Fallbrook Regional HEALTH DISTRICT

BOARD WORKSHOP

AGENDA

Saturday, January 27, 2018, 8:00 a.m. – 12:00 p.m.
Fallbrook Regional Health District, Board Room, 138 S. Brandon Rd., Fallbrook, CA

A. CALL MEETING TO ORDER

A Special Meeting may be called at any time by the President, or three Board members, by delivering notice to each Board member and to each local newspaper or general circulation, radio, or television station requesting such notice in writing, personally or by mail. Such notice must be delivered personally or by mail at least twenty-four (24) hours before the time of such meeting as specified in the notice. The call and notice shall specify the time and place of the special meeting and the business to be transacted. No other business shall be considered at special meetings. Such written notice may be dispensed with as to any Board member, who at, or prior to the time the meeting convenes, files with the Secretary a written waiver of notice. Such waiver may be given by telegram. Such written notice may also be dispensed with as to any member who is actually present at the meeting at the time it convenes.

B. DISCUSSION ITEMS

20 B1. Wellness Committee — Barbara/Bill/Linda/Bobbi

10 B2. Health & Wellness Centers
(Trips to Beach Cities & Tri-City — Barbara/Bill/Linda/Bobbi

10 B3. Community Gardens (one in each District area) — Barbara/Pam/Bobbi

20 B4. Blue Zones — Bobbi
- A. How does an organization become certified?
- B. What is the process?
- C. Financial Impact/Cost?
- D. Site Visit – Loma Linda -TBD

Barbara/Bill/Linda/Bobbi

20 B5. Expanded Behavioral Health Services — Bobbi
(All age groups: youth, teens, adults, Sr. adults)
Report from CentraForce

20 B6. Preventative Health — Bobbi
- A. Science of Meditation
- B. Science of Mindfulness
- C. Yoga and other Modalities

30 Meditation/Mindfulness Experience
Sandra Buckingham, E-RYT200, RYT500, YACEP
Experienced Registered Yoga Teacher, Yoga Alliance, Continuing Education Provider
Fallbrook Wellness Directory Founder

10	B7.	Ribbon Cutting – Pre-Launch (Fallbrook Healing Center and District's Role) Info only – Oct. 2018 Save the Date – All Board Members to attend.	Bobbi
20	B8.	Prevent the Preventable A. Food is Medicine – CBS Video B. Exercise is Medicine (Both of above in Partnership with the American College of Sports Medicine and the American Heart Association.)	Communication Only
20	B9.	EMS/Mobile Health Care LYFT Presentation	Howard & Stephen
30	B10.	A+ Urgent Care RFP Responses	Gordon & Howard

