childhood trauma or Adverse Childhood Experiences (ACEs) has emerged as a critical issue of strategic importance to both United Way and its partnering agencies. The organization has initiated a broad-based effort to advance the prevention and treatment of childhood trauma. Goals include:

- Increasing awareness of ACEs and their negative impact on health and education outcomes
- Developing shared understanding and language for discussing ACEs, toxic stress , and resiliency
- Aligning agencies and programs around common goals
- Integrating trauma informed practices in programs and services
- Ensuring consistent, quality training and support for front-line workers

As a community-based organization, United Way is uniquely positioned to build the capacity of the community to address ACEs and trauma. They have a track record of community impact, as well as, competencies that include a broad-based network of partner agencies and donors, and a proven ability to raise and manage significant funds. For all these reasons, United Way will be a critical partner throughout implementation of the RHIP education and health strategy.

Education and Health

Example Successful Cross-Sectoral Interventions

Fortunately, Central Oregon would not have to start from scratch in organizing and developing a strategy to change the early childhood ecology for vulnerable children and families. There is already momentum and planning taking place with healthcare representation through the work of the Early Learning Hub. There are also many best practices that could be studied to inform a community strategy that addresses ACEs by wrapping education, health and social supports (i.e. housing, transportation, employment) around families to impact children and youth educational achievement goals (Department of Vermont Health Access, 2015). Listed below are a few examples of multi-sectoral programs that are showing positive results nationally:

- Child-Parent Education Centers (CPC): CPC programs provide comprehensive educational, family support and healthcare services to economically disadvantaged children from ages 3-9. First developed in the 1960s, CPC initially launched in 25 sites in Chicago. The key goals were to improve school achievement, attendance, and parent engagement.
- Northside Achievement Zone: The Northside Achievement Zone (NAZ) exists to permanently close the achievement gap and end generational poverty for communities of color in North Minneapolis. Similar to Harlem's Children Zone, NAZ uses a family-centered, wraparound framework (housing, healthcare, parenting education supports) starting in the perinatal years, effectively supporting low-income families overtime so that their "scholars" will graduate from high school and be prepared for college. NAZ-enrolled families are making remarkable strides. Children are not only showing improved academic outcomes at key kindergarten and third grade benchmarks, but families are stabilizing their housing, employment, and health. A study by Wilder Research demonstrated that each dollar invested in NAZ provides more than a $6 societal return.
- Durham Connects: Increases child well-being by bridging the gap between new parent needs and community resources. The project is a collaborative effort among the Center for Child & Family Health, The NC Department of Social Services, and the Durham County Health Department. Durham Connects hires and trains nurses to provide in-home health assessments of mothers and newborns, as well as to discuss the social conditions affecting the family. A study conducted between July 2009 and December 2010 showed increased positive parenting behaviors, father involvement, childcare selection, and reduced infant hospitalization among Medicaid recipients.
- Center-Based Early Childhood Education: Prepares children by providing skills development and readiness training, while also focusing on health and social development. ECE programs aim to improve the cognitive and social development of children ages 3 or 4 years.

COMMUNITY SPOTLIGHT: M.A. Lynch Elementary School

M.A. Lynch Elementary School had the highest percentage of students impacted by poverty in Deschutes County. After becoming a full-service Community School, it went from a "School in Improvement," status under No Child Left Behind to a "Champion School," within three years. At the time of the State Recognition, 93% of students met or exceeded the reading benchmark, and 88% met or exceeded the math benchmark.

The Community School model expands before and after school programs for students and families and maximizes instructional time during the day. Enrichment and targeted academic support is provided for students and a wide range of services are provided to support parents such as GED programming, English language instruction, workshops on parenting and how to cope with stress, and financial preparation. To serve its growing Latino population, Lynch brought on a bilingual Community School Coordinator. Health was also a key support. Deschutes County Health Services and FQHC Mosaic Medical teamed up to open a school-based health clinic at Lynch to provide a range of physical and behavioral health services. More recently, the school has hosted a Head Start preschool program, creating a new bridge between early learning and the K-12 education system.

