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Reaching Our Peak

Creating a Healthier Colorado

AUGUST 2013

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Reaching Our Peak

Creating a Healthier Colorado

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Our health is shaped by our genetics and our history and our circumstances. It is impacted by the food we eat and how much we exercise. It is influenced by the policies, programs and politics of our communities and our governments.

And much more: Do we have insurance? Will a medical provider see us? Is dental care available? How far did we go in school? Do we have a job with benefits? Does our salary cover the basics? Is our neighborhood free from crime?

All of these factors enter the mix when it comes to our well-being.

The challenge for Colorado, which is striving to become the healthiest state in the nation, is how to address these varied influences on health with a thoughtful balance of public investment, private involvement and individual responsibility.

Policymakers, health care providers, philanthropists, advocates, educators, neighbors and many others are tackling this challenge. Increasing attention is being directed toward innovations inside and outside of the health care system. Commitment and collaboration are flourishing. Our collective will is starting to topple some of the barriers to good health.

Still, it is often difficult to be certain which strategies or interventions will be most effective. Resources are scarce and must be allocated carefully. Demonstrating results and a return on investment can take years or even a generation – a timeline that often does not fit typical grant cycles, annual budgets or short attention spans.

In *Reaching Our Peak: Creating a Healthier Colorado,* the Colorado Health Institute aims to help fill that knowledge gap.

We explore five areas where work is underway to improve health: schools, the workplace, communities, the health care delivery system and the places where we age. We look at new ideas and programs, make sense of the research and evidence behind them and talk about what is going on in Colorado. Finally, we evaluate Colorado's progress – how high it has climbed up the mountain – in each area.

We have chosen strategies with established momentum. Some have long been used but only recently considered as possible levers to improve health. Others draw on lessons learned in earlier efforts, such as the environmental movement or anti-smoking campaigns. Many are new, still developing an evidence base.

This report is meant to spark discussion and cultivate creativity. The analysis of programs and policies in these five areas can help focus Colorado's work – and its resources. Because *Reaching Our Peak: Creating a Healthier Colorado* is a primer, not a comprehensive review, we have included references and resources where more information is available.

Improving health requires long-term commitments – people changing their behaviors and habits, communities creating healthier environments, employers promoting wellness at the workplace and politicians marshaling the power of government when needed. The Colorado Health Institute will periodically refresh *Reaching Our Peak: Creating a Healthier Colorado* to provide the latest evidence on policies and programs that have the potential to create a healthier Colorado.

CLIMBING THE MOUNTAIN

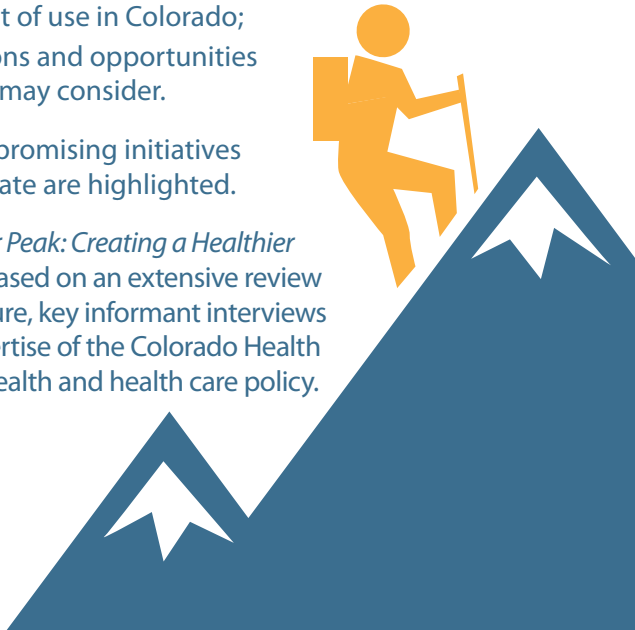
We assess the progress of our state using a yardstick that is very much Colorado – the image of a hiker heading toward the peak of a mountain.

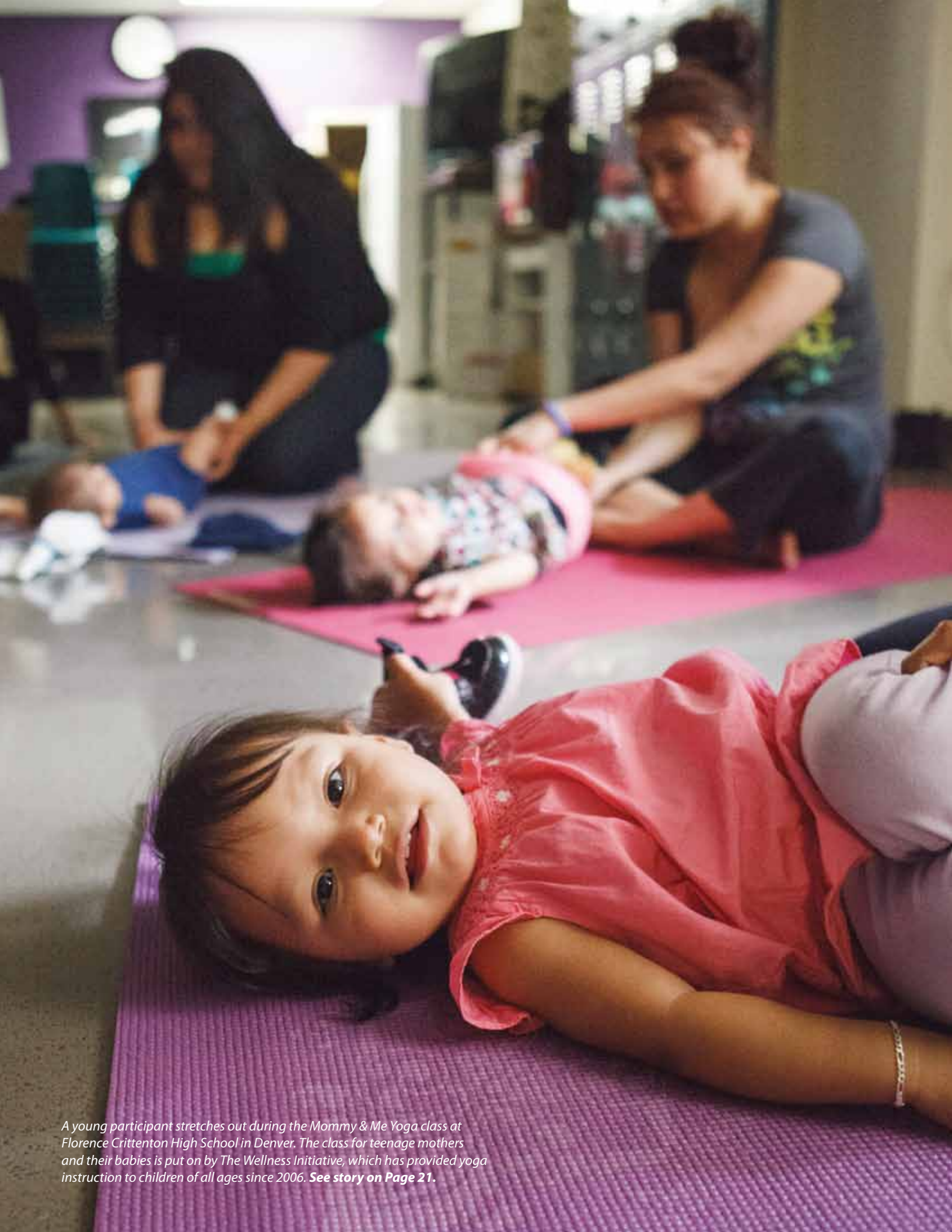
Each focus area includes:

- Main elements of the policy or program;
- A synopsis of research findings;
- The extent of use in Colorado;
- And options and opportunities Colorado may consider.

In addition, promising initiatives across the state are highlighted.

Reaching Our Peak: Creating a Healthier Colorado is based on an extensive review of the literature, key informant interviews and the expertise of the Colorado Health Institute in health and health care policy.





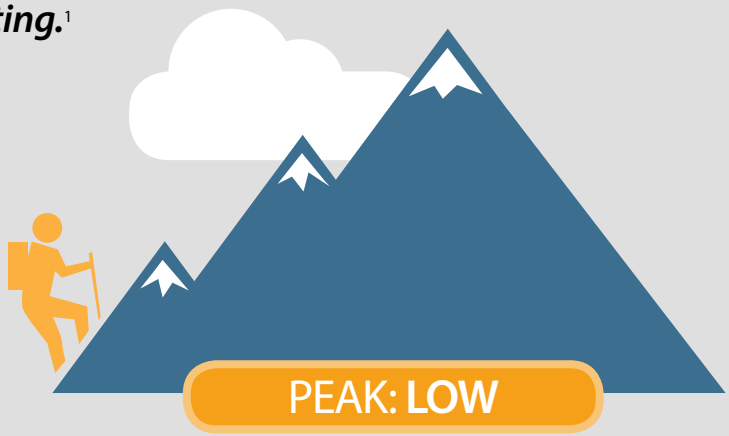
A young participant stretches out during the Mommy & Me Yoga class at Florence Crittenton High School in Denver. The class for teenage mothers and their babies is put on by The Wellness Initiative, which has provided yoga instruction to children of all ages since 2006. ***See story on Page 21.***

Aging

Colorado faces a senior tsunami. The state's fastest-growing age group is 65 and older. By 2030, the 65+ population is expected to be three times larger than it was in 2000, increasing from nearly 420,000 to more than 1.3 million. This is important because almost 70 percent of seniors will require long-term care and support, either at home or in an institutional setting.[1]

With the right mix of services and supports, seniors who are reluctant to leave home for a nursing facility or an assisted living center can age in place, while residents of skilled nursing facilities may be able to return to their community or a residential setting. Alternatives to traditional long-term care also include transforming nursing facilities to operate more like private homes, giving seniors as much independence as possible in a home-like setting while providing needed care and safety.

Finances also come into play. Long-term care is expensive and can quickly deplete a life's savings. Lower-income seniors primarily rely on Medicaid. So, creating community-based options could save money for individuals and the government insurance program.



Colorado is just beginning to create alternatives to traditional institutional care. Whether new models will emerge in sufficient numbers to serve the growing senior population, and whether these alternatives will significantly ease the strain on personal savings and Medicaid, remains unknown.