TABLE OF CONTENTS

Fallbrook Regional HEALTH DISTRICT

BOARD

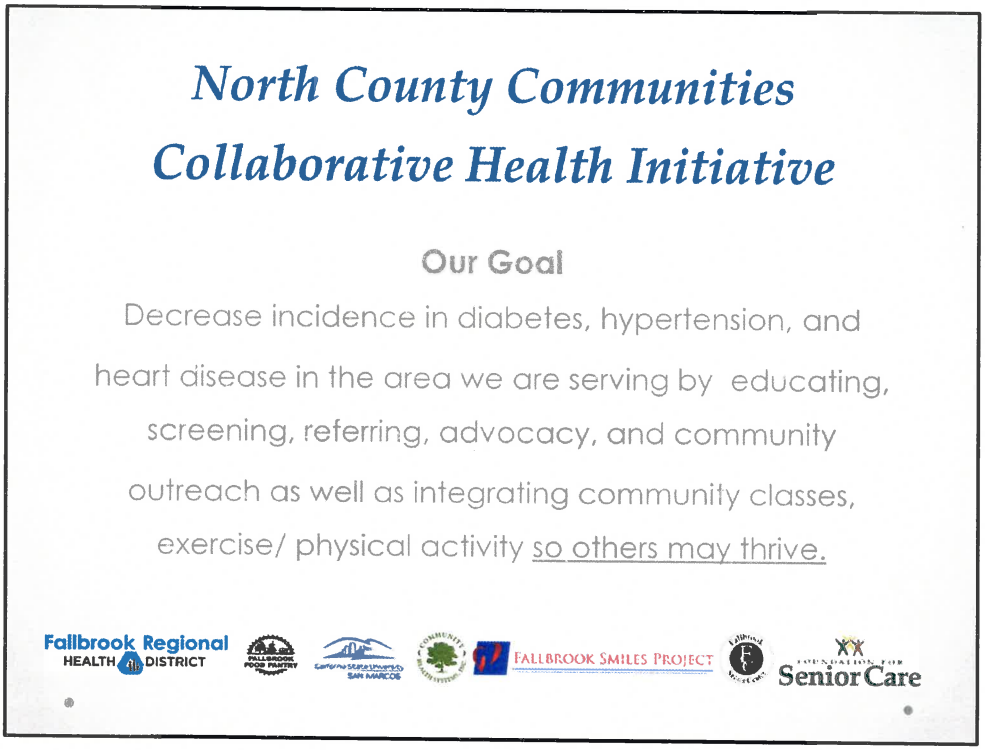
WORKSHOP

12/9/2017

Fallbrook Regional HEALTH DISTRICT

Health Initiatives

Fallbrook Regional Health District is located in Fallbrook, an unincorporated area in northern San Diego County. It is known as the "Avocado Capitol" of the world. Our District covers Bonsall, De Luz, Fallbrook and Rainbow. Just a note: Our former name was Fallbrook Healthcare District. The new name better reflects the services provided and those served.



After hiring a consultant to provide us with the major health disparities in our District, this collaborative was formed to address these specific health disparities in the ways also mentioned on the slide.

CALL TO ACTIVITY
WELLNESS
ONE STEP AT A TIME

Call to Activity – Wellness – One Step at a Time was an initial effort to bring attention to the importance of physical activity and promoting wellness. The collaborative recognized businesses and groups actively involved in promoting wellness and named them Health Champions for a specific month. Senator Joel Anderson recognized our efforts and provided certificates of recognition to each Health Champion, presented at our Woman of Wellness

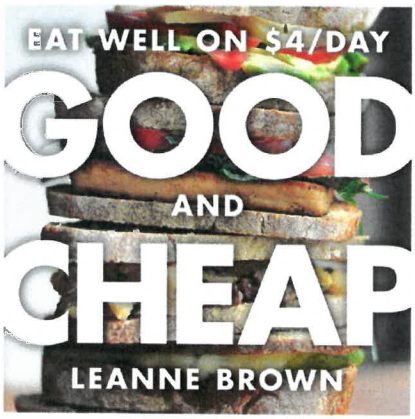
monthly events at the library.

HEALTH & WELLNESS INITIATIVES

- Food is Medicine
- Exercise is Medicine
- Prevent The Preventable

These initiatives were adopted to meet our Mission of promoting health for the people of the District and our Vision of reducing the impact of identified major health issues in our District.

FOOD IS MEDICINE

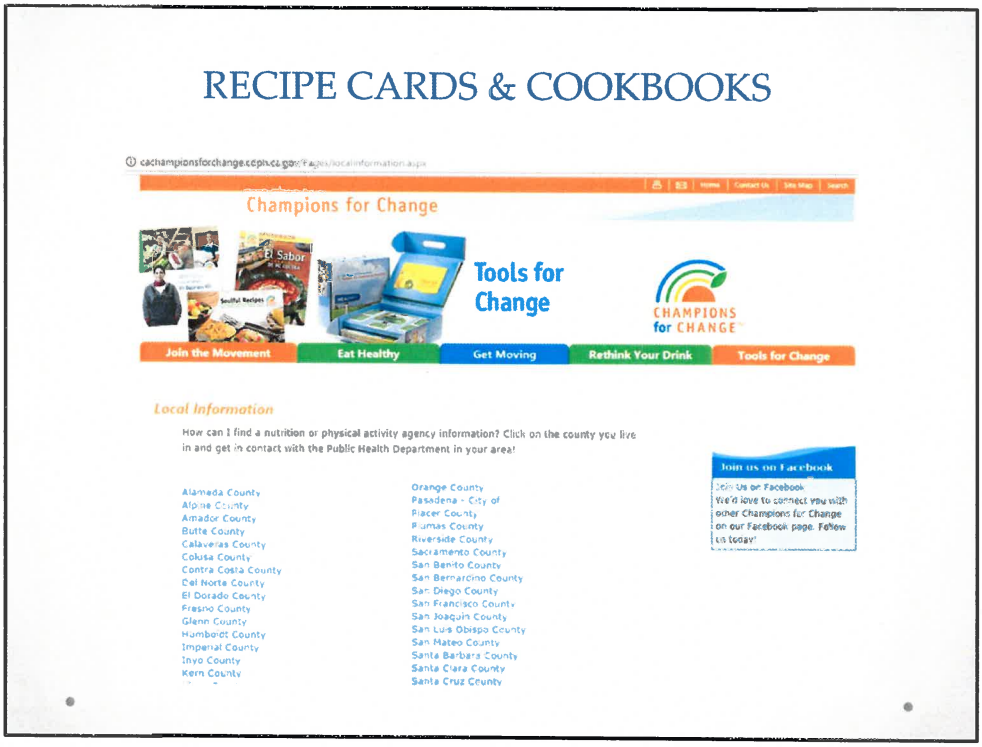


https://cookbooks.leannebrown.com/good-and-cheap.pdf

https://www.fallbrookhealth.org/brocade-wellfit-global-healthy-recipe-e-cookbook

Initiative – Food is Medicine: These are two cookbooks we have on our website. We also ordered free cookbooks and recipe cards from San Diego County – Public Health Department for distribution in our shopping bags. We provide these bags with other promotional items included at our events and those events we support in our communities.