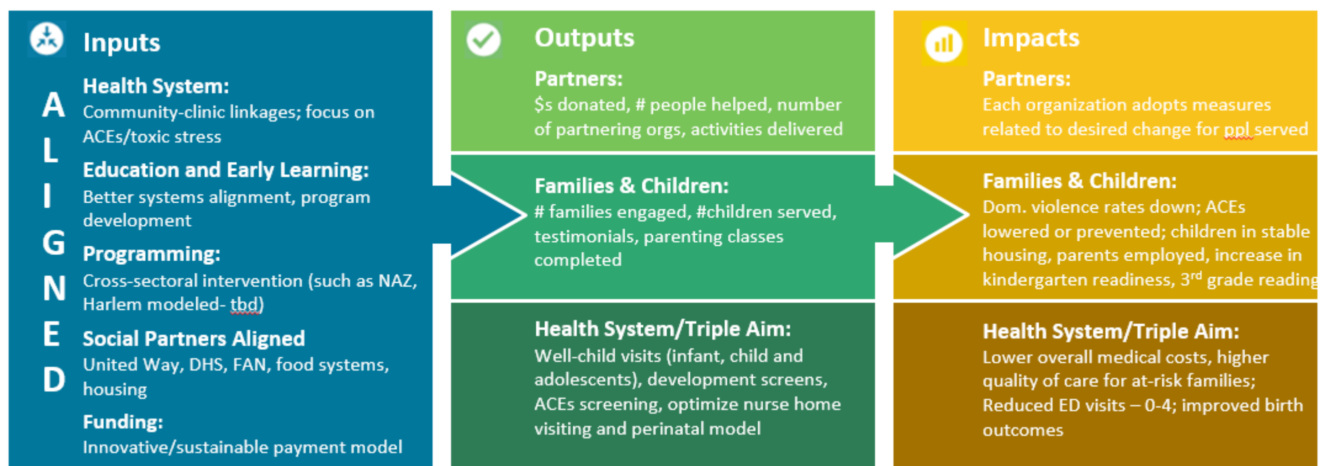
Education and Health

Education & Health Strategy Implementation Recommendations

1. There are five key strategies that the Central Oregon CCO and larger health system can take to advance educational achievement (i.e. kindergarten readiness) as a central SDOH goal (depicted as inputs in figure 2):
2. Inventory and understand the potential confluences that could be strengthened in partnership with community and education-based systems, such as the Early Learning Hub and public health nurse home visiting programs.
3. Align with and leverage the growing interest from healthcare, education and community-based organizations (i.e. United Way), in the prevention and treatment of early childhood trauma.
4. Support the formation of a workgroup that would bring together, education (Early Learning/Better Together), community-based and health system partners to identify achievement gaps "hot spots" and develop strategies to health, social service and education supports around children and families.
5. Intervene as early as possible to build resiliency in children and families, but also support youth whose lack of basic needs or poor health gets in the way of learning while already in school. The health system can support all children, youth and families by:
    - Promoting and providing annual well-child visit and conducting developmental screenings in the first 3 years of life
    - Promoting and providing annual adolescent well visits
    - Screening for ACEs (parents and children) and referring to treatment when appropriate
    - Meaningful and measurable collaboration with education, community and social support system
    - Develop innovative funding mechanisms to sustain outcome-producing models

The COHC, through the Operations Council, will develop a four-year work plan, in partnership with the above mentioned stakeholders, to implement strategies that pertain to the health system's role, starting with Board adoption of kindergarten readiness as a system metric. This work plan should be vetted by numerous stakeholder groups and by the COHC, to be given final approval by no later than April 1, 2016.

Figure 2. Education & Health Strategy At a Glance



Social Determinants of Health Part 2

Housing

The Problem

The home has deep cultural ties in America – a place where friends and families gather. The home is an anchor in the larger community, where connections and health-protective social networks flourish. As is the case with education, access to safe and stable housing constitutes one of the most basic and powerful social determinants of health. In addition to what we know intuitively about housing and health, there is growing scientific evidence that links access to safe and affordable housing with good health outcomes. Ensuring both housing stability and safety – i.e. free of health structural, bio-chemical health hazards, has become a public health priority worldwide. The World Health Organization recommends using the growing body of evidence linking housing and health to guide "primary preventive measures related to housing construction, renovation, use and maintenance, which can promote better overall health."