Naturally Occurring Retirement Communities (NORCs)

At a Glance

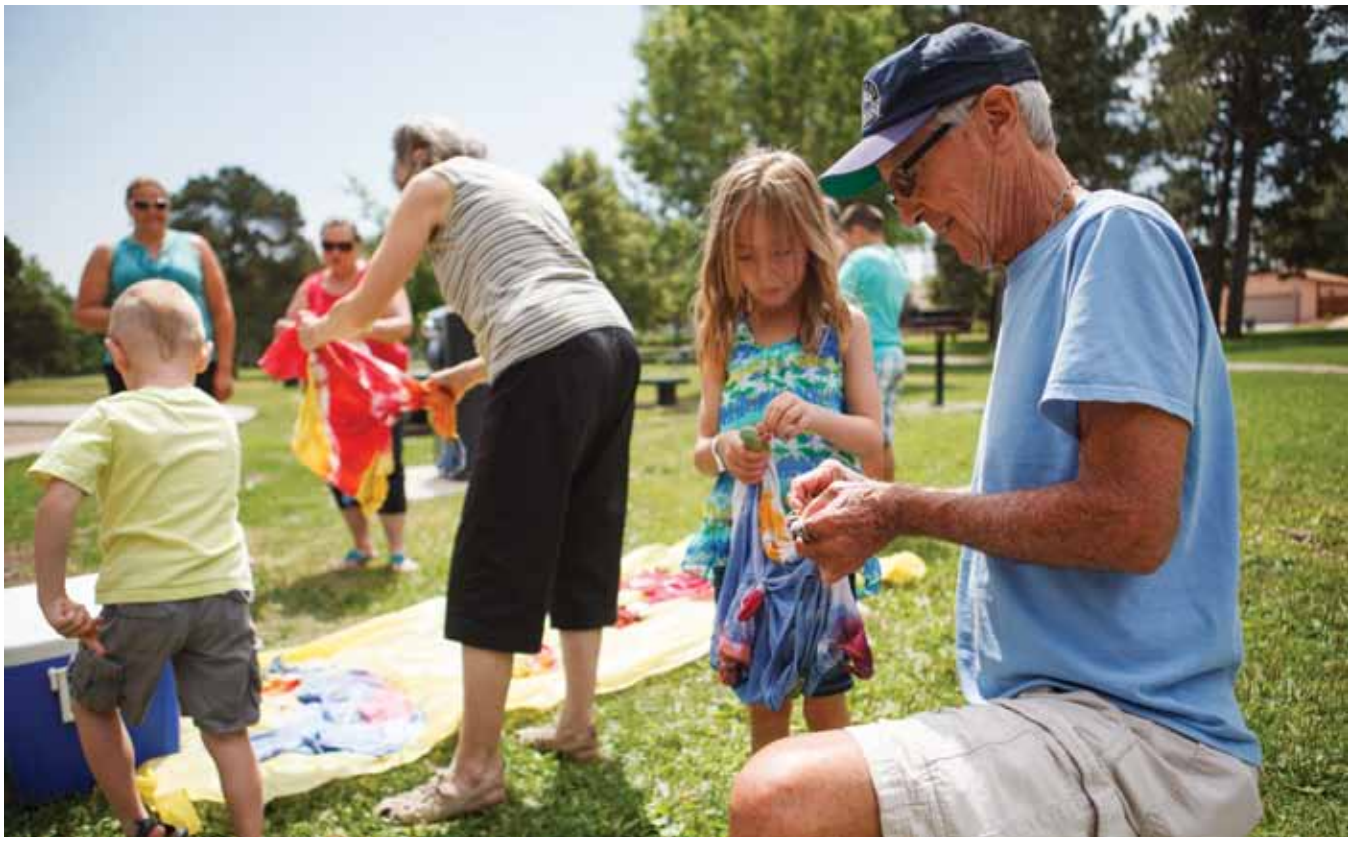
- NORCs can be apartment buildings, condominium complexes, or neighborhoods of single-family homes. The common denominator? A significant number of older residents already live there. Health and social workers provide health care management and prevention programs, education and recreational activities, volunteer opportunities and links to nearby resources.[2] NORC programs emphasize preventive care.[3]

Evidence

- Most research and evaluations have focused on quality of life. In one study, 72 percent of residents agreed or strongly agreed that they leave their homes more than they used to, and an even greater percentage said they participate in activities or events more often.[4]

In Colorado

- JFS Colorado Senior Connections, an apartment building for low-income seniors in the Denver suburb of Edgewater, is the state's only official NORC. Several Colorado foundations provide financial support, and it is staffed by a licensed social worker (see accompanying story on page 9).[5]
- The Department of Health Care Policy and Financing (HCPF) requested but did not receive funding in fiscal year (FY) 2012-13 to study the potential savings and qualitative impacts of consolidating some state-funded long-term services and supports



Brian Clark/Colorado Health Institute

Wayne Ewing, 76, helps his great-granddaughter Madelyne, 6, unwrap her tie-dye T-shirt during an event at Sloan's Lake hosted by the Naturally Occurring Retirement Community (NORC) in Edgewater. Find out more about Colorado's only NORC on ***page 9****.*

in NORCs. HCPF did not include NORC research or outreach in its FY 2013-14 budget request.

Options and Opportunities

- NORC services are typically funded by the federal government or foundations, although some NORCs charge membership fees. Several states, including New York, Maryland, Georgia and Indiana, have funded NORCs.[6]
- Municipalities and communities can identify where many soon-to-be-elderly live and begin assessing their aging-related needs. Colorado's 16 Area Agencies on Aging research the demographic trends and changing needs of seniors every four years, providing potentially helpful information.

Colorado Choice Transitions

At a Glance

- Funded through a $22 million, five-year federal Money Follows the Person grant, Colorado Choice Transitions launched in March 2013. The program is enrolling applicants with the goal of moving 500 Medicaid clients from nursing facilities to community-based housing.[7, 8]
- Services for residents of independent or group settings include home-delivered meals, home modifications and independent living skills training.
- Colorado Choice Transitions is an effort to shift some state-funded long-term services and supports from institutions to home- and community-based settings.

Evidence

- Costs are lower than or comparable with those in nursing facilities.[9, 10] Residents report improved quality of life, greater satisfaction with where they live and fewer unmet care needs compared with those in institutions. However, most research so far involves "early transitioners" to community settings who are most likely younger and with fewer needs than other Medicaid residents of nursing facilities.[11] Future research may produce different findings.

In Colorado

- Eleven committees of service providers, advocates, consumers and other stakeholders oversee Colorado Choice Transitions. The committees were created to help smooth the move to community-based living by marshaling regional resources and expertise.
- Colorado also has seven Medicaid programs offering home- and community-based services for elderly or disabled adult beneficiaries. However, some of these programs have waiting lists or enrollment delays.

Options and Opportunities

- Ongoing support after the five-year federal grant ends will require partnerships among multiple agencies and organizations. Colorado could use the grant period to solidify these relationships and restructure its long-term services and support systems.
- Other states with Money Follows the Person grants identified lack of housing and qualified care workers as major challenges.[12] Addressing these challenges in Colorado will be essential in transitioning Medicaid beneficiaries into the community.

Green House Homes

At a Glance

- The Green House Home model is a residential setting with skilled nursing care on site. A Green House Home may be a single house with several residents or a neighborhood of up to 24 homes.
- Each home has private bedrooms, a central living area, an open kitchen and a dining room where residents share meals with family and staff members. Each resident has a daily routine that may include tasks such as cooking, cleaning and laundry. These homes are much smaller than traditional nursing facilities, so residents generally receive more personal attention.
- Green House Homes are typically licensed as nursing facilities and must meet state and federal regulations. Direct care workers, often nursing assistants, provide day-to-day care and manage the home. Nurses provide oversight, consultation and supervision.[13]

Evidence

- Although limited, studies have reached similar conclusions: Green House Homes provide "significant and sustained satisfaction and clinical improvements" at the same or lower cost than traditional nursing facilities.[14]
- A retrospective examination of comparable residents of Green House Homes and traditional nursing facilities found that Medicare and Medicaid spent between $1,300 and $2,300 less annually on residents of the homes than on their counterparts in nursing facilities, and that the residents were more satisfied with their quality of life.[15] Similarly, staff members had higher job satisfaction than those in traditional nursing facilities.[16]

In Colorado

- Colorado is among 32 states with Green House Homes open or being planned. The county-owned Washington County Nursing Home, which provides skilled nursing care for up to 34 residents in rural northeast Colorado, is planning to transform into a Green House Home. Loveland's Housing Authority is developing six homes in its Mirasol Senior Living Community. Each house will serve up to 10 low- or moderate-income residents, including Medicaid beneficiaries.
- Both projects received federal money for planning and design. Construction, however, won't begin until additional financing is secured through foundations or bank loans.

Options and Opportunities

- California lawmakers passed The Small House Skilled Nursing Facilities Pilot Program in 2012 to develop 10 projects based on the Green House Home model and to collect data to inform future innovations.
- Green House Home planners say it takes significant time to bring together health care, housing and financing partners to plan and fund these models.
- Foundation and federal financing can support the planning of Green House Homes, especially those that may serve low-income seniors or those living in rural and underserved communities.

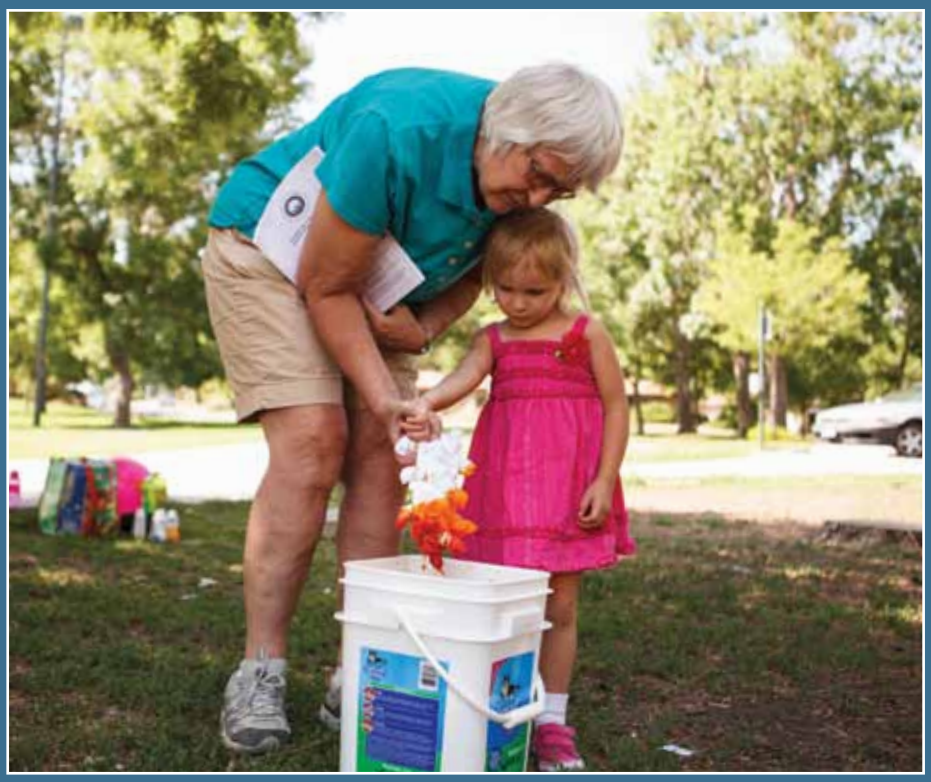
Edgewater NORC

On a warm July afternoon, a dozen or so seniors gather at Sloan's Lake in Edgewater for an afternoon of tie-dying T-shirts with family and friends. Grandparents, who perhaps created tie-dye fashions during the 1960s, offer pointers to the younger generation. "Dip each corner in a different color," one grandmother tells her eager granddaughter, who proceeds to dunk her entire white T-shirt in each bucket of dye. She ends up with a vibrant brown top.

These seniors live in a community that stands out as an alternative to nursing homes or assisted living. In demographic terms, it's called a Naturally Occurring Retirement Community, or a NORC. A NORC is not built specifically for senior living; rather it is a neighborhood or building where longtime residents, perhaps joined by newcomers, are supported by health services and social and recreational programs that promote healthy living, independence and community engagement.

The Edgewater NORC – the only one in Colorado – is run by the Colorado Senior Connections program of Jewish Family Services. A small staff relies primarily on volunteers from the Edgewater community. Many residents are on fixed incomes, so services are often free or supported by local foundations as well as the City of Edgewater.

Physician assistant students from Red Rocks Community College offer a free wellness clinic once every month at a low-income senior housing building in Edgewater. Colorado



Brian Clark/Colorado Health Institute

A grandmother helps her granddaughter dip a T-shirt into dye at an event hosted by the Naturally Occurring Retirement Community in Edgewater.

Senior Connections sponsors social and recreational events so that residents meet their neighbors and get out into the community. A group of sports enthusiasts from the NORC recently took in a Colorado Rockies game, and the more artistically-inclined residents can join "Classical Connections," a biweekly music class.

After wrapping up the tie-dye project, 76-year-old Wayne Ewing joins his great-granddaughter Madelyne, 6, in an energetic game of hide-and-seek on the nearby playground. Ewing's son, Christopher, and his granddaughter, Lisa, make it a four-generation affair.

Ewing believes being involved doesn't come with any age restrictions, young or old.