RECIPE CARDS & COOKBOOKS



This is how you can order cookbooks and recipe cards from your County.

COOKING CLASSES

DEMONSTRATION

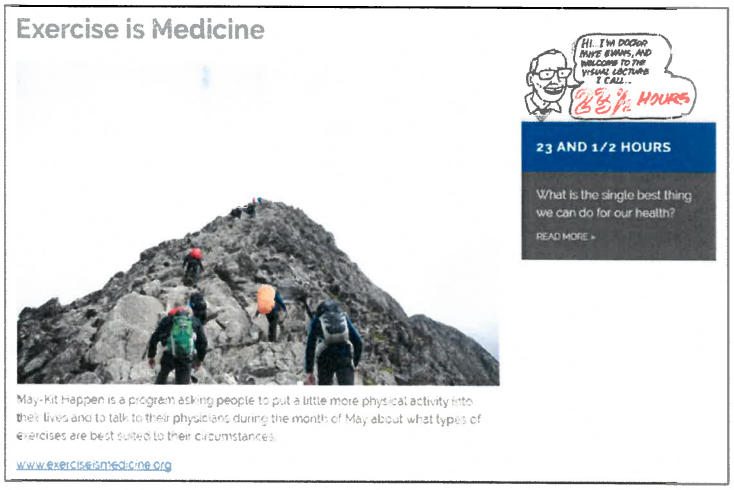
COOKBOOK

INGREDIENTS

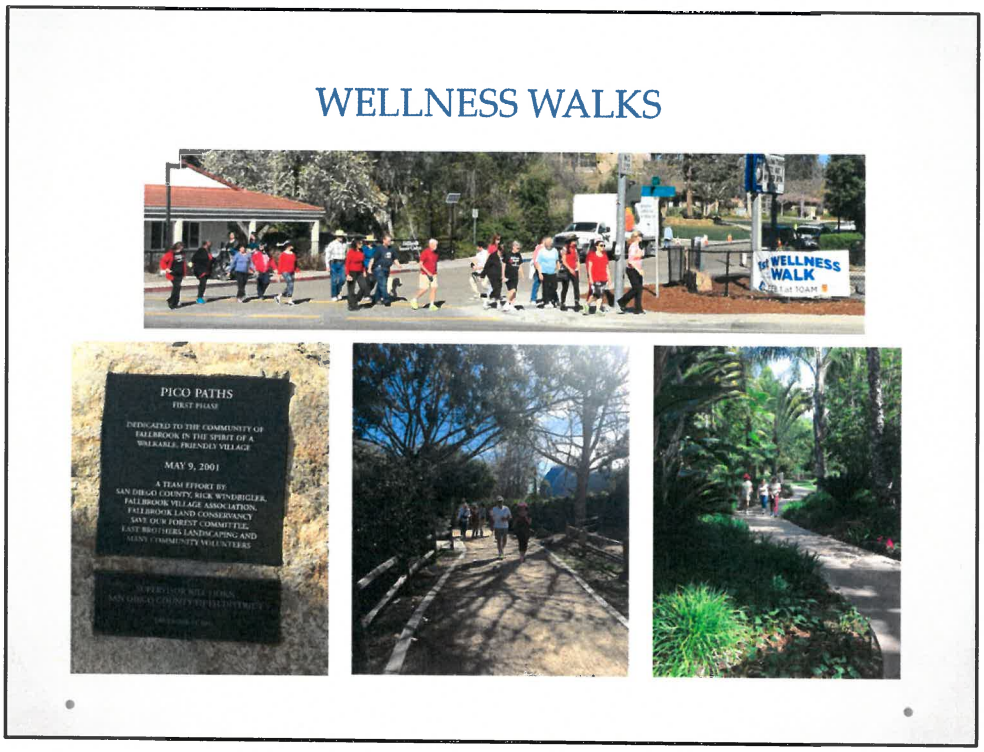
- FALLBROOK FAMILY HEALTH CENTER
- CAL STATE UNIVERSITY SAN MARCOS RN STUDENTS
- FALLBROOK FOOD PANTRY COLLABORATION

The NCCCHI collaborative mentioned earlier began providing cooking classes at the Fallbrook Family Health Center. Following the class, the Fallbrook Food Pantry then provided all of the ingredients to each participant to take home.

EXERCISE IS MEDICINE



Initiative – Exercise is Medicine: On our website is a visual lecture by Dr. Mike Evans called "23 and ½ Hours." In it he answers the question "What is the single best thing we can do for our Health?" Fallbrook Regional Health District sponsors a Wellness Walk each month at different sites in our communities.