The lack of safe and affordable housing has become a public health crisis in Central Oregon. Low-income families in all three counties struggle to find affordable housing. Even mid-income families, who do not normally struggle to find housing, are now finding it harder and harder to make ends meet as escalating rent and mortgage costs squeeze out room to budget for other living expenses. In Bend, Central Oregon's largest city, affordable housing is not the only problem. Simply finding a place to live is also extremely difficult with low housing and apartment inventory and high market demand. Given all we know about the importance of housing to health, the current housing environment in this region has the potential to widen and exacerbate inequities and health disparities that impact people with fewer financial and support resources. This is particularly true for individuals and families trapped in a cycle of crisis and housing instability due to extreme poverty, trauma, violence, mental illness, addiction or other chronic health conditions.

Promising Approach

The state of Massachusetts provides housing and supportive services to chronically homeless individuals through their Healthy and Home for Good (HHG) model. This has proven less costly and more effective overall than managing their homelessness and health problems on the street or in a shelter. As of their latest evaluation report, 766 chronically homeless individuals were placed in supportive housing. In the six months prior to housing, those participants accumulated 1,812 emergency department visits, 3,163 overnight hospital stays, 847 ambulance rides and 2,494 detox stays. The estimated total cost per person for measured services, including Medicaid ($26,124), shelter ($5,723) and incarceration ($1,343) amounted to $33,190 per year (Massachusetts Housing and Shelter Alliance, 2014). After one year in the program, the total per person costs for these same services fell to $8,603. With the cost of housing and services through the HHG program amounting to $15,468 per tenant, the total estimated return on investment to the state was $9,118 per person. This is just one of dozens of studies that have shown health care and societal returns as a result of wrapping housing and supportive services around individuals with chronic, unstable housing conditions.

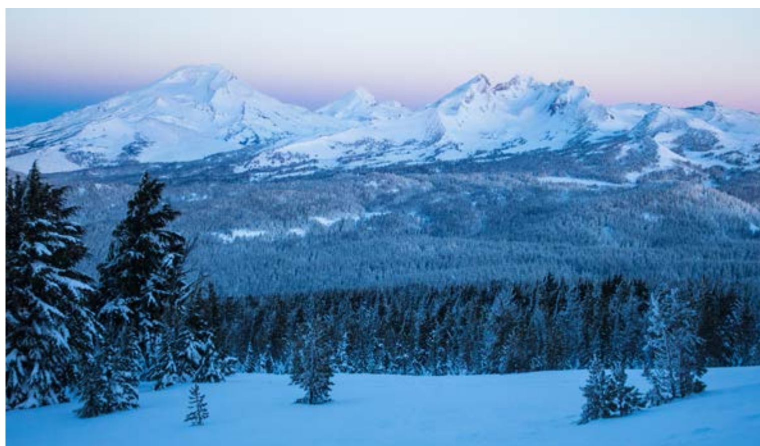
Housing

Implementation Recommendation

As part of its contract with the Oregon Health Authority, PacificSource Community Solutions, Central Oregon's Coordinated Care Organization, has outlined a plan to begin to address the housing crisis by bridging housing solutions with the health system (Transformation Plan Element 4.2). The COHC, through the Operations Council, will develop a four-year work plan around housing and health in alignment with the 2-year Transformation Plan deliverables as described below. Strategies that pertain to the health system's role will be endorsed by the COHC Board of Directors, with Board adoption of one or more housing related metrics to track and monitor performance toward this goal. This work plan should be vetted by numerous stakeholder groups and by the COHC, to be given final approval by no later than May 1, 2016.

Transformation Plan Milestone (July 30, 2016) and Benchmark (July 30, 2017):

- By July 30, 2016: Study promising and existing local, regional and national strategies. CCO, COHC and key partners secure funding for a pilot program that bridges housing and health care for those members who are homeless or at-risk for homeless and also have complex medical and behavioral health needs.
- By July 30, 2017: Partnerships are formalized (e.g. developer, property owner, housing agency). Pilot program begins implementation, dissemination of early findings provided to COHC and CAC.