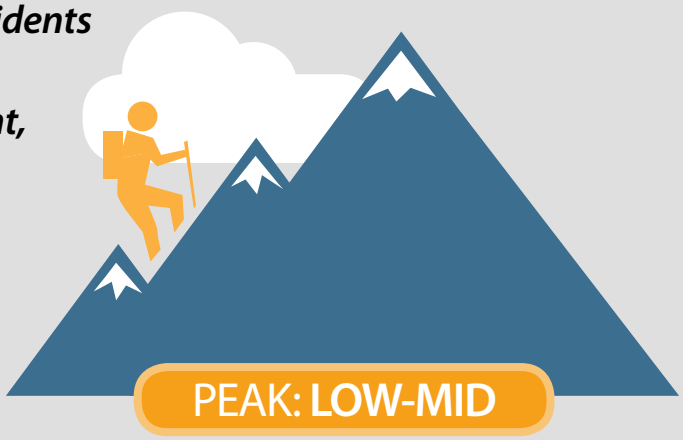
"It's not about keeping seniors active and involved," he says. "It's the other way around. For communities to remain vibrant, vital and engaged, the accumulated wisdom of the aged needs to be part of the vision. That, in turn, improves the quality of life of the young, the working class, the public schools and the greater community."

For more information on JFS Senior Connections:
edgewaterseniors.org

For more information on NORCs:
norcs.org

Communities

Local policies and private initiatives can make a community health-friendly and nudge residents toward choices and activities that promote their well-being. A city or county government, for example, can install bike lanes on busy streets to encourage physical activity – and put a dent in air pollution. Parents can press politicians for well-lit streets and parks where their children can play safely.



Financial incentives and support by a local government or private organization may spur a supermarket chain to open a store in a lower-income neighborhood. Some communities and states impose additional taxes on sugary beverages, an approach to cutting calories and improving diets that can be effective but is also controversial.

One growing trend is to assess how a project or plan may affect the public's well-being, a kind of health version of an environmental impact statement.

Some of these public and private initiatives in Colorado are so new that it's difficult to know whether they will have staying power or whether they will even achieve the desired outcomes. Overall, Colorado has a light touch when it comes to higher taxes or mandates to encourage healthy choices, though the private sector is active on several fronts. Still, government and organizations can only even the playing field so that people have a choice about healthy living. Residents must still make the personal decision to opt for the healthiest choices.

Health Impact Assessments (HIAs)

At a Glance

- HIAs inform decision-making by estimating how public health might be affected by proposed policies, plans and programs, such as transportation projects or budgetary decisions at city hall or in the statehouse.[17]
- HIAs incorporate scientific data, health expertise and public input through a structured, systematic assessment conducted by departments of public health, nonprofit organizations, universities and/or private contractors.

Evidence

- HIAs are slowly gaining acceptance in the United States. Twenty-seven HIAs were conducted between 1999 and 2007, but increased to 119 between 2007 and 2010. As of April 2013, more than 225 HIAs had been completed or were in progress.[18, 19]
- Research suggests that HIAs have introduced health issues into planning and policies. But whether this trend will make a lasting impact on health will require more time and study.[20]

In Colorado

- Colorado communities have conducted or completed six HIAs. For example, the Tri-County Health Department, serving Adams, Arapahoe and Douglas counties, conducted an assessment as part of the restoration and redevelopment of the Derby District in historic Commerce City's

commercial core. Among other things, the assessment considered how the project might encourage walking and biking and impact vehicle traffic and pedestrian safety. The HIA for the Denver Housing Authority's South Lincoln Homes redevelopment plan made recommendations to promote physical activity and healthier lifestyles for residents.[21]

- Colorado does not require HIAs, although some regulations do consider health impacts. The Colorado Department of Public Health and Environment (CDPHE) annually measures emissions from oil and gas operations. And facilities applying for licenses to store or create radioactive waste are assessed by CDPHE for their impact on public health.[22]

Options and Opportunities

- Several states have proposed routine use of HIAs, but only Massachusetts requires it, and then only for transportation projects.[23]
- Colorado state agencies and municipalities are permitted to consider health impacts of proposed projects, though they do not have to do so. Colorado Senate Bill 48, signed into law this year, allows local governments to spend state Highway Users Tax Funds on projects often recommended by health impact assessments, such as walking trails, sidewalks or bicycle lanes.[24]

Taxing Sugar-Sweetened Beverages

At a Glance

- Sugar-sweetened beverages, including soda, sports drinks, energy drinks and sweetened fruit drinks, account for 46 percent of all added sugar consumption in the average American diet.[25] These beverages are typically high in calories while providing minimal nutrition, raising the risk of obesity, diabetes and other health problems.
- Taxation strategies assume individuals will purchase less of something that is more expensive.

Most states impose a sales tax on soda and other sugary beverages. As of 2011, approximately 23 states had a higher sales tax on sodas than on food. California, Utah and Virginia require localities to impose a levy on soda sales in addition to the regular sales tax.[26]

Evidence

- One study estimates that a 10 percent price increase for sugary beverages would result in an 8 percent to 13 percent decrease in consumption.[27] Another study suggests that if all 50 states applied a penny-per-ounce excise tax on sugar-sweetened beverages, consumption would be cut by 15 percent among adults between the ages of 25 and 64.[28]
- The anti-smoking movement may hold lessons for sugary drink consumption. Governments have taken multiple approaches to curb tobacco use, including funding smoking-cessation treatments, limiting advertising, education campaigns as well as heavily taxing products. Some non-taxation initiatives have had a measurable impact on tobacco consumption, though research suggests increases in excise taxes are the most effective approach.[29]

In Colorado

- Colorado applies a 2.9 percent sales tax on soda, but exempts other sugary beverages and most food. Colorado's sales tax rate on soda is 2.3 percentage points below the 2011 nationwide average of 5.2 percent.[30]

- Telluride voters will decide in November whether to approve a ballot measure that places a penny-per-ounce tax on sweetened beverages. Revenues from the proposed tax – estimated by supporters to total between $125,000 and $175,000 annually – would provide scholarships for youngsters to participate in physical activities and would support programs such as after-school clubs and gardening projects.[31]

Options and Opportunities

- In 2013, more than 10 state legislatures proposed changes to sugar-sweetened beverage taxes, with the majority considering per-ounce excise taxes or removing exemptions. Most efforts are either awaiting legislative action or were voted down.[32]
- States, cities and employers – including many in Colorado – have used non-tax strategies to discourage consumption. Some have removed these beverages from vending machines and cafeterias and restricted container size. New York City banned the sale of sodas larger than 16 ounces, a move that was declared unconstitutional and is being decided in the courts. Other efforts take different approaches, such as media campaigns to raise awareness of the calories in soda and other sweet drinks.[33]

Addressing Food Deserts

At a Glance

- Food deserts are neighborhoods or communities, often located in low-income areas, with limited or no easy access to stores that sell healthy fresh foods such as fruits and vegetables. Approximately 25 percent of Coloradans, or nearly 1.3 million people, live in food deserts.[34]
- Market-based efforts to improve access to affordable and nutritious foods include encouraging more grocers to accept the Supplemental Nutrition and Assistance Program (SNAP), the food stamp program; increasing the number of community gardens and farmers markets; creating financial incentives to attract full-service grocers to underserved areas; and making grants or low-interest loans to corner stores for equipment to display and preserve fresh foods.

Evidence

- Factors that influence individual choices about food are difficult to measure. Access to nutritious foods can improve eating habits and reduce obesity rates. Increasing the stock and promotion of healthy foods in corner stores has resulted in greater sales.[35, 36] However, the easy availability of low-cost and nutrition-limited foods, such as fast food, rather than limited access to healthy foods, may have a greater impact on eating healthfully.[37]

In Colorado

- The Denver Food Access Task Force, a diverse stakeholder group, released a 2011 report with recommendations to improve access to affordable, healthy food. It called for public-private development and financing to attract supermarkets to underserved communities in the city. The Task Force also suggested bringing more eligible people into SNAP. The Colorado Fresh Food Financing Fund addresses these recommendations (see accompanying story on page 13).
- Colorado's Food System Advisory Council (COFSAC), established through state legislation in 2010, makes recommendations to the General Assembly and regulatory agencies on hunger, food access and other issues. The council's work has increased acceptance of SNAP benefits at farmers' markets across the state.

Options and Opportunities

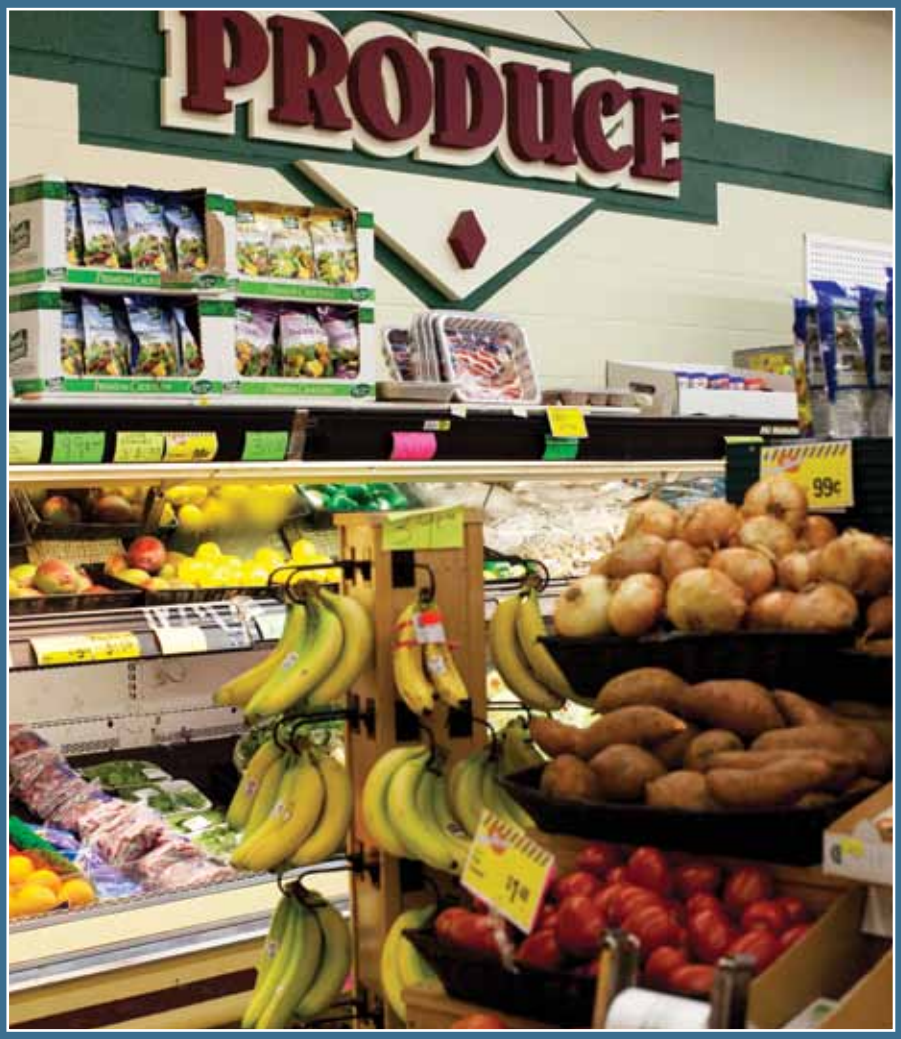
- Business licensing policies can improve access to healthy food. In 2008, for example, Minneapolis adopted The Staples Food Ordinance to require a minimum number of staple foods such as dairy products, proteins and whole grains in most small food stores and groceries.[38]
- A 2012 summit hosted by LiveWell Colorado, an anti-obesity advocacy group, and COFSAC cited conditions "most often identified as having the highest impact in achieving the healthy food access vision." Among them: Government land-use policies to support agriculture and consumer knowledge about healthy cooking and eating.[39]

Fresh Food Financing Fund

Supporters of Colorado's new initiative to make healthy food more available in lower-income neighborhoods are looking to the Keystone State for guidance and inspiration.

