
Public Employers Health Purchasing Committee

Action & Transmittal: Health Improvement Committee

1. Policy Proposal Received From:

Oregon Health Improvement Committee (July, 2010 draft)

2. Summary of Policy Proposal:

- *Model health care benefits provided by all employers include:*
 - *tobacco cessation*
 - *lactation services and equipment*
 - *preventive screenings*
 - *chronic disease self-management programs*
 - *mental health care*
 - *dental health care*

[See attachments: page 21, Draft Oregon Health Improvement Plan; lactation services and breastfeeding information.]

3. Committee Action(s):

- *Presentation and discussion at September 27, 2010 meeting.*
- *Committee Action at October 25, 2010 meeting:*

The Public Employers Health Purchasing Committee pends the draft policy proposal from the HIC awaiting action by the Health Policy Board on the final report of the Health Improvement Committee.

Pended by consensus.

[NOTE: The preventive screening recommendation has been addressed by P.L. 111-148, The Accountable Care Act.]

4. Distribution:

- *Retained by Committee staff for possible further consideration in 2011.*

Oregon Health Improvement Plan

*Improving the health of all Oregonians
where they live, work, learn and play*

October 2010

A report of the
Oregon Health Improvement Plan Committee

Oregon Health Policy Board
Oregon Health Authority

Table of Contents

Letter from the Committee Chairs.....page 3

Executive Summary..... 4

Background, Community Engagement, and Areas of Focus..... 5

Goals, Strategies and Actions 9

 Goal I: Achieve health equity and population health by improving social,
 economic and environmental factors 10

 Goal II: Prevent chronic diseases by reducing obesity prevalence, tobacco use and
 alcohol abuse 12

 Goal III: Stimulate linkages, innovation and integration among public health, health
 systems and communities 17

Recommended Actions Referred to Other OHA Committees 20

Next Steps 23

Appendices

 Acronyms 24

 Committee Membership..... 25

 Guiding Principles 27

 Population Health Definition 28

 Population Health Measures 29

 Tables of Baseline Data..... 30

 Data Sources for Baseline Data..... 41

 Metrics Definitions..... 44

 Outcomes and Effectiveness Table..... 51

 Cost Analysis Table..... 65

 Goal Area Timelines 68

 Oregon Health Improvement Plan Committee Charter – January 2010..... 71

 Select Committee Resources 75

DRAFT Oregon Health Improvement Plan: 2011 - 2020

October 20, 2010

Dear Oregon Resident,

In the coming months, you will be hearing a lot about the Oregon Health Improvement Plan. With all of the health care reform that is currently taking place across the nation, you may be wondering what this Plan is. First let me tell you what it is not. This is not a plan to eliminate or control the care you receive from your doctor. It is not a plan focused on health insurance or prescription drugs.

The Oregon Health Improvement Plan is a series of recommendations to improve the lifelong health of Oregonians, prevent chronic disease, and stimulate innovation and collaboration within our communities. Its focus is on finding ways to ensure people's health long before health *care* is needed. Its goal is to create environments and systems that provide every Oregonian, regardless of their income, education, or racial/ethnic background, with the opportunity to make healthy choices for themselves and their families.

What does this Plan mean for you? It means that over the next 10 years, you'll find more early childhood education opportunities, such as Head Start and pre-kindergarten, and you'll see more restaurants and vending machines offering foods that meet national nutrition standards. It means play time will be a part of every school day, and walking, bicycling or riding the bus to work or school will be more convenient. It means that wherever you go, you won't breathe secondhand smoke. It means the cost of your medical care won't continue to grow.

These aren't pie-in-the-sky goals. They are all achievable, but we need your help. Think about how you would draw the ideal community in which people are able to eat better, move more and breathe clean air. Think about how you design sidewalks, transit systems, bike paths, schools, restaurants, parks and workplaces, not just about the availability of health clinics. Then get involved. For more information, please visit our website to stay informed of HIP progress and activities (<http://www.oregon.gov/DHS/ph/hpcdp/hip/index.shtml>).

Every Oregonian can be a leader of the health of their community. Our legacy demands it.

Sincerely,

Tammy Bray, Chair
Oregon HIP Committee

Lila Wickham, Vice Chair
Oregon HIP Committee



Executive Summary

In recent years there has been a major shift in the way we perceive health in our communities - Instead of waiting until we are sick to *treat* an illness, we are working together to *prevent* illness. Our old approach has been a costly endeavor: Nationally, 83 cents and 96 cents of Medicaid and Medicare dollars respectively, are spent treating chronic diseases, and hospitalization costs in Oregon for chronic diseases alone are estimated to exceed \$2.2 billion a year. To have a meaningful and lasting impact on the cost of care and the overall health of our communities we need to change our approach to create environments and systems that support both the prevention and management of illness. To help address these issues, the Oregon Health Policy Board created the Oregon Health Improvement Plan (HIP) Committee in January 2010 with the charge of recommending innovative solutions to improve the lifelong health of all Oregonians; increase the quality, reliability and availability of care; and lower or contain the cost of care so it is affordable to everyone. To achieve these objectives, it is essential that we address more than the provision of care. We must also address the social factors that impact the places we live, play, learn and work, and we need to create innovations and new collaborations within our current systems. The Oregon Health Improvement Plan is organized into three goals with corresponding outcomes and strategies that are based on extensive research and community input.

1. **Achieve health equity and population health by improving social, economic and environmental factors.** **Outcome:** Increase high school graduation rates and college degrees for populations with disparities. **Strategy:** Target resources to improve child and student health (birth through higher education) to support improved education outcomes.
2. **Prevent chronic diseases by reducing obesity prevalence, tobacco use and alcohol abuse.** **Obesity Outcome:** Reduce obesity in children and adults. **Strategy:** Make healthful food and beverage options widely available, increase physical activity opportunities, and provide evidence-based weight management support. **Tobacco Outcome:** Reduce tobacco use and exposure. **Strategy:** Create tobacco-free environments, prevent initiation of tobacco use, support cessation, and counter pro-tobacco influences. **Alcohol Outcome:** Reduce alcohol abuse. **Strategy:** Reduce alcohol abuse by adults and alcohol use in youth.
3. **Stimulate linkages, innovation and integration among public health, health systems and communities.** **Outcome:** Implementation of integrated and coordinated community-based initiatives to reduce chronic diseases and improve population health. **Strategy 1:** Increase the effectiveness and efficiency of Oregon's public health system. **Strategy 2:** Establish and fund systemic integration between patient-centered medical care homes and community-based public health and social services resources to support chronic disease prevention and management.