Appendix A: Acronyms

Adverse Childhood Experiences (ACEs): An adverse childhood experience (ACE) describes a traumatic experience in a person's life occurring before the age of 18 that the person remembers as an adult. The ACE score is a measure of cumulative exposure to adverse childhood conditions.

Acquired Immunodeficiency Syndrome (AIDS): A condition caused by a virus, in which lymphocytes are destroyed, resulting in a loss of the body's ability to protect itself against disease.

Assessment, feedback, incentive, and exchange (AFIX): A quality improvement program used to raise immunization coverage levels, reduce missed opportunities to vaccinate, and improve standards of practices at the provider level.

American Academy of Pediatrics (AAP): An organization dedicated to the health and well-being of infants, children, adolescents and young adults.

American Heart Association (AHA): A non-profit organization in the United States that fosters appropriate cardiac care in an effort to reduce disability and deaths caused by cardiovascular disease and stroke.

Behavioral Health Consultants (BHC): Behavioral health generalists who provide treatment within a healthcare setting for a wide variety of mental health, psychosocial, motivational, and medical concerns. BHCs also provide support and management for patients with severe and persistent mental illness and tend to be familiar with psychopharmacological interventions.

Behavioral Risk Factor Surveillance System (BRFSS): A phone survey conducted among randomly selected non-institutionalized adults that asks about a variety of health risks and behaviors.

Blood Pressure (BP): The pressure of the blood in the circulatory system.

Body Mass Index (BMI): Use both weight and height to determine the size of an individual. BMI is divided into four categories: underweight (<18.5), normal (18.5-24.9), overweight (25.0-29.9), obese (30.0 or greater).

Cardiovascular Disease (CVD): A classification of diseases of the heart and blood vessels that includes chest pain, heart attack, and other conditions that affect the heart muscle, rhythm, or valves.

Centers for Disease Control and Prevention (CDC): A federal organization that protects the health of the nation's residents and helps local communities do the same.

Central Oregon Health Council (COHC): The COHC is the governing body of our region's CCO. The COHC is dedicated to improving the health of the region and providing oversight of the Medicaid population and Coordinated Care Organization (CCO). The COHC's mission is to serve as the governing Board for the CCO and to connect the CCO, patients, providers, Central Oregon, and resources.

Child-Parent Education Centers (CPC): CPC programs provide comprehensive educational, family support and healthcare services to economically disadvantaged children from ages three to nine.

Community Advisory Council (CAC): The overarching purpose of the CAC is to ensure the CCO and COHC remains responsive to OHP consumer and community health needs. The CAC includes healthcare consumers of the CCO as well as representatives of public and private agencies that serve CCO members.

Appendix A: Acronyms

Coordinated Care Organization (CCO): Is a network of all types of healthcare providers who have agreed to work together in their local communities for people who receive healthcare coverage under the Oregon Health Plan (Medicaid).

Car, Relax, Alone, Forget, Friends, and Trouble (CRAFFT): A short clinical assessment tool designed to screen for substance-related risks and problems in adolescents

Dental Care Organizations (DCO): There are eight DCOs in Oregon and they provide dental services to over 96 percent of the OHP clients eligible to receive dental benefits and services.

Diabetes Prevention Program (DPP): A prevention program aimed at improving Diabetes in a specified population. The program should be evidence-based.

Dental Medical Integration (DMI): Dental medical integration is the effort in improve coordination between medical and dental providers to improve client health.

Early Childhood Education (ECE): A program that prepares children by providing skills development and readiness training, while also focusing on health and social development.

Electronic Health Record (EHR): An electronic version of a patient's medical history.

Generalized Anxiety Disorder-7 (GAD-7): A concise self-administered screening and diagnostic tools for mental health disorders.

Glycated hemoglobin (HbA1c): A form of hemoglobin that is used to measure blood glucose concentration over time.

Healthy Eating and Active Living (HEAL): A coalition with diverse membership with the goal of health promotion.

Healthy People 2020 (HP 2020): National goals to meet by the year 2020.

Human Immunodeficiency Virus (HIV): A virus that causes HIV infection and over time acquired immunodeficiency syndrome.