The Pennsylvania Fresh Food Financing Initiative, a nine-year-old public-private partnership, leveraged $30 million in state seed money to attract an additional $145 million in private investments. Through loans and grants, it helped develop or improve 88 supermarkets and food outlets in rural and urban areas where there were limited fresh food options. The initiative is credited with creating or retaining more than 5,000 jobs and providing healthful alternatives in communities saturated with fast-food outlets.

Colorado is following Pennsylvania's lead with the creation of the Colorado Fresh Food Financing Fund (CO4F). Set to launch in mid-August, CO4F will provide loan and grant financing for grocery stores and other vendors that offer fresh, healthy foods to underserved communities throughout Colorado. Like Pennsylvania, CO4F is a public-private partnership, says Khanh Nguyen, portfolio director – healthy living, for The Colorado Health Foundation, which hopes to raise investments from other local funders for CO4F. The Colorado Housing and Finance Authority will administer CO4F resources.



The Reinvestment Fund

Sprankle's Neighborhood Market in Vandergrift, Pennsylvania, has added a produce section as part of the Pennsylvania Fresh Food Financing Initiative.

For more information on The Healthy Food Access Portal:
healthyfoodaccess.org

For more information on CO4F:
coloradohealth.org/yellow.aspx?id=6248

Health Care

To counter escalating health care costs, initiatives aimed at access, efficiency and prevention are gaining momentum in Colorado and elsewhere. Expanded eligibility for health insurance coverage through state and federal reforms increases access to medical care. Providers are using new technologies and tools to streamline their efforts and are being rewarded for keeping their patients healthy.

A relatively new phenomenon called medical homes provides coordinated care across a spectrum of providers and keeps careful track of a patient's health. The idea is to keep costs down and provide smart and appropriate care to head off small health problems before they become large ones.

Several health and social service programs employ a new type of worker to provide at-risk Coloradans with culturally sensitive guidance on options and services. Efforts are underway to certify these community health workers through educational programs.

As for prenatal care, it is not a new initiative but it is a proven winner and is especially important in Colorado, which is in the lowest quartile nationally for low birth weight babies. Connecting with families, especially disadvantaged or vulnerable new parents, can head off problems and start infants on a healthy path.

Colorado is ahead of many states in these areas. Although the jury is out on whether medical homes can control spending while improving health, dozens of practices are embracing the model with strong public and private support. Community health workers reach many people who are disconnected from health care, though formal training and recognition is just now being addressed. Prenatal care has long been part of the health care culture. The challenge now is to reach more mothers with this essential service.

Medical Homes

At a Glance

- Medical homes organize care around a patient's needs. Such practices typically offer extended office hours, use e-mail to communicate with patients and are supported by information technology systems to keep tabs on services and tests.[40] When a patient is being treated by more than one provider, his or her primary care practitioner acts as a quarterback and keeps track of the players to ensure the patient does not receive duplicative or unnecessary treatment.

Evidence

- Medical homes are designed to reduce disparities in access to and quality of care.[41] Research suggests they reduce errors and increase patient satisfaction.[42]

- Preliminary results from Colorado's medical home pilot project, a public-private initiative to test the impact of medical homes on cost and care, found reduced hospital admissions and lower emergency room use, although there are still questions about the model's cost savings since overall financial impacts have not been determined.[43]

Chris Schneider

Colorado is leading the way in developing innovative programs and solutions to improve health care systems across the state.

In Colorado

- Colorado has supported medical homes for children in Medicaid and Child Health Plan Plus (CHP+) for the past decade or so. Colorado's Accountable Care Collaborative (ACC), a Medicaid cost and quality effort, makes extra payments to primary care providers for providing treatment coordination and medical home services.

- Colorado is one of seven regions participating in the Comprehensive Primary Care Initiative. Nine health insurers – seven private plans plus Medicare and Medicaid – are partnering with more than 365 providers in 74 primary care practices across the state that have adopted the medical home model. Practices are receiving monthly care coordination payments to improve quality of care and patient satisfaction while lowering health care costs.

Options and Opportunities

- Colorado is expanding its medical home efforts through the ACC. Measuring changes in cost and quality and evaluating the potential for savings will yield key insights for future reforms.

- Coordinating patient care in a medical home frequently involves specialists, hospitals, rehabilitation centers and other providers. In some places, the network is larger and includes public health workers, dentists and behavioral health professionals. Bringing health-focused providers such as fitness facilities and day care centers under the medical home umbrella may hold promise for improving a patient's overall health.

Community Health Workers (CHWs)

At a Glance

- CHWs connect underserved people with social and health services and information.[44] They meet the community on its own ground, providing health screenings, staffing health fairs, addressing civic groups and walking the streets to tell people about what's available to improve their well-being.

Evidence

- Programs that use community health workers report better disease management and prevention for asthma, hypertension, diabetes, cancer and

HIV/AIDS and improvements in maternal and child health and nutrition.[45, 46]

In Colorado

- Community health workers are employed across the state in publicly funded health systems, community- based organizations and on tribal reservations. Colorado Heart Healthy Solutions, a network of practitioners who assess cardiovascular health across the state, uses community health workers to reach medically underserved individuals in 26 counties. Since 2008, the program has served more than 15,000 Coloradans.[47]
- The Colorado Community Health Worker and Patient Navigator Work Group, a coalition of advocates, local and state agencies, philanthropic organizations and health care providers, is identifying common roles for community health workers and developing ideas for how to sustain these programs. One of the group's goals is to consider whether legislation is needed to support these efforts.[48]

Options and Opportunities

- Colorado does not license or regulate community health workers. There is no standard, state-sanctioned job description or skills and training requirements, though a multidisciplinary group in Colorado is working on these issues. Establishing a uniform description can serve as a critical step in expanding educational programs, leading to formal licensure or certification. The Community College of Denver offers a 17-credit hour CHW certificate program.

Prenatal Care

At a Glance

- Prenatal care provides guidance and information to women about healthy behaviors during and after pregnancy. In addition to physical exams, prenatal care includes counseling and education on healthy eating and weight gain during pregnancy and support to quit smoking.

Evidence

- Prenatal care has been shown to improve infant/child health and reduce infant deaths and low birth weights as well as maternal complications or mortality.[49]
- The Nurse Family Partnership (NFP) is an evidence-based model of preventive care with decades of research supporting its success in reducing health disparities among low-income, first-time parents and their children. NFP links parents with a specially trained public health nurse early in the pregnancy. Nurses provide one-on-one home visits to support these new moms and families until their children are two years old.[50]

In Colorado

- Prenatal care is often delayed or out of reach for more than 20 percent of women in Colorado. Hispanic women are less likely to receive prenatal care than non-Hispanic white women.[51]
- Colorado has several programs to expand prenatal care among high-risk pregnant women. The Medicaid Prenatal Plus Program, for example, provides mothers with nutritional and smoking cessation counseling and emotional support to combat perinatal depression. A 2002 study found that participants were more likely to have gained weight and had longer periods of gestation than the control group, while their babies were less likely to be of low birth weight.[52, 53]

Options and Opportunities

- Parents may not know that prenatal care can improve both parent and child health. Programs like NFP and community health workers provide culturally competent information about the role of prenatal care in improving birth outcomes.
- Lack of health insurance is an obstacle to accessing prenatal care. Helping women and families, especially those with lower incomes, access coverage as it becomes available under federal and state health reforms is an important step toward reducing the percentage of women who do not receive prenatal care.

Community Voices

Silvia Lopez and Mona Sanchez prepare for a busy day as they maneuver the Health Access Express truck with the bright mural on the side into the parking lot at Our Lady of Grace Church in Denver's Elyria Swansea neighborhood. They are visiting this church in east Denver – one of many stops across the city – to help community members navigate a health care system that can, at times, seem complex and intimidating.

Lopez, an enrollment specialist in Denver Health's Community Voices program, helps people obtain health insurance. She offers information about plans and services as well as health education and resource referral. Sanchez is a patient navigator who helps people with big health care needs and little familiarity with the system.

"I like helping people live a healthier lifestyle," Lopez says. "If we didn't do this, many of these people wouldn't go to the doctor or get immunizations or go to the dentist. They wouldn't do any of that."

Adds Sanchez: "Many people don't know they have health care choices."

Denver Health set up the Community Voices program in 1998 to provide health information and link the city's underserved communities to health care. The Express program employs four advisors who have completed the Community College of Denver's community health worker certificate program. Denver Health's school-based health centers have six advisors who assist students and their families. Advisors often share the same culture and language – and live in the same neighborhoods – as the people they serve.

Brian Clark/Colorado Health Institute

On board the Health Access Express truck, Silvia Lopez, an enrollment specialist in Denver Health's Community Voices program, listens to a patient ask questions about her health insurance.

Community Voices employs about 35 patient navigators. They coordinate appointments and manage paperwork and program applications. Community Voices also has placed patient navigators in medical homes to provide additional support.

Liz Whitley, project director of Community Voices, says Denver Health's effort has spurred the creation of other community health and patient navigator programs in Colorado. The program has expanded its services based on demonstrated cost savings, progress on health screenings and improved patient satisfaction.

For more information on Community Voices: ***denverhealth.org/MedicalServices/PrimaryCare/OurServices/CommunityServicesAndResources/CommunityVoicesPatientNavigatiors.aspx***

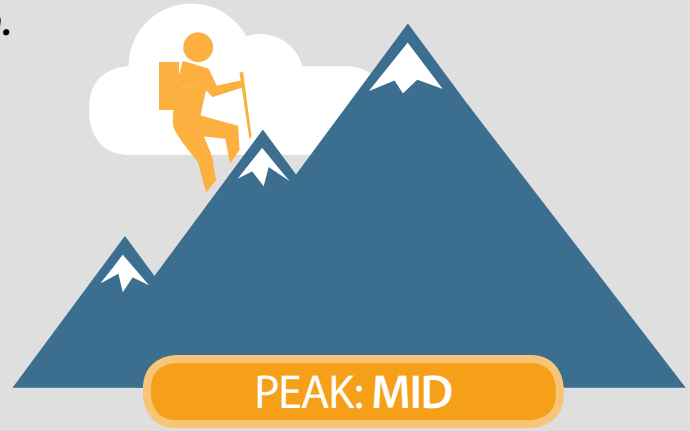
Schools

Students spend up to half of their waking hours in school during an academic year. So it stands to reason that schools can have a big impact on a student's health.

The federal government and Colorado legislature both recognize that children can get an early start on the trail to health through school-based programs and policies. Washington and the state have set some nutritional standards for school food and they promote healthy options in cafeterias, vending machines and snack bars.

Colorado has created standards for physical activity at school in response to growing child obesity rates. Research shows the positive impact of exercise on health and success in the classroom.

Early childhood education is another building block for health. Programs that engage children from birth to age 8 in healthy activities help them develop habits that can lead to health and success later in life. These programs also encourage parents to create healthier homes.



Coloradans feel that schools have the biggest role among community groups and organizations in reducing obesity.[54] Cafeteria menus offer more fruits, vegetables and grains. More students will soon receive nutritious breakfast at school because of new legislation passed by Colorado lawmakers. But physical activity requirements lack strong oversight and don't cover all students. Ensuring that programs are fully implemented at the local level will require strong champions – including parents – especially in poorer school districts.