The completion of the Oregon Health Improvement Plan is just the beginning. A path forward has been identified, but it will take the efforts of every Oregonian to put the plan into practice. In the coming years, the HIP Committee will be working with state and local public health agencies, education and transportation agencies, health care systems and Oregon residents to tailor the strategies and actions within the Plan to the needs of individual communities, and then put them into practice. As progress is made, the Committee will also work with appropriate agencies to collect data to ensure our ability to measure the impact of this important work on Oregon's diverse populations.

Background, Community Engagement, and Areas of Focus

Background

The Oregon Health Policy Board (OHPB) and the Oregon Health Authority (OHA) were recently created through the passage of House Bill 2009. The OHPB is a nine-member citizen Board that serves as the policy-making and oversight body for the Oregon Health Authority, a new state agency that will encompass all of the health related programs in the state. The OHPB has a triple aim: 1) Improve the lifelong health of all Oregonians; 2) Increase the quality, reliability and availability of care for all Oregonians; and 3) Lower or contain the cost of care so it is affordable to everyone.

In January 2010, the Oregon Health Policy Board (OHPB) created the Health Improvement Plan (HIP) Committee, a group consisting of twenty-six members who represent schools, government agencies, tribes, businesses, and communities throughout the state. The Committee was charged with developing an overarching plan with short- and long-term actions to improve the health of all Oregonians. The Plan must use evidence-based interventions that incorporate policy, systems, and environmental approaches to promote the overall health of Oregonians across the state; and emphasize coordination among health care delivery systems, public health, community-based organizations, and individual communities. This document contains the Committee's first draft of Oregon's Health Improvement Plan. It is scheduled to be finalized and submitted to the OHPB after a public comment period.

The HIP Committee utilized a set of guiding principles to direct its work throughout the development of the Plan. These principles called for a focus on: 1) prevention; 2) evidence and data; 3) health equity; 4) addressing social, economic and environmental factors; 5) respecting cultures and traditions; 6) empowering local communities; and 7) creating short- and long-term policy actions. These principles were echoed by the community and participating stakeholders, and are reflected in the recommendations of the Plan. Additional information on the guiding principles and other key theoretical frameworks the Committee used can be found in the Appendices.

Community Engagement Process

The HIP Committee recognizes and values the wisdom and experiences of both individuals and organizations, and has diligently worked to ensure that this critical information is included in its recommendations and built upon previous community engagement. In addition to reviewing numerous statewide plans and reports, national guidelines, and evidence-based and best/promising practices, the HIP Committee conducted an extensive community engagement process to inform the Health Improvement Plan. To gain local and regional perspectives, the Committee hosted a series of community listening sessions in Pendleton, Medford, Hillsboro, Portland, Bend, Madras, Prineville, Grand Ronde, and at the Health Commission of the Confederated Tribes of Umatilla, between the months of April and August, 2010. The Committee also conducted a web-based Community Input Survey in June 2010. In both the sessions and the survey, participants were asked the following questions:

1. What are the issues in your community that have the greatest impact on your health and that of others in the community?

2. What is happening in your community that promotes health and supports a thriving community?
3. What 3-5 changes in policy would make your community healthier and thrive?

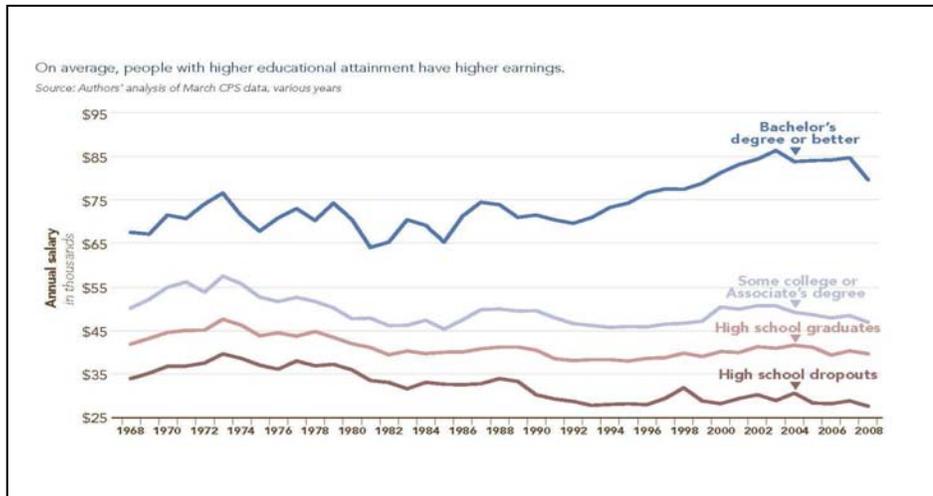
An analysis of the data showed that Oregonians believe core issues such as poverty and education, and chronic conditions including diabetes and addiction, have the greatest impact on the health of their communities. These findings, which are also supported by local and national research, have been woven into all of the components of the plan. However, the community engagement process does not end here. Over the next several years, the Health Improvement Plan Committee will be working with state and local public health agencies, education and transportation agencies, businesses and worksites, health care systems, community- and faith-based organizations, and Oregon residents to tailor the strategies and actions within the Plan to the needs of individual communities, and then put them into practice.

Identified Areas of Focus

The Health Improvement Plan is organized into three areas of focus: Achieving Health Equity and Population Health; Preventing Chronic Disease; and Stimulating Innovation and Integration. Each area has corresponding goals, outcomes, strategies, and actions which are laid out in the Plan. The following narrative provides a brief description of each area of focus.

I. Achieving Health Equity and Population Health – Our health is determined by much more than individual behavior, health care, or genetics. Though we don't usually associate social factors with health, the places we live, play, learn and work have huge impacts on our health and are shaped by economics, social policies and politics. Efforts to get people to eat right, exercise more, and stop smoking can only go so far without addressing the significant health disparities and health inequities seen in the U.S. Health *disparities* are differences between population groups with regard to disease and health outcomes, or access to care¹. These disparities may be the result of health *inequities*, differences that result from social factors such as economic forces, educational quality, environmental conditions, individual health behavior choices, and access to health care. As the name suggests, health inequities are unfair; they are also reversible². Policies and decisions about education, employment, housing, transportation, land use, economic development, and public safety can either mitigate or widen health disparities and inequities. To effectively address health equity and population health, both health expertise and community wisdom must be a part of all policy and programmatic decisions in Oregon.

After reviewing the research and considering the input from Oregonians throughout the state, the need to focus on education initiatives was clear. Research has shown that the link between education and health is strong, though complex. Educational attainment is negatively impacted by the effects of poor health in childhood, positively impacts future income levels and social networks, and contributes to the understanding and practice of good health behaviors. No other single factor will improve health more, for all of Oregon's many populations, than increased educational attainment and the employment and income benefits it creates.