These are photos of participants in our Wellness Walks. The first photo represents our 1st Wellness Walk followed by one at the Pico Promenade and the last photo was taken at The Grand Tradition, where they have planted beautiful gardens for their guests to enjoy. Our walkers include all ages and sometimes children in strollers and dogs. Our goal is to have the participants form their own walking groups to accommodate their schedules and

specific needs.

PREVENT THE PREVENTABLE

NCCCHI COLLABORATIVE AND CAL STATE UNIVERSITY SAN MARCOS RN STUDENTS PROVIDING HEALTH SCREENINGS AT LOCAL NURSERY.

Initiative – Prevent the Preventable: Through attending a local resource fair and speaking with the HR Director for a local nursery, we identified the need for basic health screenings for local nursery workers. Members of the collaborative worked together with the local nursery to provide health screenings for workers which will be ongoing. Appropriate referrals are then discussed if needed for further treatments.

Fallbrook Regional HEALTH DISTRICT

CONTACT INFO

BPalmer@FallbrookHealth.org
Lbannerman@FallbrookHealth.org
Pknox@FallbrookHealth.org

760-731-9187

PO BOX 2587 • Fallbrook CA 92028

Here is our contact information. Just a reminder: Avocados are good for you! Eat healthy!

DISCUSSION ONLY

Inland Empire RCD Connecting Local Farmers and Low-Income Families

By Brian Robey, Project Manager, Inland Empire Resource Conservation District

Over the past few decades, much of the Inland Empire, the metropolitan area east of Los Angeles, saw a massive shift from agricultural production to urban sprawl. A booming shipping industry in Los Angeles and Long Beach lead to a rapid shift from arable land to gigantic warehouses to handle the flow of goods through Southern California's ports. Despite the changing landscape, organizations are fighting to promote urban agriculture in a region desperately in need of access to fresh, healthy produce. Huerta del Valle Community Garden (HdV), in Ontario, CA, is leading the effort to develop urban farms throughout the Inland Empire, especially in low-income areas where produce access is severely limited. The Inland Empire Resource Conservation District (IERCD), a special district of the county of San Bernardino, has a mission to preserve and enhance the natural resources throughout their district. This includes promoting healthy soil and supporting the historic agricultural roots of the Inland Empire. Together, the IERCD and HdV continuously partner to provide healthy, sustainable food, improve soil health, and protect the Inland Empire's natural resources.

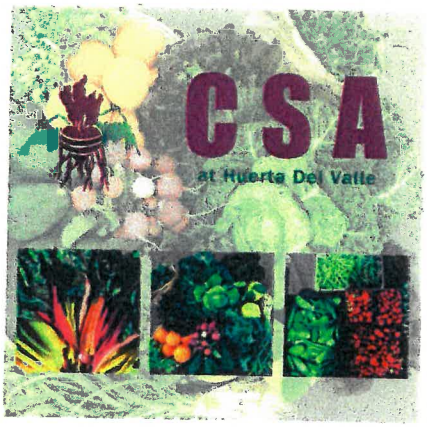
As a result of the loss of agricultural land, increasing living expenses, and expanding communities, many areas in the Inland Empire have become 'food deserts'- areas where fresh, healthy food is unavailable, too expensive, or difficult to access. Without easy access to nutritious foods and produce, residents are forced to turn to fast-food chains and convenience stores as they are often the only option. This has become an issue for public health and is especially prevalent in lower income communities.

In one such community in Ontario, HdV's Executive Director Maria Alonso started looking for a way to provide organic produce for her son, who had recently been diagnosed with ADHD. His doctor told Maria that healthy food could help offset his symptoms without needing medication. But while medication was accessible via insurance, fresh food was prohibitively difficult and expensive to acquire. So, she and a group of neighbors began developing their own garden to provide fresh food for their families.

The project has since grown from a small lot to a 4-acre production area with around 60 community

The Urban Agriculture Conservation Grant Initiative is available to member districts to advance agricultural conservation in developed or developing areas

plots. With the guidance of Maria and Project Manager Arthur Levine, they are now looking to develop more urban farms to expand their production and provide educational programs to residents and farmers. HdV's long term vision is to establish urban gardens throughout the Inland Empire to serve disadvantaged areas, but in the short term, Huerta del Valle is looking to grow its food and education programs in the local community.



One of the most exciting new programs at HdV is its Community Supported Agriculture (CSA) program, targeted towards local, low-income families. A CSA program connects local farmers with consumers to subscribe to a weekly box of fresh produce allowing families access to fresh food while supporting the farm's operations. Much of this produce will be "gleaned"- produce that would not be sold to regular, large-scale customers. Not only does this cut down significantly on food waste, but also helps make the boxes affordable. Families can also use food stamps to purchase the boxes, further increasing program accessibility.