Physical Activity Requirements

At a Glance

- National guidelines call for 60 minutes or more of physical activity each day for youth.[55] Colorado's school-based physical activity requirements are less than that and end after elementary school.[56]
- In 2011, 29.2 percent of Colorado high school students were physically active for at least one hour each day for the past seven days, slightly higher than the national rate of 28.7 percent.[57]

Evidence

- Physical activity is linked to improved mental health, lower blood pressure and higher achievement in mathematics and reading.[58, 59, 60]
- Research suggests that children and adolescents are more likely to maintain active lifestyles when schools support physical fitness.[61]
- A recent study found increased gym time in kindergarten through fifth grade reduces the risk of obesity, especially among boys.[62]

In Colorado

- Colorado House Bill 1069, the Physical Activity Expectation in Schools Act of 2011, requires all public elementary schools to make 600 minutes of physical activity opportunities available per month for each student – the equivalent of 30 minutes per day – but did not establish statewide enforcement and oversight.[63]

Brian Clark/Colorado Health Institute

A toddler and her teenage mother play with bubbles during the Mommy & Me yoga class at Florence Crittenton High School. The class is put on by The Wellness Initiative, which offers programs that help students in lower-income schools and districts. ***See story on page 21.***

- Colorado recommends comprehensive health and physical education for students from pre-kindergarten through the end of high school. Local school districts are responsible for ensuring that standards are taught and students are progressing toward meeting them.[64]

Options and Opportunities

- Advocates say the passage of House Bill 1069 was a step in the right direction, though strong reporting requirements to ensure compliance were stripped from the final bill following complaints by local districts. It's up to school boards, administrators and parents to confirm that student exercise is meaningful and effective.
- Nearly two-thirds of Colorado's youth between ages 5 and 14 were not physically active for the recommended 60 minutes each day in the past seven days.[65] Extending physical activity requirements beyond elementary school would provide additional opportunities for Colorado's youth and young adults to be active.

School Breakfast and Lunch

At a Glance

- Nearly 249,000 Colorado children, or 20 percent, lived in households where parents often could not put sufficient food on the table in 2011.[66] School meals are a reliable food source, especially for lower-income students. In 2012, 40 percent of Colorado students were eligible for free- or reduced-price meals through the U.S. Department of Agriculture's National School Lunch Program and the School Breakfast Program.[67]
- Almost 75 percent of Colorado children who qualified for free- or reduced-price meals did not eat breakfast at school, largely because it was served before students arrived for the start of classes.[68]

Evidence

- Students served nutritional food at school tend to eat better in general – a finding with implications in the fight against obesity.[69, 70]
- Congress passed the Healthy, Hunger-Free Kids Act of 2010 establishing stronger nutrition standards for school meals. Students must be served fruit or vegetables with each meal and calories and salt are limited. The act requires healthier "competitive foods," such as snacks and drinks sold from vending machines and in school stores.

In Colorado

- The state legislature passed House Bill 1006, the Breakfast After the Bell Nutrition Program, in 2013. Beginning in the 2014-15 school year, schools where at least 80 percent of students qualify for free- or reduced-price meals must offer a nutritious breakfast to all students. More students will be covered in 2015-16 when the threshold drops to 70 percent. In addition, breakfast must be served at the start of classes – not before they begin – to encourage student participation.[71]
- Colorado has created minimum nutritional standards for school beverages that limit serving size, calories and added sweeteners. Colorado law also requires school districts to eliminate transfats from most foods and beverages available in schools.[72]

Options and Opportunities

- Colorado schools are working with groups like LiveWell Colorado and the Colorado Farm to School Project to improve the quality of food in schools and to add more local items to menus.[73] Weld County School District 6 in northeast Colorado is embarking on a "School Food Renaissance" by offering students freshly prepared meals with ingredients from local growers.[74]
- States and local school districts are already implementing most provisions of the federal Healthy, Hunger-Free Kids Act of 2010. They are allowed to go beyond the minimum requirements of the law.

Early Childhood Education

At a Glance

- Early childhood education creates a foundation for a healthy life, especially for at-risk or disadvantaged children. Programs can begin with prenatal support and continue through age 8 with child care, preschool and development initiatives that improve school readiness and provide stimulating experiences for children.

Evidence

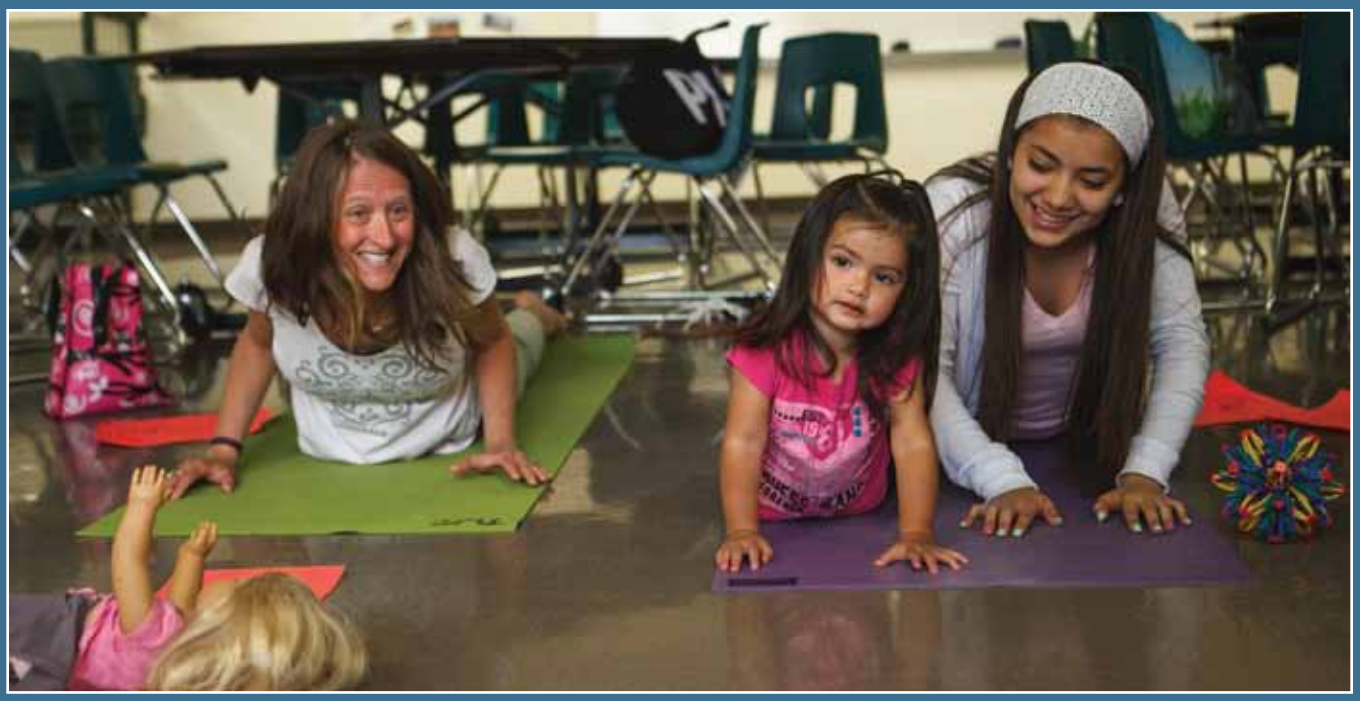
- Decades of research shows that high-quality early childhood education results in improved health, long-term academic achievement and greater earning potential later in life.[75, 76, 77, 78]
- One Colorado study attributed an $8.2 billion projected increase in overall wages and benefits and $4.1 billion in savings in criminal justice costs by 2050 to pre-kindergarten programs.[79]

In Colorado

- The state legislature created Early Childhood Councils, made up of representatives of early learning, health and family groups, to improve early childhood services.[80]
- Each year, Colorado's Preschool Program funds half-day preschool education for approximately 20,000 3- to 5-year-olds with language challenges or family risk factors. However, limited funding means that neither the Colorado program nor the federal Head Start initiative reaches everyone who is eligible. More than 8,000 eligible children were on a waiting list for the program in 2011-12.[81]

Options and Opportunities

- Nineteen states have mandatory kindergarten attendance. While Colorado requires all school districts to offer half-day kindergarten, it does not require school attendance until age six, meaning that some children could skip kindergarten.[82]
- Colorado passed legislation to move a number of child development programs to a new Office of Early Childhood in the state's Department of Human Services. The changes are intended to streamline enrollment and create more efficient administration.[83]



Brian Clark/Colorado Health Institute

Instructor Amy Andrews-McMaster, left, leads participants in the Mommy & Me yoga class at Florence Crittenton High School in Denver.

The Wellness Initiative

As the afternoon school bell rings, girls hurry down the halls of Denver's Florence Crittenton High School to the cafeteria for a much-anticipated class – Mommy & Me Yoga. The teenage girls are the Mommies; their children are the Mes.

The young moms arrange their mats as their babies crawl around the room. Yoga teacher Amy Andrews-McMaster welcomes the students and begins the class. She is an instructor with The Wellness Initiative (TWI), which since 2006 has provided yoga instruction to students of all ages.

During the 2012-2013 school year, TWI instructors reached nearly 2,300 students in 37 Front Range schools. The nonprofit organization relies on Colorado's abundant network of yoga instructors, foundations, fundraising events and support from higher-income schools to provide no-cost or low-cost services in lower-income schools and districts.

Mommy & Me instructors, moms and babies gather following their class at Florence Crittenton High School in Denver.

TWI offers programs that help students to relax, reflect, strengthen and focus their bodies and minds. One student explained, "Yoga helps me as a mom because…that's where I get a lot of my patience from. Just being able to channel that energy inward and being more patient with my child has helped my parenting a lot."

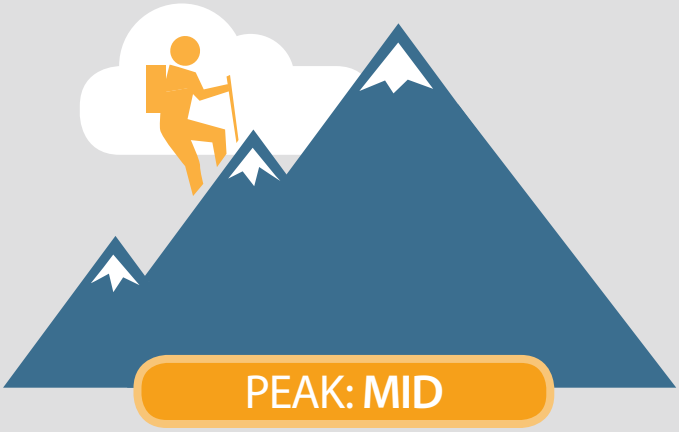
For more information on The Wellness Initiative:
wellnessinitiative.org

Workplace

It's good business to have healthy workers. Poor health and chronic disease drive health care costs and reduce productivity. About one of every five dollars spent on employee health care is related to modifiable risk factors, including obesity, high blood pressure, tobacco use, physical inactivity and stress.[84]

In light of that, many employers offer wellness programs to minimize preventable health threats. And many new models of health insurance include incentives to steer workers toward effective preventive care while discouraging suspect or overused treatments.

One of the basics for a healthy workplace is sick leave. Most employers provide it, though many lower-income service industry workers don't have the benefit.



Gov. John Hickenlooper has created an office to promote workplace wellness in the private sector and has set goals for the percentage of state employees participating in health screenings and chronic disease prevention and management programs. Business groups and chambers of commerce are active in promoting and adopting healthy workplace practices. Value-based insurance plans designed to improve health and lower costs are being tested by a few Colorado employers. Most employers offer sick leave, but Colorado does not have a blanket requirement and is unlikely to add one.