Source: The Georgetown University Center on Education and the Workforce, *Help Wanted: Projections of Jobs and Education Requirements Through 2018*, June 2010

The Health Improvement Plan proposes several activities to create explicit linkages between the health of young people and education in order to increase the educational attainment by Oregon's youth. For example, Oregon's public health system and community-based organizations can partner with the state Department of Education and local school districts to ensure students are healthy and able to achieve their fullest potential; early childhood education programs can be strengthened and expanded; and schools can be utilized as community meetings spaces to promote community engagement and support healthy lifestyles. Throughout this process, improved ability to collect and analyze current data to monitor and evaluate health, social, economic and environmental factors among Oregon's diverse populations will be critical.

II. Preventing Chronic Diseases – Medical care will always be a part of health. However, to improve the overall health of Oregonians and ensure the availability of affordable, high-quality medical care we must increase our focus on preventing chronic disease. The cost of treating chronic diseases is staggering. Nationally, 83 cents and 96 cents of Medicaid and Medicare dollars, respectively, are spent treating chronic diseases³, and hospitalization costs in Oregon for chronic diseases alone are estimated to exceed \$2.22 billion a year⁴. Almost half of Oregon adults (45%) have at least one chronic disease⁵, and in 2007, chronic diseases caused more than 60 percent of the deaths in Oregon⁶.

Obesity, tobacco, and alcohol abuse are responsible for 50 percent of the chronic disease deaths in Oregon each year⁷. An analysis of data from the 2009 Behavioral Risk Factor Surveillance System and the Oregon Healthy Teen Survey produced the following results. Since 1990, obesity in Oregon adults has increased 121 percent, and between 2001 and 2009, obesity jumped 54 percent among middle and high school students. Though comprehensive strategies have significantly reduced tobacco use in Oregon, the 2009 data reports that 17.5% of adults and 9.9% of 8th graders and 14.9% of 11th graders continue to smoke. Alcohol abuse, defined as having had more than one drink per day for women, or more than two drinks per day for men, has been identified in approximately 6% of Oregon adults, and has significant impacts on individual health, the health and well-being of families, and broader social and

economic issues including public safety and worker productivity. Today, the number of Oregon 8th graders who have had a drink in the past 30 days is twice the national average. Addressing these three risk factors is the most promising strategy for improving population health and lowering future chronic disease costs.

The Health Improvement Plan makes several recommendations to address the high rates of obesity, and tobacco and alcohol use in Oregon. Creating environments that are tobacco free and provide access to healthy, affordable, culturally appropriate choices for foods and beverages, and safe places for daily physical activity will have the highest impact in preventing these chronic diseases and preventing further complications. Though strategies and actions have been identified for each issue, it is critical that we look at the prevention of these chronic disease risk factors as a single initiative to create environments where making healthy choices is common, affordable, safe and accessible for all Oregonians.

III. Stimulating Innovation and Integration – The health issues described throughout this document are complex issues with numerous contributing factors that no single person or agency can adequately address alone. As a result, the expertise and active participation of numerous stakeholders, including individual community members, community and faith-based organizations, and governmental agencies, need to be part of the response. As part of this collaboration, public health agencies can play a key leadership role in supporting the development of local solutions by assessing conditions at the community level, assuring data is available to analyze and prioritize actions, coordinating system integration efforts, and developing local health improvement plans. To be effective, all stakeholders must be involved in the creation of new collaborations, ideas, and ways of doing things.

Many of the ideas and solutions that will arise from this new collaborative approach will take several years to implement. However, the HIP Committee has identified several areas for immediate action within the Plan. These include developing mechanisms to collect accurate population health and risk factor data by race, ethnicity and economic status and link it to clinical, emergency, and hospital data at the community and state levels; strengthening the ability to link public health with the health care delivery system; and providing opportunities for collaboration among multiple stakeholders.

¹ Department of Health and Human Services (US). *Healthy People 2010: Understanding and Improving Health*. 2nd ed. Washington: DHHS; 2000 Nov.

² Baker, Metzler, Galea. 2006. Addressing Social Determinants of Health Inequities: Learning from Doing. *American Journal of Public Health*, 95(4), 553-555.

³ Chronic Conditions: Making the Case for Ongoing Care, September 2004 Update. Robert Wood Johnson Foundation. <http://www.rwjf.org/files/research/Chronic%20Conditions%20Chartbook%209-2004.ppt>

⁴ Keeping Oregonians Healthy, Oregon Department of Human Services, 2007. (*adjusted for inflation*). In this publication, chronic diseases include arthritis, asthma, cancer, diabetes, heart disease and stroke, and obesity.

⁵ 2009 Oregon Behavioral Risk Factor Surveillance System.

⁶ Oregon Department of Human Services analysis of 2007 Death Certificate data.

⁷ Oregon Department of Human Services analysis of 2003 Death Certificate data.

Goals, Strategies, Actions

The Oregon Health Improvement Plan consists of a series of recommendations to improve the lifelong health of all Oregonians; increase the quality, reliability and availability of care; and lower or contain the cost of care so it is affordable to everyone. The Plan is based on extensive research and community engagement and uses evidence-based interventions that incorporate policy, systems, and environmental approaches and emphasizes coordination among health care delivery systems, public health, community-based organizations, and individual communities.

The Health Improvement Plan is organized under three distinct goals:

1. Achieve health equity and population health by improving social, economic and environmental factors;
2. Prevent chronic diseases by reducing obesity prevalence, tobacco use and alcohol abuse; and
3. Stimulate linkages, innovation and integration among public health, health systems and communities.

Each goal has at least one corresponding outcome that includes specific strategies, actions, evaluation metrics, and return on investment information. Actions are broken out into three distinct time categories, 2011 Actions, 2012-2014 Actions, and 2015-2020 Actions. Additional information, including definitions and supporting data, can be found in the Appendices.

Goal I: Achieve health equity and population health by improving social, economic and environmental factors.

Outcome: Increase high school graduation rates and college degrees for populations with disparities

Strategy: Target resources to improve child and student health (birth through higher education) to support improved educational outcomes.

2011 Actions:

- Support maintenance of current funding for access and participation in early childhood education such as Oregon Prekindergarten, Early Head Start and Migrant Head Start.
- Support passage of legislation that requires districts and schools to assess and address physical, social, and environmental health barriers that impede learning. Principles of such legislation should include:
 - Inclusion of specific student health measures and routine reporting on these measures (e.g., Oregon School Report Card);
 - Creating a mechanism for the provision of training and technical assistance to support school districts in developing and implementing plans;
 - Ensuring that all actions are based on student health data and are connected to measurable outcomes; and
 - Employing best available evidence to inform policies and programs.
- Support partnerships among state and local public health agencies, community-based organizations, Oregon Department of Education, and local school districts to support health improvement of students and staff.