Intravenous drug (IV drug): A drug that is administered into a vein or veins.

Immunization Rate Improvement Project (IRIP): A program to increase immunization rates in children.

Low Birth Weight (LBW): The birth weight of a live-born infant of less than 5 pounds 8 ounces regardless of gestational age.

Long-Acting Reversible Contraception (LARC): Birth control methods that provide effective, reversible contraception for extended periods of time without requiring user action.

Medically Assisted Treatment (MAT): A program that combines behavioral therapy and medications to treat substance use disorders.

Coordinated Care Organization (CCO): Is a network of all types of healthcare providers who have agreed to work together in their local communities for people who receive healthcare coverage under the Oregon Health Plan (Medicaid).

Car, Relax, Alone, Forget, Friends, and Trouble (CRAFFT): A short clinical assessment tool designed to screen for substance-related risks and problems in adolescents

Dental Care Organizations (DCO): There are eight DCOs in Oregon and they provide dental services to over 96 percent of the OHP clients eligible to receive dental benefits and services.

Diabetes Prevention Program (DPP): A prevention program aimed at improving Diabetes in a specified population. The program should be evidence-based.

Appendix A: Acronyms

Coordinated Care Organization (CCO): Is a network of all types of healthcare providers who have agreed to work together in their local communities for people who receive healthcare coverage under the Oregon Health Plan (Medicaid).

Car, Relax, Alone, Forget, Friends, and Trouble (CRAFFT): A short clinical assessment tool designed to screen for substance-related risks and problems in adolescents

Dental Care Organizations (DCO): There are eight DCOs in Oregon and they provide dental services to over 96 percent of the OHP clients eligible to receive dental benefits and services.

Diabetes Prevention Program (DPP): A prevention program aimed at improving Diabetes in a specified population. The program should be evidence-based.

Dental Medical Integration (DMI): Dental medical integration is the effort in improve coordination between medical and dental providers to improve client health.

Early Childhood Education (ECE): A program that prepares children by providing skills development and readiness training, while also focusing on health and social development.

Electronic Health Record (EHR): An electronic version of a patient's medical history.

Generalized Anxiety Disorder-7 (GAD-7): A concise self-administered screening and diagnostic tools for mental health disorders.

Glycated hemoglobin (HbA1c): A form of hemoglobin that is used to measure blood glucose concentration over time.

Healthy Eating and Active Living (HEAL): A coalition with diverse membership with the goal of health promotion.

Healthy People 2020 (HP 2020): National goals to meet by the year 2020.

Human Immunodeficiency Virus (HIV): A virus that causes HIV infection and over time acquired immunodeficiency syndrome.

Intravenous drug (IV drug): A drug that is administered into a vein or veins.

Immunization Rate Improvement Project (IRIP): A program to increase immunization rates in children.

Low Birth Weight (LBW): The birth weight of a live-born infant of less than 5 pounds 8 ounces regardless of gestational age.

Long-Acting Reversible Contraception (LARC): Birth control methods that provide effective, reversible contraception for extended periods of time without requiring user action.

Medically Assisted Treatment (MAT): A program that combines behavioral therapy and medications to treat substance use disorders.

Medicaid Behavioral Risk Factor Surveillance Survey (MBRFSS): The BRFSS conducted among adults enrolled in Medicaid (OHP).

Northside Achievement Zone (NAZ): Exists to permanently close the achievement gap and end generational poverty for communities of color in North Minneapolis.

National Quality Forum (NQF): A non-profit organization that works to improve quality of healthcare through several mediums, including the endorsement of evidence-based measures.

Obstetrics/ gynecology (OB/GYN): An obstetrician is a physician who delivers babies. A gynecologist is a physician who specializes in treating diseases of the female reproductive organs.

Appendix A: Acronyms

Operations Council (OPs): OPs is housed within the COHC, and member promote and facilitate accessible, affordable, quality health services including mental, behavioral, oral, and physical health for Central Oregon residents. This group provides strategic, fiduciary, and operational advice to the COHC in a effort to design and implement key initiatives.

Oregon Department of Education (ODE): The Oregon Department of Education is responsible for implementing Oregon's public education policies, including academic standards and testing, credentials, and other matters not reserved to the local districts and boards.