As part of the ongoing partnership, IERCD was awarded a grant opportunity though the National Association of Resource Conservation Districts (NACD) to support the expansion of the low-income CSA program. The Urban Agriculture Conservation Grant Initiative is available to member districts to advance agricultural conservation in developed or developing areas. The grant was written to support Huerta del Valle's CSA program while also engaging farmers in the area to join a network of producers to help provide for the program and expand it into a multi-farm project.

The addition of a full-time CSA coordinator will allow for the expansion of the CSA program, with the first year goal of growing the CSA Program to 40 enrolled families and the long-term objective of reaching 200+ families. The coordinator will also provide outreach to both residents and farmers. Residents and CSA members will have the opportunity to attend workshops on nutrition and healthy cooking. Regional farmers will be approached to support the CSA program by providing excess produce that may not have value on the regular market. In addition, farmers will be introduced to IERCD programs – as well as programs through their Federal partner, the Natural Resources Conservation Service (NRCS). The ultimate objective is to develop a network

Continued on page 28

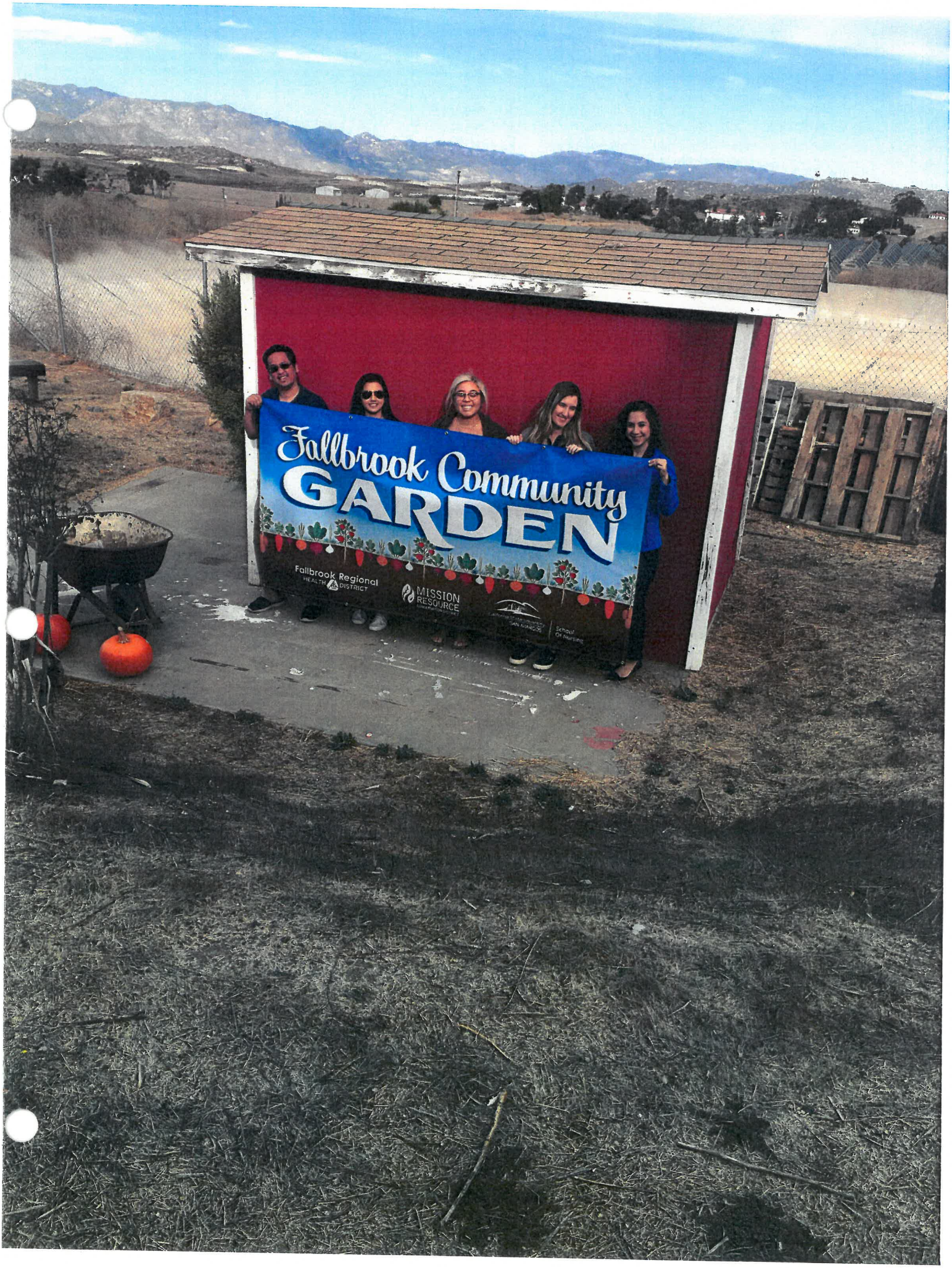
of farmers and community members to rally behind the mission of local, affordable produce. The expansion of the CSA program will help meet the mission of the IERCD and HDV by supporting urban agriculture, promoting soil health awareness, teaching sustainable growing techniques, and encouraging land conservation.