2012-2014 Actions:

- Support expanded funding for access and participation in early childhood education such as Oregon Prekindergarten, Early Head Start and Migrant Head Start.
- Support organizations with expertise in educational systems, such as the Oregon Department of Education, schools districts, Chalkboard Project, in implementing strategies to improve educational attainment among all Oregon children, with particular attention paid to populations experiencing educational disparities.
- Support Health Impact Assessments and plans to remediate identified health impacts for building and transportation projects in geographic proximity to school sites.
- Improve early intervention through prompt access to mental health services so that school and transition age youth receive help at the onset of mental illness to help achieve overall health as well as educational and vocational attainment.

2015-2020 Actions:

- Promote stable housing by prioritizing existing resources to build new, affordable housing and preserve and rehab existing affordable housing to accommodate families who make less than 30% under median income. (Oregon Housing and Community Services)

Metrics: Participation in early childhood education, high school graduation rates, post-secondary degrees

Return on Investment: Nothing will improve health for all of Oregon's various populations more than being well-educated and employed. Less education predicts higher levels of health risks, such as obesity, tobacco and alcohol use, and violence. At the same time, good health is associated with academic success. Health risks such as teenage pregnancy, poor dietary choices, inadequate physical activity, physical and emotional abuse, substance abuse, and gang involvement have a significant impact on how well students perform in school.

Educational attainment is directly related to future income of individuals and of the State. In Oregon, on average working-age people who did not complete high school earn \$10,000 less each year than those who graduate from high school. The personal implications of this type of wage disparity are many. The implications to the state are also significant. Approximately \$173 million dollars in tax revenue is lost each year due to the decreased earnings of individuals that did not earn a high school diploma.

There are additional costs incurred to provide social and medical services to Oregonians that do not complete high school. Those who did not complete high school and are over the age of 24 are reported to be in worse health than adults that completed high school. As a result of this health disparity, costs for state supported social and medical programs are higher for this population. For example, Oregon spends more than \$200 million providing Medicaid services to people who did not graduate from high school.

Goal II: Prevent chronic diseases by reducing Obesity prevalence, Tobacco use, and Alcohol abuse.

Obesity Outcome: Reduce obesity in children and adults

Strategy: Make healthful food and beverage options widely available, increase physical activity opportunities, and provide evidence-based weight management support.

2011 Actions:

- Support legislative efforts to fund the Farm to School and School Gardens and Nutrition Programs through State Lottery funds.
- Adopt and implement nutrition standards for foods and beverages sold in cafeterias, stores and vending machines in state agencies, schools, universities, including eliminating the sale of sugar-sweetened beverages.
- Make an evidence-based weight management health insurance benefit (e.g. Weight Watchers) available to DMAP managed care and fee-for-service clients, as well as to PEBB and OEBC members and promote its use at workplaces.
- Reduce consumption of sugar-sweetened beverages by raising the price through a \$0.005 per ounce excise tax in 2011-2013 (increasing to \$0.01 per ounce in 2013). Dedicate a portion of the proceeds to reach recommended funding (\$22 million 2011-13) for comprehensive efforts to reduce obesity and chronic diseases in adults and children including media campaigns and implementation of best and promising practice interventions by counties, regions, tribes, schools, coalitions and community-based organizations.
- Promote and support physical activity throughout the work and school day for employees and students including accessible stairs, breaks for stretching, walking meetings, recess, physical education and after school play time.
- Support legislation to propose an Oregon constitution change to expand the Oregon Highway Trust Fund to allow for use of funds for active transportation projects outside of the road right of way. Funds could be used to support public transit, inter-city rail, and bicycle and pedestrian projects.

2012-2014 Actions:

- Expand the adoption of nutrition standards and elimination of the sale of sugar-sweetened beverages to additional settings including county and city agencies, community colleges, tribal agencies, health care facilities, childcare settings, community based organizations, worksites.
- Expand availability of an evidence-based weight management health insurance benefit through other public and private agencies and organizations.

DRAFT Oregon Health Improvement Plan: 2011 - 2020

- Promote and support active transportation options for employees and students including mass transit, bicycling and walking.
- Begin steps to reduce the sodium intake of Oregonians by decreasing sodium in packaged and restaurant foods produced in Oregon by 25% over five years through voluntary strategies.

2015-2020 Actions:

- Supplement the current federal food stamp program (SNAP) with state funds and provide incentives for purchasing healthful foods with state-funded program.
- Fund a Healthy Food Financing Initiative similar to the successful Pennsylvania program that funds development of grocery stores and corner “healthy food” markets in low-income neighborhoods/“food deserts”.

Metrics: BMI, sugar-sweetened beverage consumption, meet CDC physical activity recommendations

Return on Investment: One-third of the recent increase in medical costs in Oregon is attributed to obesity. In 2003, estimated medical costs related to obesity in Oregon among adults were \$781 million. Costs in Oregon for treating diabetes are \$1.4 billion/year. CDC estimates that persons who are obese have medical costs that are \$1429 higher than those of normal weight. By reducing obesity and obesity-related chronic diseases like diabetes, Oregon stands to realize a significant return on investment.

Public health programs have been successful at reducing the prevalence of tobacco use by adults in Oregon by 22% in 10 years. A fully funded obesity prevention program that achieved similar success in preventing diabetes would save at least \$215 million a year in medical costs by 2020. Savings from diabetes reduction alone from 2011-2020 would total \$1.18 billion, a return on investment of over 6:1. Savings relating to diabetes are just one component of the total benefit from reducing obesity rates, so this estimate is conservative.

The benefits of establishing health-promoting environments go far beyond reducing the prevalence of obesity and diabetes. Such environments also support treatment and management of diabetes and help reduce its dire complications such as heart disease, blindness, amputations and kidney disease. Likewise, prevention and management of other chronic diseases like hypertension, heart disease, strokes, cancer and arthritis would improve and provide additional savings in health care cost

Sugar-sweetened beverages are empty calories, a major contributor to the increase in obesity in children and adults. Oregonians consume over 136 million gallons of sugar-sweetened soda each year, equivalent to more than 63 million pounds of excess weight gained in the state. This figure does not include other beverages such as energy drinks and sugar-sweetened fruit drinks. Price increases are being shown to reduce consumption of sugar-sweetened beverages. Raising the price of sugar-sweetened beverages by 10% through taxation is projected to decrease consumption by over 12%. Because sugar-sweetened beverages are one of the main drivers of weight gain in America, taxing these products is an appropriate means for reducing their consumption and funding comprehensive efforts to reduce obesity and related chronic diseases like diabetes.