Oregon Health Plan (OHP): Healthcare coverage program for low-income Oregonians.

Patient Health Questionnaire (PHQ): A concise, self-administered screening and diagnostic tools for mental health disorders.

Performance Improvement Project (PIP): The purpose of a PIP is to assess areas of need and develop a project intended to improve health outcomes. The Oregon Health Authority (OHA) contract requires Coordinated Care Organizations (CCO's) to conduct PIP's that are "designed to achieve, through ongoing measurements and intervention, significant improvement, sustained over time, in clinical and non-clinical areas that are expected to have favorable effect on health outcomes and OHP Member satisfaction.

Prescription Drug Monitoring Program (PDMP): A state-run electronic databases used to track the prescribing and dispensing of controlled prescription drugs to patients.

Primary Care Provider (PCP): A healthcare practitioner who sees people that have common medical problems.

Pregnancy Risk and Monitoring Survey (PRAMS): A survey of mothers who recently gave birth that addresses prenatal care, health behaviors and risks, and post-partum topics.

Provider Engagement Panel (PEP): This is a committee housed within the COHC, and provides a highly valued clinical perspective to the work the CCO and the COHC. Providers of the PEP represent a variety of healthcare organizations that serve the OHP population.

Quality Improvement Measure (QIM): State defined tolls that help measure and track the quality of healthcare services provided by eligible professionals and eligible providers of Medicaid within our healthcare systems.

Screening, Brief Intervention and Referral to Treatment (SBIRT): An evidence-based practice that targets patients in primary care with nondependent substance use.

Social Determinants of Health (SDOH): Conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.

Substance Use and Mental Health Services Administration (SAMSHA): The Substance Use and Mental Health Services Administration is a branch of the U. S. Department of Health and Human Services.

Sexually Transmitted Infection (STI): An infection transmitted through sexual contact, caused by bacteria, viruses, or parasites.

Supplemental Nutritional Assistance Program (SNAP): Nutrition assistance program for low-income families.

Substance Use Disorder (SUD): A condition developed when the use of one or more substances leads to a clinically significant impairment or distress.

To Be Determined (TBD): Indicates the need to further develop a particular idea or strategy.

Women, Infants, and Children (WIC): A Federal program for low income and nutritionally at risk women, infants and children. Participants receive education, screening, and support in purchasing nutritious food.

Appendix B: References

Behavioral Health

Boyd, C., Leff, B., Weiss, C., Wolff, J., Hamblin, A., & Martin, L. (2010). Clarifying multimorbidity patterns to improve targeting and delivery of clinical services for Medicaid populations. A study published by the Center for Healthcare Strategies, Inc.

Centers for Disease Control and Prevention. (2015). CDC wonder, underlying cause of death. 2009-2013. Available at www.wonder.cdc.gov.

Centers for Disease Control and Prevention. (2013). Viral hepatitis surveillance. Available at www.cdc.gov/hepatitis/statisitics/2013surveillance.

Clarke, R.E., Samnaliev, M., & McGovern, M.P. (2009). Impact of substance use disorders on medical expenditures for Medicaid beneficiaries with behavioral health disorders. Psychiatric Services, 60 (1), 35-42.

Lichtman, J.H., Bigger, J.T., Blumenthal, J.A., Frasure-Smith, N., Kaufmann, P.G., Lesperance, F., Mark, D.B., Sheps, D.S., Taylor, C.B., & Froelicher, E.S. (2008). AHA Science Advisory: depression and coronary heart disease. Circulation, 118-1768-1775.

Mancuso, D., & Felver, B. (2010). Bending the healthcare cost curve by expanding alcohol/drug treatment. Report done by the Washington State Department of Social and Health Services, Research Data Analysis Division.

Mauer, B., & Jarvis, D. (2010). The business case for bidirectional integrated care. Available from The Integration Policy Initiative at http://www.cimh.org/Initiatives/Primary-Care-BH-Integration.aspx.

Mertens, J.R., Lu, Y.W., Parthasarathy, S., Moore, C., & Weisner, C.M. (2003). Medical and psychiatric conditions of alcohol and drug treatment patients in an HMO. Arch Internal Medicine, 163:2511-2517.