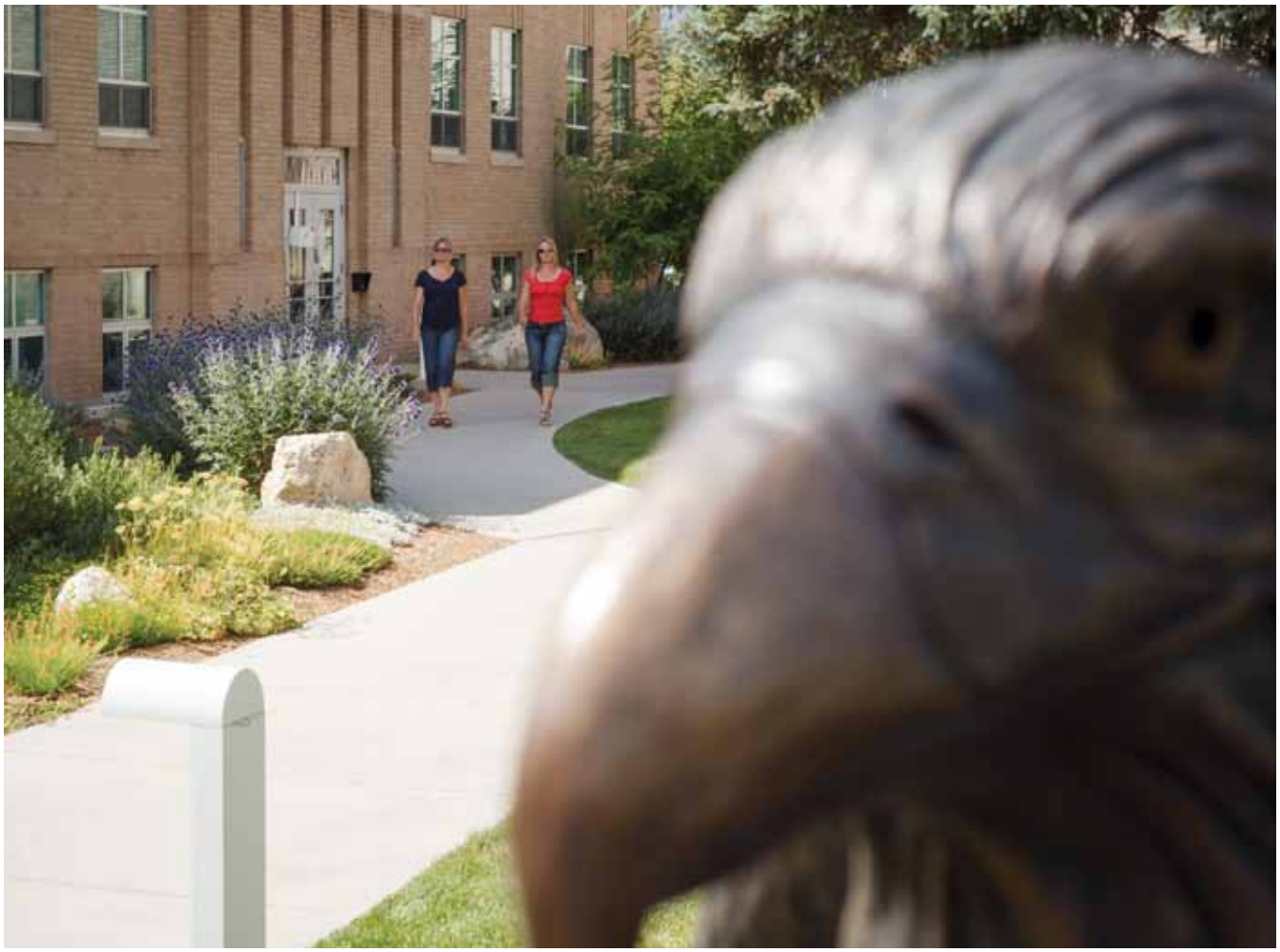
Workplace Wellness

At a Glance

- Wellness strategies to support healthy decisions and activities include discounted or free fitness memberships, healthy vending machine food, web-based health resources and on-site fitness, cooking and health education classes.[85] Team-based activities to promote healthy behaviors include contests and rewards.
- Nationally, nearly all large firms with at least 200 employees and 63 percent of smaller firms with at least three employees that offer health benefits also have some type of wellness program.[86] Nearly one-third of employers surveyed by the National Business Group on Health in 2012 offered or were planning to expand financial incentives to encourage healthy living.[87]

Evidence

- Though gaining in popularity, workplace wellness efforts are relatively new and vary from employer to employer. As a result, how well they help workers stay healthy and reward employers with cost savings is difficult to pin down. However, some evidence suggests that wellness programs may yield modest cost savings in three to five years if workers actively participate in activities and are given tools and resources to make behavior changes.[88, 89, 90]
- Lifestyle counseling via phone or internet as well as workplace encouragement to use stairs or walk at lunch have been found to be moderately effective at preventing weight gain.[91]



Brian Clark/Colorado Health Institute

Joanie Baranowski and Andie Noakes, appraisers in the Eagle County Assessor's Office, return to the county offices following a mid-afternoon walk around Eagle. Baranowski and Noakes say two 15-minute walks a day help improve their overall focus. ***See story on page 25.***

In Colorado

- A 2009 statewide employer survey found that 73 percent of respondents had some type of worksite wellness activity.[92]
- Colorado law allows insurance carriers to provide incentives and rewards to policyholders who participate in wellness and disease prevention programs. The rewards include premium discounts for employers or individuals and discounted gym memberships. In 2010, about 30 percent of health insurers in Colorado, most in the large-group market, offered a wellness benefit in their policies.[93]

Options and Opportunities

- Under the ACA, employers in 2014 can reduce an employee's premium by as much as 30 percent if the employee participates in a wellness program.[94]
- Some employers have considered penalizing employees who do not participate in activities such as health-risk assessments by making them pay higher premiums. This step has raised concerns about employee privacy and sparked discussion about how best to provide incentives for employees to be healthy.[95]

Value-Based Insurance Design (VBID)

At a Glance

- VBID encourages evidence-based and preventive care – cancer screenings, for example – and imposes higher cost-sharing and co-payments for

employees who opt for expensive treatments with uncertain clinical value.[96]

Evidence

- Patients are more likely to use preventive services when the co-pay is low or there is no charge.[97]
- Evidence on whether VBID impacts cost and quality is still developing. Co-pay reductions for beneficial medications have been linked to greater use, with one employer also finding reduced emergency department visits for employees with diabetes. Other research suggests insurance incentives for preventive care may increase overall health care costs as consumers opt for screenings and tests they may have gone without. Whether these short-term cost increases will yield better health and result in longer-term savings is unclear.[98]

In Colorado:

- Engaged Benefit Design is a VBID program being tested by the San Luis Valley Regional Medical Center. Engaged Benefit Design waives cost-sharing for primary care visits and for prescription drugs and supplies that manage chronic conditions. For treatments such as knee or hip replacement, which have the potential to be overused, the plan either charges higher co-payments or requires patients to review educational materials about their effectiveness.[99, 100]

Options and Opportunities

- Federal health reform requires Medicare and most private health insurance companies, as well as employer self-insured plans, to provide no-cost coverage of certain preventive services such as immunizations and cholesterol screening. States that cover these services for Medicaid enrollees can receive a small increase in federal matching funds.
- Most VBID efforts have been focused in large group, self-insured employers. Connect for Health Colorado, the state's health insurance marketplace, will explain and compare plans, which may include VBID features.

Paid Sick Leave

At a Glance

- Sick leave provides all or part of an employee's earnings if he or she is off the job because of a non-work related illness or injury. There is no federal requirement for employers to offer paid sick leave. Still, 61 percent of private industry workers had a paid sick leave benefit in 2012. But the level varies by industry. About 24 percent of service workers in accommodation and food service businesses had paid sick leave.[101]

Evidence

- Paid sick leave may support employee health as workers with the benefit are more likely to obtain preventive services.[102]
- Business impacts of paid sick leave are unclear. Research suggests that paid sick leave is linked to lower employee turnover, increased productivity and lower absenteeism. But after San Francisco passed its paid sick leave ordinance in 2006, few employers experienced these positive effects.[103, 104]

In Colorado:

- In 2012, approximately 58 percent of all private industry workers in the mountain region, which includes Colorado, had access to paid sick leave, according to the U.S. Bureau of Labor Statistics.[105]
- Colorado law does not require sick pay or sick leave or require time off due to illness. An unsuccessful 2011 ballot initiative in Denver would have allowed employees of companies with 10 or more workers to earn up to nine paid sick days a year or one hour of paid sick leave for every 30 hours worked.

Options and Opportunities

- Connecticut is the only state that requires paid sick leave. At least six cities – Milwaukee, New York City, Portland, San Francisco, Seattle, and Washington, D.C. – have ordinances requiring paid sick leave.[106]
- Interest groups representing business, such as chambers of commerce, often oppose local or state sick leave legislation while labor organizations often line up in support. A federal mandate appears unlikely to pass a divided Congress.

Eagle County Wellness Program

Eagle County is one of Colorado's crown jewels, with soaring peaks and some of the best fishing, hiking and skiing in the state. It contributes to Colorado's reputation as a healthy place to live.

While Eagle County certainly has its share of healthy people, it also has higher rates of drinking compared with the rest of the state. Its residents are also more likely to be in fair or poor health than the average Coloradan.

Brian Clark/Colorado Health Institute

Eagle County government employees show off their step trackers before heading off on a short mid-afternoon walk.

So in 2008, the county government launched a wellness initiative for its 400-plus employees. It wanted to trim its rising health care costs – approaching $7 million in 2009 – and help its workers improve and manage their health.

The county partners with a vendor to administer the program and ensure employee privacy and confidentiality. It starts with a screening that measures a participant's height, weight and blood pressure. County workers use a website to create a personal account to identify health goals and log their activities. Workers earn points for making progress toward goals or for participating in weight-loss and activity events. Rewards include iPads and paid time off.

At the county government office in Eagle, many employees read reports while walking on a treadmill outside the human resources office, participate in afternoon yoga classes and record their steps using small electronic trackers worn on their shoes. Around 300 of the county's employees wear the trackers at work, and many choose to keep them on during other daily activities, such as cleaning the house and cooking.

"I left my tracker at home one day so I called my husband mid-morning and made him bring it to me," said Joanie Baranowski, an appraiser in the assessor's office. "It really has become an obsession."

Twice a day Baranowski and fellow assessor Andie Noakes step away from their desks for 15-minute walks around the neighborhood. In addition to the fresh air and exercise, the walking partners believe the activity helps improve their focus at work the rest of the day.

"It's great that the county encourages this kind of work-life balance," Baranowski said. "Having an active lifestyle is why many of us live here."

The county wellness program has grown so much that 90 percent of employees participate as do 40 percent of their families. In the past three years, employees have improved their health scores and more are reporting good or excellent health. The county government has benefitted as well. Lisa Ponder, director of human resources for Eagle County, estimates the program is seeing a five-to-one return on investment through lower health care costs.

For more information on Eagle County:

eaglecounty.us

Endnotes

[1]Colorado Health Institute. (2011). Long-Term Services and Supports in Colorado. Available at: http://www.coloradohealthinstitute.org/uploads/downloads/Long_Term_Services_and_Supports.pdf.

[2] The Jewish Federation of North America. " NORC Paradigm, What is a NORC SSP?" http://www.norcs.org/page.aspx?ID=140774.

[3] The Jewish Federation of North America. "NORCs: An Aging in Place Initiative." www.norc.org.

[4] Bedney, et al. "Rethinking Aging in Place: Exploring the Impact of NORC Supportive Service Programs on Older Adult Participants." Presentation at the Annual Meeting of the American Society on Aging and National Council on Aging, Chicago, IL, March 7-10, 2007.

[5] Personal communication with Alison Joucovsky, Program Coordinator for Jewish Family Services, Colorado Senior Connections, October 10, 2012.

[6] Greenfield, et al. (2012). "An Overview of Programs in the National NORCs Aging in Place Initiative: Results from a 2012 Organization Survey." Rutgers School of Social Work. http://agingandcommunity.com/wp-content/uploads/2012/12/National-NORC-FINAL.pdf.

[7] The Colorado Department of Health Care Policy and Financing. (2013). "Colorado Choice Transitions." http://www.colorado.gov/cs/Satellite?blobcol=urldata&blobheader=application%2Fpdf&blobkey=id&blobtable=MungoBlobs&blobwhere=1251851795591&ssbinary=true.