Besides developing urban farms throughout the region, both the IERCD and HdV place a lot of emphasis on educating residents about the importance of urban farms, nutritional eating, and composting. In 2016, HdV served as a host location for the IERCD's Student and Landowner Education and Watershed Stewardship Program (SLEWS). This program serves to connect high school students with a local landowner to perform conservation work. Through this program, students built a rain water capture system, helped compost hundreds of pounds of food waste, performed soil testing, and much more. HdV also helped support the development of IERCD's Farm-to-Fork program, a statewide effort to increasing access to healthy food.

To bolster these programs and add more like them, HdV is also looking to add two education coordinators to help increase their outreach potential. Funded, by IERCD's Special Projects Fund, these coordinators will be able to add classes on better farming practices, healthy cooking, and sustainability to the region.

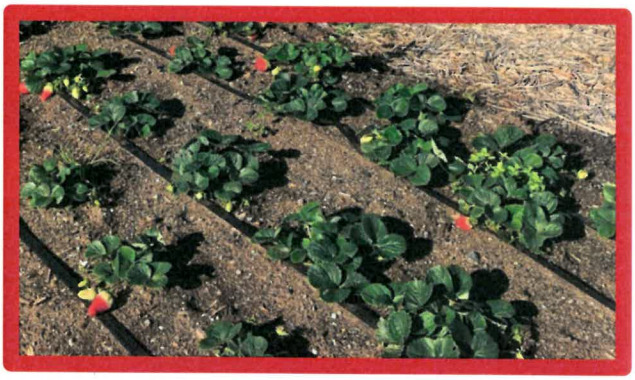
The Inland Empire may never be able to return to its agricultural roots, but the residents of this region deserve access to fresh produce and urban gardens provide them with that access. The Inland Empire Resource Conservation District and Huerta del Valle will continue to find ways to reach this through our continued partnership. ■


Fallbrook Community
GARDEN
Fallbrook Regional
HEALTH DISTRICT
MISSION
RESOURCE

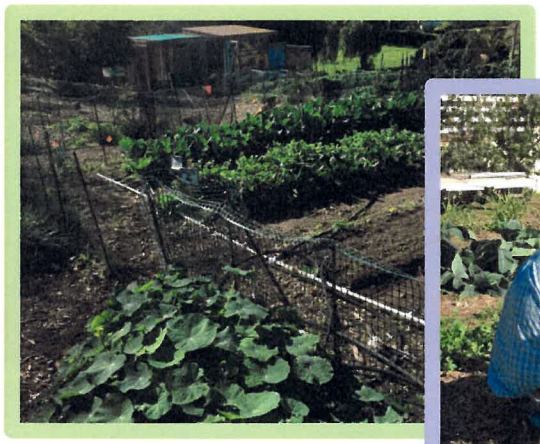

Fallbrook Community
GARDEN
Fallbrook Regional
HEALTH DISTRICT
MISSION
RESOURCE

Olivewood Gardens And Learning Center

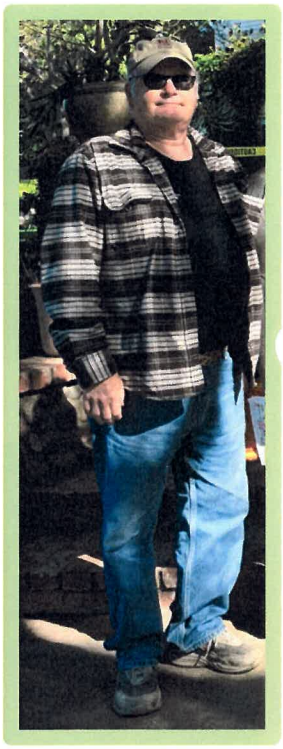
North County Communities Collborative Health Initiative members toured garden and kitchen on January 17th 2017.



The parking lot was designed by architecture students at Woodbury, using a water permeable surface that's absorbs rain, not diverting it like concrete.



Transplanting lettuce



Flower Tunnel

Winter crops

BLUE ZONES PROJECT™
by HEALTHWAYS

BECOMING A BLUE ZONES COMMUNITY

Working together for better well-being where you live, work and play.

BLUE ZONES AREAS

PLACES WHERE PEOPLE LIVE LONGER, BETTER.