SAMHSA. (2013). Diabetes care for clients in behavioral health treatment. HHS Publication No. (SMA) 13-4780.

Tann, S.S., Yabiku, S.T., Okamoto, S.K., & Yanow, J. (2007). TRIADD: the risk for alcohol abuse, depression, and diabetes multimorbidity in the American Indian and Alaskan Native population. 14(1)5-27. Journal of American Indian and Alaska Native Mental Health Research.

Cardiovascular Disease

U.S. Department of Health and Human Services. The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014 [accessed 2015 Oct 5].

Diabetes

Lloyd-Jones D, Adams R, Carnethon M, et al. Heart disease and stroke statistics — 2009 update. A report from the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. http://circ.ahajournals.org/content/119/3/e21.extract. Circulation. 2009; 119: e21–e181. Accessed April 9, 2014

Diabetes Prevention Program Research Group (October 29, 2009). 10-year follow-up of diabetes incidence and weight loss in the Diabetes Prevention Program Outcomes Study. The Lancet. Published Online.

Oregon Health Authority. (2015). Oregon Diabetes Report A report on the burden of diabetes in Oregon and progress on the 2009 Strategic Plan to Slow the Rate of Diabetes. Retrieved from https://public.health.oregon.gov/DiseasesConditions/ChronicDisease/Pages/pubs.aspx

Centers for Disease Control and Prevention. National diabetes statistics report: estimates of diabetes and its burden in the United States, 2014. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2014. (http://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-web.pdf)

Appendix B: References

Oral Health

American Academy of Pediatric Dentistry. (n.d.). From American's Pediatric Dentists mychildrensteeth.org The Big Authority on Little Teeth: http://www.mychildrensteeth.org/assets/2/7/ECCstats.pdf

Centers for Disease Control and Prevention. (December 2006). Division of Oral Health: Oral Health for Adults. From Centers for Disease Control and Prevention: http://www.cdc.gov/oralhealth/publications/factsheets/adult_oral_health/adults.htm

Kemple Memorial Children's Dental Clinic. (n.d.). Dental Screening Data, 2014-2015. Bend, Oregon.

National Institute of Dental and Craniofacial Research. (2000). Chapter 6: Effects on Well-being and Quality of Life. From National Institute of Dental and Craniofacial Research: http://www.nidcr.nih.gov/DataStatistics/SurgeonGeneral/sgr/chap6.htm

Oregon Health Authority. (November 2015). Oregon Health Authority: Office of Health Analytics. From Oregon Health Authority: Dental Sealants on Permanent Molars for Children - Guidance Document: http://www.oregon.gov/oha/analytics/CCOData/Dental%20Sealant%20Guidance%20Document%20-%20Nov%202015.pdf

Oregon Health Authority. (2015). Oregon Healthy Teens 2015 Results. From Oregon Health Authority: Public Health: https://public.health.oregon.gov/BirthDeathCertificates/Surveys/OregonHealthyTeens/Documents/2015/2015_OHT_State_Report.pdf

Oregon Health Authority. (2011). Oregon PRAMS: 2011 Results. From Oregon Health Authority: Public Health: https://public.health.oregon.gov/HealthyPeopleFamilies/DataReports/prams/Documents/OregonPRAMS2011.pdf#Oral_Health

Oregon Oral Health Coalition. (2014). Strategic Plan for Oral Health in Oregon: 2014-2020. From Oregon Oral Health Coalition: http://static1.squarespace.com/static/554bd5a0e4b06ed592559a39/t/55a7f5aae4b01d3d0f766de4/1447361848914/Strategic+Plan+for+Oral+Health+in+Oregon.pdf

The California Society of Pediatric Dentistry and California Dental Association. (n.d.). The Consequences of Untreated Dental Disease in Children: Looking Closer at California's Children. From California Dental Association: http://www.cda.org/Portals/0/pdfs/untreated_disease.pdf

Volunteers in Medicine. (2013). Bend, Oregon.