[8] Personal communication with The Colorado Department of Health Care Policy and Financing, July 2013.

[9] Kaiser Commission on Medicaid and the Uninsured. (2011). Money Follows the Person: A 2011 Survey of Transitions, Services and Costs. The Henry J. Kaiser Family Foundation. http://kaiserfamilyfoundation.files.wordpress.com/2013/01/8142-02-2.pdf.

[10] Irvin, et al. (2012). Post-Institutional Services of MFP Participants: Use and Costs of Community Services and Supports. Mathematica Policy Research. http://www.mathematica-mpr.com/publications/pdfs/health/mfpfieldrpt9.pdf.

[11] Irvin, et al. (2012). Money Follows the Person 2011 Annual Evaluation Report. Mathematica Policy Research. http://www.mathematica-mpr.com/publications/PDFs/health/MFP_annual_report_2011.pdf

[12] Kaiser Commission on Medicaid and the Uninsured. (2011). Money Follows the Person: A 2011 Survey of Transitions, Services and Costs. Kaiser Family Foundation. http://kaiserfamilyfoundation.files.wordpress.com/2013/01/8142-02-2.pdf.

[13] The Green House Project. "Evaluating The Green House Model." http://blog.thegreenhouseproject.org/wp-content/uploads/2011/10/green_house_research-1-pager-with-map_September-2011.pdf.

[14] Jenkens, et al. (2011). "Financial Implications of The Green House Model Overview." Seniors Housing & Care Journal, 19(1).

[15] The Green House Project. "Costs of Care in Green House Home Compared to Traditional Nursing Home Residents." http://thegreenhouseproject.org/doc/9/cost-saving-summary.pdf.

[16] The Green Home Project. "Evaluating the Green House Model." http://blog.thegreenhouseproject.org/wp-content/uploads/2011/10/green_house_research-1-pager-with-map_September-2011.pdf .

[17] Health Impact Project. (2010). "Health Impact Assessment: Bringing Public Health Data to Decision Making." http://www.healthimpactproject.org/resources/policy/file/health-impact-assessment-bringing-public-health-data-to-decision-making.pdf.

[18] Gottlieb, L., Egerter, S., and Braveman, P. (2011). "Health Impact Assessment: A Tool for Promoting Health in All Policies." May 2011. Robert Wood Johnson Foundation Commission to Build a Healthier America. http://www.ucdenver.edu/academics/colleges/PublicHealth/research/centers/lrpc/Resources/Documents/PolicyHealthImpactAssessment2011RWJF.pdf.

[19] Health Impact Project. (2013). "Press Release: New Projects Bringing Health Considerations Into Education, Energy Policy, And Other Decisions." http://www.healthimpactproject.org/news/project/new-projects-bringing-health-considerations-into-education-energy-policy-and-other-decisions.

[20] Gottlieb, L. Egerter, S., Braverman, P. (2011). "Health Impact Assessment: A Tool for Promoting Health in All Policies." Robert Wood Johnson Foundation Commission to Build a Healthier America. http://www.ucdenver.edu/academics/colleges/PublicHealth/research/centers/lrpc/Resources/Documents/PolicyHealthImpactAssessment2011RWJF.pdf.

[21] Health Impact Project. (2013). "South Lincoln Homes." (Retrieved April 15, 2013 from: http://www.healthimpactproject.org/hia/us/south-lincoln-homes).

[22] Health Impact Project and Arizona State University Sandra Day O'Connor College of Law. (2012). "Legal Review Concerning the Use of Health Impact Assessments in Non-Health Sectors," Legal Status of Health Impact Assessments by Jurisdiction, Table II. Pew Health Group and Robert Wood Johnson Foundation. http://www.healthimpactproject.org/resources/body/Legal-Review-table-2-1.pdf.

[23] Wernham, A. (2011). "Health Impact Assessments Are Needed in Decision Making About Environmental and Land-Use Policy." Health Affairs: 30 (5) 947-956.

[24] Colorado Senate Bill 2013-048. http://www.leg.state.co.us/CLICS/CLICS2013A/csl.nsf/fsbillcont3/9D4690717C1FF9DC87257AEE00572392?Open&file=048_enr.pdf.

[25] U.S. Department of Agriculture and U.S. Department of Health and Human Services. (2010). Dietary Guidelines for Americans 2010," Chapter 3 Foods and Food Components to Reduce. http://www.cnpp.usda.gov/Publications/DietaryGuidelines/2010/PolicyDoc/PolicyDoc.pdf.

[26] Bridging the Gap Program, University of Illinois at Chicago. (2011). "State Sales Tax on Regular, Sugar-Sweetened Soda". (Retrieved April 15, 2013 from: http://www.bridgingthegapresearch.org/_asset/602tm3/BTG_State_Soda_Sales_Tax_Jan012011_publuse_091911-final.pdf).

[27] Friedman, R, and Brownell, K. (2012). "Sugar-sweetened Beverage Taxes: An Updated Policy Brief." Yale Rudd Center for Food Policy & Obesity.

[28] Wang, Y, et. al. (2012). "A Penny-Per-Ounce Tax on Sugar-Sweetened Beverages Would Cut Health and Cost Burdens of Diabetes." Health Affairs: 31 (1) 199-207. http://content.healthaffairs.org/content/31/1/199.full.

[29] Huang, J, and Chaloupka, F. (2012). "The Impact of the 2009 Federal Tobacco Excise Tax Increase on Youth Tobacco Use." National Bureau of Economic Research Working Paper No. 18026. http://www.nber.org/papers/w18026.

[30] Bridging the Gap Program, University of Illinois at Chicago. (2011). "State Sales Tax on Regular, Sugar-Sweetened Soda". (Retrieved April 15, 2013 from: http://www.bridgingthegapresearch.org/_asset/602tm3/BTG_State_Soda_Sales_Tax_Jan012011_publuse_091911-final.pdf).

[31] Klingsporn, K. "'Soda tax' heading toward the ballot." Telluride Daily Planet. June 27, 2013. http://telluridenews.com/articles/2013/06/27/news/doc51cb777a413d1120671525.txt

[32] Yale Rudd Center for Food Policy & Obesity. (2013). Legislation Database, 2013 Sugar-Sweetened Beverages/Taxes. http://www.yaleruddcenter.org/legislation/archive/search.aspx.

[33] Colorado Department of Public Health and Environment. (2013). Sugar-Sweetened Beverages, National Trends and Policies. https://docs.google.com/file/d/0B1aSQxD5f7yRV1NiaXNYbGRPMDA/edit.

[34] U.S. Department of Agriculture. (2013). "Food Access Atlas." (Retrieved July 22, 2013 from: http://assessment.communitycommons.org/DataReport/Report.aspx?page=3&id=404).

[35] Fluornoy, R. (2010). "Promising Strategies to Improve Access to Fresh, Healthy Food and Transform Communities." PolicyLink. http://www.policylink.org/site/apps/nlnet/content2.aspx?c=lkIXLbMNJrE&b=5136581&ct=8020083.

[36] Song, H.J, et al. (2009). "A Corner Store Intervention in a Low-Income Urban Community Is Associated with Increased Availability and Sales of Some Healthy Foods." Public Health Nutrition 12 (11): 2060-2067. http://journals.cambridge.org/download.php?file=%2FPHN%2FPHN12_11%2FS1368980009005242a.pdf&code=accd62c0918c28a54c8f885f98070afa.

[37] Economic Research Service, U.S. Department of Agriculture. (2009). "Access to Affordable and Nutritious Food: Measuring and Understanding Food Deserts and Their Consequences." http://www.ers.usda.gov/media/242675/ap036_1_.pdf.

[38] ChangeLab Solutions. (2013). "Licensing for Lettuce: A Guide to the Model Licensing Ordinance for Healthy Food Retailers." http://changelabsolutions.org/sites/default/files/Licensing_for_Lettuce_FINAL_20130212_0.pdf.

[39] LiveWell Colorado and the Colorado Food Systems Advisory Council. (2012). "Colorado Food Systems Advisory Council & LiveWell Colorado Healthy Food Access Summit Event Summary." http://www.cofoodsystemscouncil.org/uploads/8/5/3/0/8530122/hfa_summit_summary_report_11.13.12.pdf.

[40] Colorado Health Institute. (2012). Medical Homes: A New Way To Deliver Health Care. Available at: http://www.coloradohealthinstitute.org/uploads/downloads/Medical_homes.pdf.

[41] Beal A.C, et al. (2007). "Closing the Divide: How Medical Homes Promote Equity in Health Care- Results from the Commonwealth Fund 2006 Health Care Quality Survey." The Commonwealth Fund. http://www.commonwealthfund.org/Publications/Fund-Reports/2007/Jun/Closing-the-Divide--How-Medical-Homes-Promote-Equity-in-Health-Care--Results-From-The-Commonwealth-F.aspx

[42] Rosenthal, T. (2008). "The medical home: growing evidence to support a new approach to primary care." The Journal of the American Board of Family Medicine 21(5), 427-440.

[43] Center for Improving Value in Health Care and Colorado Health Institute. (2012). New Approaches to Paying for Health Care: Implications for Quality Improvement and Cost Containment in Colorado. http://www.coloradohealthinstitute.org/key-issues/detail/new-models-of-health-care/new-approaches-to-paying-for-health-care.

[44] Centers for Disease Control and Prevention. "Addressing Chronic Disease through Community Health Workers: A Policy and Systems-Level Approach." http://www.cdc.gov/dhdsp/docs/chw_brief.pdf.

[45] Witmer A, et al. (1995). "Community health workers: integral members of the health care work force." American Journal of Public Health 1995; 85 (8 Pt 1):1055–1058. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1615805/pdf/amjph00446-0017.pdf.

[46] Lewin S.A, et al. (2006). "Lay health workers in primary and community health care." Cochrane Database Syst Rev. 2005(1):CD004015. http://www.who.int/rpc/meetings/LHW_review.pdf.

[47] CPC Community Health. (2010). "Colorado Heart Healthy Solutions: Preliminary Results." http://www.cpccommunityhealth.org/colorado-heart-healthy-solutions/preliminary-results.html.

[48] Colorado Patient Navigator and Community Health Collaborative. https://sites.google.com/site/copnchwcollaborative/home

[49] Ickovics, J.R, et al. (2007). "Group Prenatal Care and Perinatal Outcomes: A Randomized Controlled Trial." Obstetrics and Gynecology. 110(2 Pt 1): 330–339. http://www.ncbi.nlm.nih.gov/pmc/articles/pmc2276878/.

[50] Burse-Family Partnership. "Nurse-Family Partnership Model Elements." http://www.nursefamilypartnership.org/Communities/Model-elements

[51] The Colorado Health Foundation. (2012). "2012 Colorado Health Report Card: Prenatal Care." http://www.coloradohealthreportcard.org/reportcard/2012/default.aspx.

[52] Colorado Department of Public Health and Environment. (2002). "The Effects of the Prenatal Plus Program on Infant Birth Weight and Medicaid Costs." http://www.colorado.gov/cs/Satellite?blobcol=urldata&blobheadername1=Content-Disposition&blobheadername2=Content-Type&blobheadervalue1=inline%3B+filename%3D%22The+Effects+of+the+Prenatal+Plus+Program+on+Low+Birth+Weight+and+Medicaid+Costs.pdf%22&blobheadervalue2=application%2Fpdf&blobkey=id&blobtable=MungoBlobs&blobwhere=1251834520827&ssbinary=true

[53] Association of Maternal & Child Health Programs, Innovation Station. (2008) "Sharing Best Practices in Maternal & Child Health: The Prenatal Plus Program." http://www.amchp.org/programsandtopics/BestPractices/InnovationStation/ISDocs/Prenatal-plus-program-CO.pdf

[54] The 2013 Kaiser Permanente Childhood Obesity Prevention Survey, conducted by Field Research Corporation for Kaiser Permanente and its agency, Cause Communications, March-April 2013.