We all want to live life well. Not merely surviving day to day, keeping the effects of aging and chronic illness at bay, but actually thriving and contributing with a clear sense of purpose. What if, even at an advanced age, with our well-being intact and energy to spare, we were able to share our experiences and wisdom with our grandchildren and our great-grandchildren?

What if you knew that you could add 12 healthy and happy years to your life? Would you be interested?

Across the globe lie Blue Zones® areas, where people reach age 100 at an astonishing rate. People in places like Sardinia, Italy; Okinawa, Japan; and Loma Linda, California, are living vibrant, active lives well into their hundreds—and with a lower rate of chronic disease. Physically, socially, and emotionally these people are living their lives longer, better.

The common cultural practices of these longevity super stars have been compiled in National Geographic explorer Dan Buettner's *New York Times* bestselling book, "The Blue Zones—Lessons for Living Longer From the People Who've Lived the Longest."

This research, coupled with an eight-year worldwide longevity study, has been used to develop lifestyle management tools and programs that help people live longer, healthier, and happier lives by optimizing their surroundings.

> "**The calculus of aging offers us two options: We can live a shorter life with more years of disability, or we can live the longest possible life with the fewest bad years. As my centenarian friends showed me, the choice is largely up to us.**"
>
> -Dan Buettner, Blue Zones Founder

BLUE ZONES PROJECTS UNDERWAY

WELL-BEING TRANSFORMATION, COMMUNITY BY COMMUNITY.

In 2009, Blue Zones led a prototype, community-wide makeover project in Albert Lea, Minnesota, based on the lifestyle traits of centenarians from Blue Zones areas. Measurable success was achieved by integrating healthy environmental interventions in four areas: inner self, habitat, social network, and community.

Just one year later, Blue Zones partnered with Healthways to replicate the Albert Lea experience in three California communities: Hermosa Beach, Manhattan Beach, and Redondo Beach. This well-being movement has since spread to the state of Iowa where, in 2011, Blue Zones and Healthways joined forces again to deliver the Blue Zones Project™ to ten communities in Iowa sponsored by Wellmark® Blue Cross® and Blue Shield®.

BLUE ZONES PROJECT PURPOSE

DEMONSTRATED COMMUNITY WELL-BEING IMPROVEMENT.

If surroundings lead to healthy behaviors, and healthy behaviors lead to longer, better lives, then by optimizing the surroundings of any community, it might be possible to manufacture a Blue Zones Community™.

The purpose of the Blue Zones Project™ is to lead and ignite a community-by-community well-being transformation, where people live and work together in Blue Zones Communities™ for a better life.

The Blue Zones Project is unique because it takes a systematic environmental approach to improving well-being through policy, building design, social networks and the built environment. By optimizing our environments—those settings where we live, work, and play, which influence our behavior—we can make the healthy choice the easy choice so that we naturally adopt healthy behaviors.

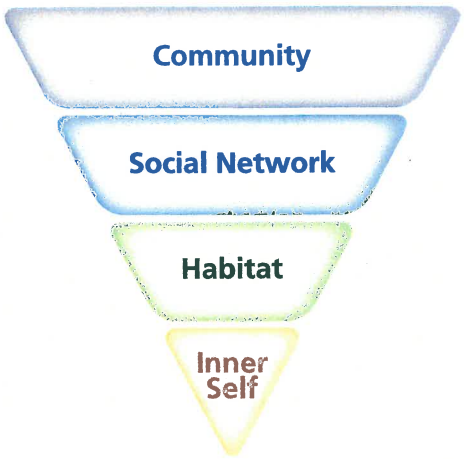
For example, experts will design tools for restaurants to help them provide better choices, such as making fresh fruit the default option rather than French fries. Also, rather than asking residents to walk or bike more, improvements to the built environment will make walking and cycling easier and more desirable than driving.

OPTIMIZING 4 KEY ENVIRONMENTS TO MAKE HEALTHY CHOICES EASIER.

INNER SELF

Purpose begins with the inner self. By helping people discover their purpose in life, it's possible to lift their well-being. In Blue Zones® cultures, one's purpose is so important that these people have special words for it. In Costa Rica they call it, "Plan De Vida" – a plan for life.

Blue Zones® Community Environmental Change Model



HABITAT

The habitat includes those places where people spend most of their time, like home, work, and school. If we de-convenience these settings, we can create healthier activities like Okinawans, who, for example, don't use couches and must get up and down from the floor numerous times each day. That constant, moderate exercise rewards them with years of healthy life.

SOCIAL NETWORK

Social connections influence the decisions people make. People in Blue Zones cultures are social, and they regularly associate face-to-face with a network of friends whose healthy behaviors reinforce their own.

COMMUNITY

Community surroundings encourage healthy behaviors—from restaurant and grocery store choices, to sidewalk and bike path access that encourages safe physical activity for all ages and abilities.