World Health Organization. (2012). Media Centre: Oral Health. From World Health Organization: http://www.who.int/mediacentre/factsheets/fs318/en/

Reproductive and Maternal Health

Department of Health and Human Services, Health Resources and Services Administration Maternal and Child Health Bureau. Women's health USA 2011. Rockville (MD): DHHS; 2011.

Finer, L. and Kost, Unintended Pregnancy Rates at the State Level, Perspectives on Sexual and Reproductive Health, 2011, 43(2): 78-87.

Finer and Zolna. Shifts in Intended and Unintended Pregnancies in the United States, 2001-2008. American Journal of Public Health, 2014; 104:S43-S48

Guide to Community Preventive Services. Violence Prevention: Child Childhood Home Visitation. http://www.thecommunityguide.org/violence/home/index

Health Disparities in Rural Women. Committee Opinion No. 586. American College of Obstetricians and Gynecologists. Obstet Gynecol 2014; 123:384-8.

Appendix B: References

Reproductive and Maternal Health (continued)

Healthy Families America. www.healthyfamiliesamerica.org

https://www.guttmacher.org/pubs/FB-Unintended-Pregnancy-US.html

http://www.cdc.gov/reproductivehealth/unintendedpregnancy/

http://www.onekeyquestion.org/

Injury Prevention & Control: Division of Violence Prevention; Child Maltreatment Prevention Strategies; http://www.cdc.gov/violenceprevention/childmaltreatment/prevention.html

Oregon Health Authority, Public Health Division, Center for Health Statistics – Vital Statistics, 2013. https://public.health.gov/HealthyPeopleFamilies/DataReports/Pages/nurse-home-visting.aspx

Oregon Health Authority – Public Health; Oregon Vital Statistics Annual Report 2011, Volume One. https://public.health.oregon.gov/BirthDeathCertificates/VitalStatistics/annualreports/Volume1/Pages/2011.aspx

Oregon Pregnancy Risk Assessment Monitoring System, 2011 Results

https://public.health.oregon.gov/HealthyPeopleFamilies/DataReports/prams/Pages/index.aspx

Social Determinants of Health: Know What Affects Health; Tools for Putting Social Determinants of Health into Action; http://www.cdc.gov/socialdeterminants/tools/index.htm

Sonfeld A. and Kist K., Public Costs from Unintended Pregnancies and the Role of Public Insurance Programs in Paying for Pregnancy and Infant Care: Estimates for 2008, New York: Guttmacher Institute, 2013. http://guttmacher.org/pubs/public-costs-of-UP.pdf

The Community Guide – The Guide to Community Preventive Services; Increasing Appropriate Vaccination; http://www.thecommunityguide.org/vaccines/homevisits.html

The Community Guide – The Guide to Community Preventive Services; Tobacco Policy Strategies; http://www.thecommunityguide.org/tobacco/smokefreepolicies.html

Social Determinants of Health

Cutler D, Lleras-Muney A. Education and Health: Evaluating Theories and Evidence. Bethesda, MD: National Bureau of Economic Research; 2006 June 2006.

Duncan et al. School Readiness and Later Achievement. Developmental Psychology 43(6):1428 –1446. 2007.

Department of Vermont Health Access. Integrating ACE-Informed Practice into the Blueprint for Health. 2015.

Maryland State Department of Education. Getting Ready: The 2010-2011 Maryland School Readiness Report. Annapolis, Maryland: Department of Education. 2010.

Massachusetts Housing and Shelter Alliance, 2014. Home and Healthy for Good June 2014 Progress Report. Available at: http://www.mhsa.net/matriarch/documents/June%202014%20HHG%20Report.pdf

Mirowsky J, Ross CE. Refining the association between education and health: the effects of quantity, credential, and selectivity. Demography 1999; 36(4):445-60.

Mirowsky J, Ross CE. Education, social status, and health. Hawthorne, NY: Aldine de Gruyter; 2003.

Low MD, Low BJ, Baumler ER, Huynh PT. Can education policy be health policy? Implications of research on the social determinants of health. J Health Policy Law 2005;30(6):1131-62.

Silver, D., & Saunders, M. What factors predict high school graduation in the Los Angeles unified school district? Santa Barbara, CA: University of California. 2008.