[55] U.S. Department of Health and Human Services. (2008). "2008 Physical Activity Guidelines for Americans." http://www.health.gov/paguidelines/pdf/paguide.pdf.

[56] Colorado House Bill 2011-1069. http://www.leg.state.co.us/clics/clics2011a/csl.nsf/fsbillcont3/9CF56533FEFE87598725780800800FBF?open&file=1069_enr.pdf

[57] Centers for Disease Control and Prevention. (2012). "Youth Risk Behavior Surveillance, United States 2011." Morbidity and Mortality Weekly Report. Vol. 61 (4). http://www.cdc.gov/mmwr/pdf/ss/ss6104.pdf

[58] U.S. Department of Health & Human Services. (2012). "Physical Activity Guidelines for Americans Midcourse Report: Strategies to Increase Physical Activity Among Youth." http://www.health.gov/paguidelines/midcourse/pag-mid-course-report-final.pdf.

[59] Brian, H.E, et al. (2013). "Physical activity interventions and depression in children and adolescents: a systematic review and meta-analysis." Sports Medicine. 43(3), 195-206.

[60] Castelli, D, et al. (2007). "Physical Fitness and Academic Achievement in Third-and Fifth-Grade Students." Journal of Sport & Exercise Psychology. 29, 239-252. http://www.kapoleims.k12.hi.us/campuslife/depts/electives/dance/Physical%20Fitness%20and%20Academic%20Achievement.2.pdf.

[61] Centers for Disease Control and Prevention. (2011). "School Health Guidelines to Promote Healthy Eating and Physical Activity." Morbidity and Mortality Weekly Report Vol. 60(5). http://www.cdc.gov/healthyyouth/npao/strategies.htm

[62] Cawley, J, Frisvold, D, and Meyerhoefer, C. (2012). "The impact of physical education on obesity among elementary school children." Journal of Health Economics 32(4), 743-755. http://www.econstor.eu/bitstream/10419/62413/1/722532474.pdf.

[63] Colorado House Bill 2011-1069. http://www.leg.state.co.us/clics/clics2011a/csl.nsf/fsbillcont3/9CF56533FEFE87598725780800800FBF?open&file=1069_enr.pdf.

[64] Colorado Legacy Foundation and RMC Health. "Comprehensive Health & Physical Education Standards." http://colegacy.org/news/wp-content/uploads/2011/12/CHPE-FAQs-AE.pdf

[65] Colorado Department of Public Health and Environment, Youth Behavioral Risk Factor Surveillance Survey, 2009-2010.

[66] Colorado Children's Campaign. (2013). "2013 Kids Count." http://www.coloradokids.org/kidscount2013/kidscount2013.html.

[67] Colorado Children's Campaign. (2013). "2013 Kids Count." http://www.coloradokids.org/kidscount2013/kidscount2013.html.

[68] Hunger Free Colorado. (2011). "2011 Colorado School Breakfast Report." http://www.hungerfreecolorado.org/wp-content/uploads/2012/08/HFC-SBP-Report-LR2.pdf

[69] Centers for Disease Control and Prevention. (2012)."Competitive Foods and Beverages in U.S. Schools: A State Policy Analysis." U.S. Department of Health and Human Services. http://www.cdc.gov/healthyyouth/nutrition/pdf/compfoodsbooklet.pdf.

[70] Taber D, et al. (2013). "Association between state laws governing school meal nutrition content and student weight status: implications for new USDA school meal standards." JAMA Pediatrics 167(6) 513-9. http://archpedi.jamanetwork.com/article.aspx?articleid=1675659.

[71] Hunger Free Colorado. "Breakfast After the Bell." http://www.hungerfreecolorado.org/policy-and-advocacy/breakfast-after-the-bell-bill.html.

[72] Colorado Department of Public Health and Environment. (2012). "Overview of School Food changes in Colorado 2009-2011." https://docs.google.com/file/d/0By4iEudJElClTko4Mk5YZGZSWW1LTVNjdXZoZEJJQQ/edit.

[73] LiveWell Colorado. "Healthy Schools." https://about.livewellcolorado.org/livewell-in-action/freshen-up-school-food-initiati/freshen-up-school-food-initiatives

[74] Weld County School District 6. (2013). "School Food Renaissance."(Retrieved July 24, 2013 from: http://www.greeleyschools.org/Page/2739.)

[75] Robert Wood Johnson Foundation. "Early Childhood Experiences and Health." http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2011/rwjf70440.

[76] The Carolina Abecedarian Project. "The Abecedarian Project." http://projects.fpg.unc.edu/~abc/files/ells-03.pdf.

[77] HighScope. "HighScope Perry Preschool Study." http://www.highscope.org/Content.asp?ContentId=219.

[78] National Criminal Justice Reference Service. "Program Outcomes." U.S. Department of Justice, Office of Justice Programs. https://www.ncjrs.gov/html/ojjdp/2000_10_1/page2.html.

[79] Lynch, Robert. "Enriching Children, Enriching the National: Alabama Study." Economic Policy Institute. http://epi.3cdn.net/da8d4fab11d42aaffc_15m6i66hq.pdf.

[80] Colorado Children's Campaign. "Early Childhood." http://www.coloradokids.org/issues/earlychildhood/early_childhood_system.html

[81] Colorado Department of Education Office of Early Learning & School Readiness. (2013). "Colorado Preschool Program 2013 Legislative Report." http://www.cde.state.co.us/cpp/download/CPPDocs/2013_CPP_Legislative_Report.pdf.

[82] Colorado Department of Education. "Full-Day Kindergarten Information." Education Commission of the States. http://www.cde.state.co.us/cpp/fulldayk.htm.

[83] Colorado House Bill 2013-1117, Alignment of Child Development Programs. http://www.leg.state.co.us/clics/clics2013a/csl.nsf/fsbillcont3/7364A590733EAEFA87257AEE00573AAC?Open&file=1117_01.pdf.

[84] Goetzel, R. et al. (2012). "Ten Modifiable Health Risk Factors are Linked to More than One-Fifth of Employer-Employee Health Care Spending." Health Affairs. 31(11) 2474-2484. http://content.healthaffairs.org/content/31/11/2474.abstract.

[85] Colorado Department of Public Health and Environment Prevention Services Division. (2012). "State Government Strategies to Improve Worksite Wellness." https://docs.google.com/file/d/0By4iEudJElClbmdSNC1fUTZsVzA/edit.

[86] Kaiser Family Foundation and Health Research and Education Trust. (2012). "Employer Health Benefits 2012 Annual Survey." http://kff.org/private-insurance/report/employer-health-benefits-2012-annual-survey/.

[87] Towers Watson/National Business Group on Health. (2012). "Performance in an Era of Uncertainty: Employer Survey on Purchasing Value in Health Care." http://www.changehealthcare.com/downloads/industry/Towers-Watson-NBGH-2012.pdf.

[88] Horwitz, J, Kelly, B, and DiNardo, J. (2013). "Wellness Incentives in the Workplace: Cost Savings Through Cost Shifting to Unhealthy Workers." Health Affairs. 32 (3): 468-476. http://content.healthaffairs.org/content/32/3/468.abstract.

[89] Towers Watson/National Business Group on Health. (2011-2012). "Pathway to Health and Productivity: 2011/2012 Staying@Work Survey Report." http://www.towerswatson.com/en/Insights/IC-Types/Survey-Research-Results/2011/12/20112012-StayingWork-Survey-Report--A-Pathway-to-Employee-Health-and-Workplace-Productivity.

[90] Baicker, K, et. al. (2010). "Workplace Wellness Programs Can Generate Savings." Health Affairs. 29(2): 304-311. http://content.healthaffairs.org/content/29/2/304.full.

[91] Hutfless, S, et. al. (2013). "Strategies to Prevention Weight Gain Among Adults Comparative Effectiveness Review No. 97. Agency for Healthcare Research and Quality. http://effectivehealthcare.ahrq.gov/ehc/products/317/1448/weight-gain-prevention-executive-130417.pdf.

[92] LiveWell Colorado. (2010). "Worksite Wellness Blueprint." http://livewellcolorado.org/uploads/ckfinder/userfiles/files/LWC_WorksiteWellnessBlueprint(2).pdf.

[93] Colorado Department of Regulatory Agencies, Colorado Division of Insurance. (2012). "Wellness Programs in the Colorado Private Insurance Market." http://cdn.colorado.gov/cs/Satellite?blobcol=urldata&blobheadername1=Content-Disposition&blobheadername2=Content-Type&blobheadervalue1=inline%3B+filename%3D%22Wellness+Programs+in+the+Colorado+Private+Insurance+Market+2010.pdf%22&blobheadervalue2=application%2Fpdf&blobkey=id&blobtable=MungoBlobs&blobwhere=1251822183222&ssbinary=true.

[94] James, J. (2012). "Health Policy Brief: Workplace Wellness Programs." Health Affairs. .http://www.healthaffairs.org/healthpolicybriefs/brief.php?brief_id=69.

[95] McGregor, J. "The CVS health-screening debate." The Washington Post. March 21, 2013. http://articles.washingtonpost.com/2013-03-21/national/37894965_1_health-screening-health-coverage-annual-health-insurance-costs

[96] V-BID Center. (2012). "Wellness and Value-Based Insurance Design: Better Outcomes Together." The University of Michigan Center for Value-Based Insurance Design. http://www.sph.umich.edu/vbidcenter/publications/pdfs/V-BID%20brief_Wellness%20August2012.pdf.

[97] Busch, S. H. et. al. (2006). "Effects of a Cost-Sharing Exemption On Use of Preventive Services At One Large Employer." Health Affairs 25(6):1529-1536. http://content.healthaffairs.org/content/25/6/1529.full.

[98] Choudhry, N, Rosenthal, M, and Milstein, A. (2010). "Assessing The Evidence For Value-Based Insurance Design." Health Affairs 29(11):1988-1994. http://content.healthaffairs.org/content/29/11/1988.abstract.

[99] Engaged Benefit Design. (2013). "Why Evidence-Based Medicine?" http://www.engagedbenefitdesign.org/index.php/free-high-value-services/88

[100] Corlette, S, et al.. (2013). "State Insurance Exchanges Face Challenges in Offering Standardized Choices Alongside Innovative Value-Based Insurance." Health Affairs 32 (2): 418-426. http://content.healthaffairs.org/content/32/2/418.abstract.

[101] U.S. Department of Labor, Bureau of Labor Statistics. (2012)."Table 32. Leave benefits: Access, Private Industry Workers, National Compensation Survey." (Retrieved July 22, 2013 from: http://www.bls.gov/ncs/ebs/benefits/2012/ownership/private/table21a.htm).

[102] Peipins et al. (2012). "The lack of paid sick leave as a barrier to cancer screening and medical care-seeking: results from the National Health Interview Survey." BMC Public Health 12(520). http://www.biomedcentral.com/1471-2458/12/520/.

[103] Lovell, V. (2005). "Valuing Good Health: An Estimate of Costs and Savings for the Healthy Families Act." Institute for Women's Policy Research. http://www.iwpr.org/publications/pubs/valuing-good-health-an-estimate-of-costs-and-savings-for-the-healthy-families-act

[104] Boots, S., Martinson, K, and Danziger, A. (2009). "Employers' Perspectives on San Francisco's Paid Leave Policy." Low-Income Working Families Paper 12. The Urban Institute. http://www.urban.org/UploadedPDF/411868_sanfranciso_sick_leave.pdf.

[105] U.S. Department of Labor, Bureau of Labor Statistics. (2013). "Table 6. Selected paid leave benefits: Access, National Compensation Survey, March 2012." http://www.bls.gov/news.release/ebs2.t06.htm.

[106] Zornick, G. "The Paid Sick Leave Battle Widens in the States." The Nation. March 8, 2013. http://www.thenation.com/blog/173265/paid-sick-leave-battle-widens-states#

Notes

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