DRAFT Oregon Health Improvement Plan: 2011 - 2020

Focusing prevention efforts and providing weight management benefits for the 850,000 OHA covered lives (DMAP, PEBB, and OEBC) will enable significant savings to accrue directly to the state budget. PEBB estimates more than \$2 million savings in health care costs from a \$1.4 million investment in AY 09.

Tobacco Outcome: Reduce tobacco use and exposure

Strategy: Create tobacco-free environments, prevent initiation of tobacco use, support cessation, and counter pro-tobacco influences.

2011 Actions:

- Adopt and implement tobacco-free campus policies in state agencies, addictions and mental health facilities contracting with OHA, and hospitals.
- Adopt and implement smoke-free policies for all public multiunit-housing settings in partnership with public housing authorities and community development corporations.
- Prevent initiation and reduce consumption of tobacco by raising the price of cigarettes by a \$1/pack excise tax (and a proportionate amount on other tobacco products), and dedicate 10% (\$40 million) to comprehensive efforts at the state and local level to reduce tobacco use and exposure in adults and children, including implementation of best practice interventions by counties, regions, tribes, schools, coalitions and community-based organizations.
- Assure that evidence-based tobacco cessation health insurance benefits are available and promoted to DMAP managed care and fee-for-service clients, as well as to PEBB and OEBC members.

2012-2014 Actions:

- Expand implementation of tobacco-free campus policies to additional settings including county and city agencies, community colleges, universities, medical clinics, childcare settings, tribal agencies, private sector worksites, multi-tenant office properties, and community-based organizations.
- Continue to increase the price of tobacco through excise tax and dedicate a portion of the proceeds to expand comprehensive efforts to reduce tobacco use and exposure in adults and children, until the CDC recommended level of funding for tobacco control in Oregon is reached (\$43 million/year).
- Require tobacco retailers to obtain a license at the local, state, and/or tribal level before selling tobacco in order to monitor, implement, and enforce local, state, federal and tribal laws regulating tobacco sales, marketing, and promotions.
- Ban free sampling of tobacco products, tobacco coupon redemption, and other tobacco price reduction strategies.

DRAFT Oregon Health Improvement Plan: 2011 - 2020

- Require tobacco prevention messages at the point-of-sale, such as Quit Line or hard hitting graphic warnings.
- Require that tobacco education and cessation materials be given “equal time” in tobacco retail stores, such that anti-tobacco marketing materials take up the same amount of space as tobacco advertising and promotional materials including “powerwall” displays.

Metrics: Tobacco use and exposure in children, adults, pregnant women

Return on Investment: Increasing the cost of tobacco is a proven practice for preventing initiation and reducing tobacco use in youth and adults. Oregon’s current tobacco tax is below the national average, making it easier for youth to begin using tobacco and more difficult for tobacco users to quit. Oregon’s low tobacco tax rate, unchanged since 2004, also limits funds available for tobacco prevention and other important state services. Without an on-going substantial and dedicated source of funding, the relentless efforts of the tobacco industry to recruit new smokers and promote tobacco use will overcome current tobacco prevention efforts.

Tobacco use continues to be the leading cause of illness and premature death in Oregon. For each one percentage point decline in adult and youth smoking rates, Oregon can expect to see 28,400 fewer adult smokers, 460 fewer pregnant smokers, and 2,000 fewer high school smokers. This will result in a \$269.8 million reduction to future health care costs from adult smoking declines and a \$148.8 million reduction in future health costs from youth smoking declines.

Focusing prevention efforts and providing evidence-based cessation benefits for the 850,000 OHA covered lives (OHP, PEBB, and OEBC) will enable significant savings to accrue directly to the state budget. For every dollar Oregon spends on providing tobacco cessation treatments, it has an average potential return on investment of \$1.32.

Alcohol Outcome: Reduce Alcohol Abuse

Strategy: Reduce alcohol abuse by adults and alcohol use in youth

2011 Action:

- Decrease consumption of alcohol consumed in the form of beer by raising the price of beer by doubling the current excise tax from 8 cents per gallon to 16 cents in 2011-2013. Dedicate a portion of the proceeds to provide funding for comprehensive efforts to reduce the health and economic burden of alcohol abuse, including implementation of media campaigns and evidence-based community alcohol abuse prevention interventions for high-risk and vulnerable populations such as youth, and communities with high prevalence of alcohol abuse.

2012-2014 Actions:

- Continue to increase the excise tax on beer bi-annually indexed to inflation and dedicate funding for comprehensive efforts to reduce the health and economic burden of alcohol abuse, including

implementation of media campaigns and evidence-based community alcohol abuse prevention interventions for high-risk and vulnerable populations such as youth, and communities with high prevalence of alcohol abuse.

Metrics: Alcohol abuse

Return on Investment:

The return on this investment would be lower levels of alcohol related damage in our society, and increased funding to cover the costs of damage that does occur. The Oregon Liquor Control Commission (OLCC) reports that alcohol abuse alone cost Oregon's economy approximately \$3.2 billion in 2006. This is approximately eight times greater than the \$395.0 million in tax revenues collected in fiscal year 2006 from the sale of alcohol. A substantial return could be gained by reducing consumption, especially in youth. The actual amount in financial terms needs to be determined by an economic and health analysis assessing the unique contribution of beer and other malt beverages, estimating the potential drop in consumption given tax increase, and estimating the savings in health care and social service agencies. However, the 2010 report to the Governor has indicated that "prevention and recovery programs are very cost effective".

Goal III: Stimulate linkages, innovation and integration among public health, health systems and communities to increase coordination and reduce duplication.

Outcome: Implementation of integrated and coordinated community-based initiatives to reduce chronic diseases and improve population health

Strategy 1: Increase the effectiveness and efficiency of Oregon's public health system

2011 Actions:

- Coordinate funding and programs available through federal health reform that would contribute to establishing systemic integration between primary care homes, public health, mental health, and other health services (dental, vision) and social services such as public health nurse home visiting, community health workers, community health teams.
- Collaborate with local (non-profit) hospitals, local agencies, and community-based organizations to conduct community health assessments, develop local coordinated and integrated Health Improvement Plans focused on reducing obesity, tobacco use and exposure, and chronic disease prevention and management, and evaluate the results.
- Create regional health collaboratives that track and are responsible for local policy, health improvement planning, priority setting, system development, financial investment and health outcomes.
- Ensure that state data systems to collect, manage, and analyze public health performance measures and quality improvement processes include demographic data on race, ethnicity, income, and education level and tie them to clinical, emergency and hospital data through state and regional HIEs.
- Designate Health Information Technology funding to assure clinicians and admissions staff are trained on the collection of racial and ethnic data for inclusion in electronic health records by hospitals and clinics using standards developed in 2010 by Quality Corporation Task Force.

2012-2014 Actions:

- Advance the quality and performance of Oregon public health departments by the state and all county/regional health departments seeking and achieving national accreditation.
- Require that local pilot programs resulting from local Health Improvement Plans be funded to target resources for Oregon populations that are most vulnerable and have the greatest disparities due to income, race, ethnicity, and/or geographic region.

Strategy 2: Establish and fund systemic integration between patient-centered medical care homes and community-based public health and social services resources to support chronic disease prevention and management.

DRAFT Oregon Health Improvement Plan: 2011 - 2020

2011 Actions:

- Make evidence-based chronic disease self-management interventions (e.g. Living Well) widely available in communities and reimbursed by OHA for DMAP managed care and fee-for-service clients, as well as PEBB and OEGB members.
- Make evidence based group exercise and falls prevention programs (e.g. Tai Chi, Arthritis Foundation programs) widely available and affordable in all counties and all tribal communities through collaboration with county/regional health departments, Area Agencies on Aging, tribal agencies, community-based organizations.

2012-2014 Actions:

- Expand upon the current pilot programs to reimburse for evidence-based home-based multi-trigger, multi-component interventions with an environmental focus for people with asthma available through targeted case management programs in all local health departments and tribal health authorities in Oregon.
- Establish pilots to develop, test, and evaluate “community health team” models that coordinate, navigate, integrate and track patient referrals and outcomes between primary care homes, public health and social services.
- Establish a mechanism to measure the savings resulting from implementing chronic disease health prevention benefits associated with the Health Improvement Plan and redirect the savings for further expansion of OHP and funding of proven intervention strategies.
- Expand statewide programs that demonstrate improved health outcomes through successful coordination, navigation, integration and evaluation of patient referrals and outcomes between primary care homes, public health and social services.

Metrics: community assessments done in collaboration with local health departments and hospitals, health collaboratives established and tracking health outcomes, state/local health departments applying for accreditation, participation in evidence-based chronic disease self-management programs, hospital readmissions and preventable hospital admissions

Return on Investment: A focus on community health assessment and community health improvement plans resulting from inter-related community collaborations that include public health, hospitals, land grant university extension services and community based organizations, will focus community interventions on identified needs and will be embraced by the community because they are driven at the local level. The collaborations with population based public health measures and decreased hospitalization use will reduce costs and focus on primary prevention. A public health system focused on utilization of prevention and meaningful outcome measures will assure the focus on prevention at the community level. The return on investment is well documented by Trust for America’s Health. Healthy people spend less on medical care. Investing \$10 per person annually in community programs that

increase physical activity, improve nutrition, and prevent smoking could save Oregon more than \$193 million in the next five years.

Persons living with chronic conditions who have the tools to effectively self-manage their conditions feel an increased sense of efficacy, are more able to follow-through with their health care provider's recommendations, and use fewer high-cost health care services. A recent OSU report on Oregon's evidence-based Living Well program estimates the following five-year effects if only 5% (78,300) of eligible Oregonians were to participate in the program: 2,138 quality adjusted life years gained, 11,119 avoided ED visits saving \$13 million, 55,593 avoided hospital days saving \$130 million. Reimbursement by OHA of \$750,000 (\$375/participant for 2000 people) would support the expansion of Living Well workshops across the state. Potential ROI would include 280 avoided ED visits (saving \$317,000) and 1390 avoided hospital days (saving \$3.25 million).

Evidence based healthy homes programs improve overall quality of life and productivity, specifically improving asthma symptoms and reducing the number of school days missed due to asthma. The Community Guide for Preventive Services found that healthy homes programs with a combination of minor or moderate environmental remediation with an educational component provide good value for the resources invested and have benefit-cost ratios ranging from 5.3 to 14.0.

Recommended Actions Referred to Other OHPB Committees

Many recommended actions were generated during the plan development process, by HIP Committee members, through the Community Listening Sessions and from stakeholder input. Below is the list of recommendations that have been referred to DMAP and other Oregon Health Policy Board Committees as actions determined by the committee to be important but are outside the scope of the HIP Plan.

HIP Committee Recommendations to OHA/DMAP

Enroll all eligible tribal members onto the Oregon Health Plan outside of the lottery system because of 100% federal reimbursement

DMAP purchased health care benefits for managed care and fee-for-service clients should reimburse:

- evidence-based tobacco cessation that meets US Preventive Services Task Force recommendation
- evidence-based chronic disease self-management programs such as Living Well
- evidence-based weight management programs such as Weight Watchers
- lactation-related durable medical equipment and lactation specialists to provide lactation services
- evidence-based home-based multi-trigger, multi-component interventions with an environmental focus for people with asthma

HIP Committee Recommendations to other Oregon Health Policy Board Committees

Health Information Technology Oversight Council (HITOC)

- Require public health participation on Health Information Exchange initiatives.
- Require county level demographic data (income, race/ethnicity, education) that supports identification of populations vulnerable to chronic disease disparities and chronic disease risk factors.
- Create Health Information Exchanges and fund data collaborations that support HIP metrics and indicators for all populations including demographics and qualitative data that support assessment and improvement of health equity.
- Assure that Health Information Exchanges include a wide range of health measures for use at the county/regional level including income, education, race/ethnicity, health risks (tobacco use, BMI, physical activity, sugar sweetened beverage and fruit/vegetable consumption at a minimum), clinical services, and emergency and hospitalization data, so that outcomes and return on investment of interventions can be measured for all populations including those most vulnerable to chronic diseases and risk factors.

Public Employers Health Purchasing Committee

Organize OHA services such that full integration of mental health, addictions, oral and physical health care is achieved.

OHA purchased health care benefits reimburse:

- evidence-based tobacco cessation that meets US Preventive Services Task Force recommendation
- evidence-based chronic disease self-management programs such as Living Well
- evidence-based weight management programs such as Weight Watchers
- lactation-related durable medical equipment and lactation specialists to provide lactation services
- nutrition consultation with a registered dietitian and physical activity consultation with a certified exercise physiologist, and consider other medical and surgical treatment options following evidence-based reviews
- asthma trigger reduction incentives
- health care benefits provided by all employers include tobacco cessation, lactation services and equipment, preventive screenings, chronic disease self-management, mental health, addictions and dental care.

Health Incentives and Outcomes Committee

- Integrate the Chronic Care Model into the medical home model
- Establish referral and care coordination systems between medical/behavioral health homes and community services and resources
- Insurers provide coverage for tobacco cessation, lactation services and equipment, preventive screenings, chronic disease self-management, mental health, addictions and dental care
- Insurers reimburse for evidence-based chronic disease self-management programs (e.g. Living Well, Asthma Home Visits)
- Standardized clinical practices are established for chronic disease prevention, such as BMI calculations, oral health screening, tobacco use prevention and cessation
- Health care providers provide screening and anticipatory guidance for adolescents recommended by the Guidelines for Health Supervision for Adolescents (Bright Futures by AAP and DHHS), such as BMI, lipid screening, tobacco use and cessation, social-emotional health, and alcohol and drug use
- Require all birthing hospitals to meet WHO/UNICEF breastfeeding-friendly criteria

- Collect and make available emergency transport, emergency department, and hospitalization data
- Disseminate Childhood Hunger Coalition's "Childhood Hunger" toolkits and CME training to pediatric and family practice providers across Oregon, including local resources to refer those with food insecurities
- Family planning services include preconception health assessment and education to prevent chronic diseases in future generations

Healthcare Workforce Committee

- Develop a required standard or competency for health professional licensing/certification that includes preventive practices about physical activity, nutrition, breastfeeding, oral health, mental health, and healthy and safe home environments
- Develop and implement a PH internship program for high school and college students in local and state public health agencies.
- Workforce needs for a fully functioning, robust public health system in Oregon include the following (from Oregon State University and Conference of Local Health Officials, CLHO):
 - Oregon needs an accredited school of public health to train and retain a high functioning public health workforce. Establishing a school/college of public health at one or more universities is a critical step if Oregon is to produce the estimated 240 graduates per year that it will need.
 - Many among the workforce lack public health training and are not well prepared to conduct population based approaches, which is the heart of the profession. Oregon needs to establish and offer continuing education and certification opportunities for the current public health workforce.
- The use of community health worker programs is a strategy that has been demonstrated to be effective at reducing the disparities of care that occur within the context of health care delivery (referenced from the Oregon Health Fund Board report, Building Block 5, Ensure Health Equity for All, November 2008). Oregon should explore the following:
 - Providing direct reimbursement for Community Health Workers (CHWs) for publicly-sponsored health programs.
 - The Oregon Health Authority, in coordination with the Oregon Healthcare Workforce Institute and other groups builds a culturally competent workforce that reflects the diversity of Oregonians.
 - The Legislature supports Community Health Worker programs that recruit and train members of underserved communities to provide culturally and linguistically competent health services within that community.

Next Steps

By June 2011, the HIP Committee, in accordance with its charter and with guidance from the Oregon Health Policy Board, will develop a two-year operational plan.

In the long term, developing a process for implementing the Health Improvement Plan in collaboration with multiple partners in communities across the state will be essential to achieving the plan's goals. Public health agencies, tribes, community-based organizations, hospitals, health plans, clinics, social service agencies, employers, schools, early childhood education and child care programs, colleges and universities, housing, transportation, land use and economic development agencies all have a stake in improving conditions so all Oregonians can live as healthy as possible. Building relationships, common goals and commitments among these sectors is crucial to the Oregon Health Improvement Plan's success.

Equally important in this effort will be developing the evaluation and continuous quality improvement processes to track success of implementation efforts and impact of their health equity components on Oregon's diverse populations. Collecting and reporting data for population groups by age, race, ethnicity, geographic location, ability, income and education will be challenging, but critical to ensuring that resources and actions are directed where they are most needed, and that these actions bring about real change and improvement sought in the Health Improvement Plan.

Covering Lactation Services Lowers Health Risks and Costs

Covering lactation services is a primary prevention strategy that gives a high return on investment including improvements in lifelong health and significant reductions in health care costs.

Over 76% of Oregon’s children miss out on benefits of exclusive breastfeeding.

Lower breastfeeding rates increase the incidence of many preventable chronic diseases and other health problems. That is why health experts recommend six months of exclusive breastfeeding as a way to improve the health of Mothers and children and reduce health care costs. Oregon Mothers have already gotten the message that breastfeeding is best-over 86% breastfeed their babies at birth. Unfortunately, recent Center for Disease Control (CDC) research shows only 23.7% exclusively breastfeeding for six months *and this rate has gone down 4% since 2005.*

Lack of access to lactation services contributes to lower breastfeeding rates.

Often mothers quit breastfeeding early or do not exclusively breastfeed because they are unable to access assistance when they encounter breastfeeding difficulties. Three Oregon surveys, the Pregnancy Risk Assessment Monitoring System Survey, the WIC Peer Counseling Research Project survey, and a Portland area hospitals survey showed that the majority of problems causing mothers to stop breastfeeding could be solved with early intervention from a lactation specialist.

Including lactation services, as part of all preventive services, including insurance and Medicaid coverage, will help mothers breastfeed longer. The Oregon Health Plan (OHP) – Lactation Analysis and Proposal recommended allowing “at least two” lactation visits. Reimbursement for community based visits with physicians and certified lactation consultants, breast pumps and pumping kits was another recommendation. In the long run, adding lactation benefits to insurance plans will save much more than it will cost.

Low exclusive breastfeeding rates increase health care costs.

An abundance of research document the increase in health risks and medical care costs associated with low breastfeeding rates. For example, there is an increased incidence of many costly chronic diseases.

Table 1: Maternal/Child Health Risks of Not Breastfeeding

Disease	Increased risk
Diabetes	40%
Recurrent ear infections	60%
Obesity	25%
Hospitalization for asthma or pneumonia	250%
Maternal breast cancer	39%
Maternal ovarian cancer	26%

There are many other risks and costs when children are not breastfed.

- In the first year of life alone, breastfeeding is associated with fewer cases of otitis media, respiratory infections and gastrointestinal illnesses.
- For every 1,000 babies not breastfed there are 2,033 more medical visits, 212 more days in the hospital and 609 more prescriptions.
- Formula-fed children in the US have a much higher rate of diabetes costing over one billion dollars per year in avoidable health care costs..

Summary of OHP cost/benefit analysis for coverage of lactation services.

OHP analyzed the possible financial impact of adding lactation benefits by looking at how often Medicaid women had breastfeeding problems and how often mothers used these services when they were available. They found that:

- If 15% of mothers used the service and the “lowest” cost savings were realized the benefit would be budget neutral; with the “most likely” cost savings the benefit would save \$600,000 per year.
- If 30% of mothers used the service and the “most likely” cost savings were realized the benefit would be budget neutral; with the “best” cost savings the benefit would save over \$2.8 million per year.

Table 2: Annual Costs for Covering Two Lactation Visits

	Cost Estimates
Cost if 15% of women use the lactation benefit	\$703,463
Cost if 30% of women use the lactation benefit	\$1,406,925

Table 3: Estimates of Annual Cost Savings with Added Lactation Benefit

	Yearly Cost Savings
Lowest cost savings	\$664,710
Most likely cost savings	\$1,329,421
Best cost savings	\$4,220,384

Because Oregon women living on a limited income have breastfeeding rates similar to the general population, these cost savings can be applied to both groups. The OHP analysis does not include future saving in health care costs from reductions in long-term chronic diseases and other health problems. For a copy of the complete OHP analysis, contact Sue Woodbury, Director of the Oregon WIC Program.

Conclusion

The importance of providing lactation care to mothers is recognized by many health organizations including the United States (US) Department of Health and Human Services, the Surgeon General and the US Breastfeeding Committee. Provider reimbursement for lactation services is essential to the success of our efforts to improve the health of Oregonians by increasing breastfeeding rates.



UNITED STATES BREASTFEEDING COMMITTEE

STATEMENT ON BREASTFEEDING AS A CRITICAL STRATEGY FOR OBESITY PREVENTION

The United States Breastfeeding Committee recommends breastfeeding as a primary prevention strategy to reduce overweight and obesity and promote the maintenance of a healthy weight throughout the life span.

Obesity is recognized as a major and growing health concern in the United States. Due to its increasing prevalence and the chronic health risks associated with its diagnosis, obesity is a particularly challenging and complex issue to address. Multiple factors contribute to obesity and confound understanding of its progression, including nutritional, genetic, biological, hormonal, and environmental exposures. Exclusive breastfeeding is not a panacea for the obesity epidemic, but it is one of the most easily modifiable and cost-effective strategies available.

Research has identified breastfeeding as a potentially critical strategy in reducing the risk of obesity in adolescence and adult life. The exclusivity, as well as the duration, of breastfeeding must be considered when investigating the relationship between breastfeeding and obesity. All major medical organizations recommend exclusive breastfeeding for the first six months, followed by continued breastfeeding for the first year and beyond, with the gradual introduction of appropriate complementary foods to the infant's diet beginning around six months of age.¹

A recent systematic review of breastfeeding research conducted by the Agency for Healthcare Research and Quality (AHRQ)² reports an association between being breastfed and a reduced risk of being overweight or obese in adolescence and adult life. Exclusive breastfeeding appears to have an even stronger effect than combining breastfeeding with formula feeding. The incidence of childhood overweight and obesity was lower among infants who were exclusively



breastfed for the first six months of life.³ Studies that controlled for exclusivity and duration of breastfeeding showed a more significant protective effect against childhood obesity.

Possible explanations for the protective effect of breastfeeding against obesity include behavioral mechanisms such as metabolic programming, differences in macronutrient intake, and family environment.⁴ It is well documented that formula fed infants consume larger volumes and gain weight more rapidly than breastfed infants, with the increased weight being predominantly adipose tissue in formula fed infants, while breastfed infants gain proportionately more lean body mass. Research shows rapid weight gain during infancy is associated with childhood obesity.⁵

A multinational study of the growth of exclusively breastfed infants conducted by the World Health Organization (WHO) indicates that the 50th percentile BMI for exclusively breastfed infants is lower at and after 6-7 months of age.⁶ These data indicate that both formula feeding and non-exclusive breastfeeding may be contributing to the obesity epidemic among American children. The estimated population-attributable risk of childhood obesity due to formula feeding is 15-20%.⁷

Newer research has investigated the relationship between breastfeeding and the co-morbidities related to obesity, such as hypertension, cardiovascular disease, and diabetes. AHRQ reports a minimal reduction in adult blood pressure for those adults who were breastfed as infants. Results from a meta-analysis of cohort and case-control studies reported a reduction in total and LDL cholesterol levels in adults who were breastfed.¹ AHRQ also reports evidence to suggest breastfeeding for more than three months is associated with a reduced risk of type 1 diabetes.¹ Another meta-analysis of seven studies reported that breastfeeding was associated with a reduced risk of type 2 diabetes in later life.¹

Optimal breastfeeding, as recommended by major medical organizations, contributes to normal growth and improved child and adult health outcomes. Policy and research aimed to improve



breastfeeding exclusivity and duration rates, especially among populations at risk for obesity, are essential components of a comprehensive national obesity prevention strategy.

USBC is an organization of organizations. Opinions expressed by USBC are not necessarily the position of all member organizations and opinions expressed by USBC representatives are not necessarily the position of USBC.

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¹ American Academy of Pediatrics Section on Breastfeeding. Breastfeeding and the use of human milk (policy statement). *Pediatrics*. 2005;115(2):496-506.

American Academy of Family Physicians. Family physicians supporting breastfeeding (position paper). <http://www.aafp.org/online/en/home/policy/policies/b/breastfeedingpositionpaper.html>. Accessed May 7, 2007.

Academy of Breastfeeding Medicine Web site. <http://www.bfmed.org>. Accessed June 1, 2007.

James, DC, Dobson B, American Dietetic Association. Position of the American Dietetic Association: promoting and supporting breastfeeding. *J Am Diet Assoc*. 2005;105(5):810-818.

American College of Obstetricians and Gynecologists Committee on Health Care for Underserved Women and Committee on Obstetric Practice. Special report from ACOG: breastfeeding: maternal and infant aspects. *ACOG Clin Rev*. 2007;12(1)(suppl):1S-16S.

National Association of Pediatric Nurse Practitioners. NAPNAP position statement on breastfeeding. *J Pediatr Health Care*. 2007; 21(2): A39-A40.

U.S. Department of Health and Human Services. *HHS Blueprint for Action on Breastfeeding*. Washington, D.C.: U.S. Department of Health and Human Services, Office on Women's Health; 2000.

World Health Organization/UNICEF. *Global Strategy for Infant and Young Child Feeding*. Geneva, Switzerland: World Health Organization; 2003.

² Ip S, Chung M, Raman G, Chew P, Magula N, DeVine D, Trikalinos T, Lau J. *Breastfeeding and Maternal and Infant Health Outcomes in Developed Countries*. Rockville, MD: Agency for Healthcare Research and Quality; 2007. Evidence Report/Technology Assessment No. 153.

³ Gillman MW, Rifas-Shiman SL, Camargo CA, et al. Risk of overweight among adolescents who were breastfed as infants. *JAMA*. 2001;285:2461-2467.

⁴ Li R, Fein SB, Grummer-Strawn LM. Do infants fed from bottles lack self-regulation of milk intake compared with directly breastfed infants? *Pediatrics*. 2010;125(6):e1386-e1393.

⁵ Dewey KG. Is breastfeeding protective against child obesity? *J Hum Lact*. 2003;19(1):9-18.



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⁶ World Health Organization. *WHO Child Growth Standards: Length/height-for-age, weight-for-age, weight-for-length, weight-for-height and body mass index-for-age: Methods and development*. Geneva, Switzerland: World Health Organization; 2006.

⁷ Dietz WH. Breastfeeding may help prevent childhood overweight. *JAMA*. 2001;285:2506-2507.