Blue Zones Project™ is a community well-being improvement initiative designed to make healthy choices easier through permanent changes to environment, policy, and social networks.

> "**The Blue Zones Project helped our community set amazing, aggressive, and achievable strategies that moved the Public Health agenda further in 10 months than I could have expected in 10 years.**"
>
> -Lois Ahern, (retired) Director of Freeborn County Health

POWER 9

SMALL SIMPLE STEPS TO FEELING BETTER.

People in Blue Zones® areas have enjoyed greater well-being and longevity for generations— and now you can too! The truth is genetics are responsible for only about 20% of your well-being, according to the Danish Twins study*. What made the Blue Zones areas special were the nine common lifestyle traits they shared—known as the Power 9®. These nine small, easy steps fit into four categories and can be practiced anywhere.

MOVE NATURALLY

1 **Move Naturally**: We can get more physical activity naturally if we live in walkable communities, de-convenience our homes, and grow gardens.

RIGHT OUTLOOK

2 **Know Your Purpose**: People who know why they wake up in the morning live up to seven years longer than those who don't.

3 **Down Shift**: To reverse inflammation related to every major age-related disease, find time every day to meditate, nap, pray, or enjoy a happy hour with friends.

EAT WISELY

4 **80% Rule**: It takes your stomach 20 minutes to tell your brain it's full, causing most people to accidentally overeat—so stop eating when you're 80% full.

5 **Plant Slant**: Eat mostly a plant-based diet that is heavy on beans, nuts, and green plants. This is consistent with the USDA's MyPlate recommendations to make fruits, vegetables, and grains the majority of your intake. The focus should be on more veggies, less meat, and less processed food.

6 **Wine @ Five**: If you have a healthy relationship with alcohol, one glass of wine daily could help add years to your life, especially when consumed with a healthy diet.

BELONG

7 **Family First**: Living in a thriving family is worth half a dozen extra years of life expectancy. Invest time in your kids, nurture a monogamous relationship, and keep your aging parents near.

8 **Belong**: Recommit, reconnect, or explore a new faith-based community. No matter which faith, studies found that people who show up to their faith-based community four times a month, live an extra 4 to 14 years.

9 **Right Tribe**: Your friends have a long-term impact on your well-being. Expanding your social circle to include healthy-minded, supportive people might be the most powerful thing you can do to add happy, quality years to your life.

Move Naturally

Right Outlook
- Know Your Purpose
- Downshift

Eat Wisely
- 80% Rule
- Plant Slant
- Wine @ Five

Belong
- Family First
- Belong
- Right Tribe

* Christensen, Kaare, and James W. Vaupel. Longitudinal Study of Aging Danish Twins, 1995.

BLUE ZONES COMMUNITY CERTIFICATION

ACHIEVING IT TAKES EVERYONE'S SUPPORT.

What if you had the opportunity to create a city where the healthiest choices are also the easiest ones to make? Imagine a place where it's easy to eat fresh produce from grocery stores and farmers' markets, not only because it's more affordable, but also because it's more accessible than a fast food restaurant.

Here it's easier to bike than drive, thanks to better bike lanes providing safe and direct access to work, shopping centers, and parks, all without the hassle of public parking. This community designed for health and well-being also makes it easier for our kids to play outside, with safe school playgrounds available to the public during non-school hours.

This is a city built for active living. It's an environment where public policies provide people with healthy opportunities, giving them a supportive nudge toward eating better and moving more naturally.

Can such a community exist? Yes! But it takes everyone's support. Here's how:

CERTIFICATION CRITERIA

To become a certified Blue Zones Community™, the six community sectors outlined below must pledge and then act on their specific responsibilities. Once a community has met these goals, everyone can share the benefits of living in a place where well-being is a way of life, and that town can enjoy national recognition as a great place to live, work, and play.

BECOMING A CERTIFIED BLUE ZONES COMMUNITY REQUIRES:

1. **Personal**: At least 20% of citizens take the Blue Zones® Personal Pledge and complete one action.
2. **Schools**: At least 25% of public schools become a Blue Zones School™.
3. **Worksites**: At least 50% of the top 20 community-identified employers become a Blue Zones Worksite™.
4. **Restaurants**: At least 25% of independently or locally owned restaurants become a Blue Zones Restaurant™.
5. **Grocery Stores**: At least 25% of grocery stores become a Blue Zones Grocery Store™.
6. **Community Policy**: Completion of the Blue Zones® Community Policy Pledge.

Learn more at **www.bluezonesproject.com**.

PLEDGE TO MAKE A DIFFERENCE

IMPROVE YOUR WELL-BEING AND YOUR COMMUNITY'S TOO.

Blue Zones Project™ pledges for citizens, worksites, schools, and other areas, enable community leaders to promote evidence-based actions supported by Power 9® principles, enabling healthier lifestyles for all citizens.

By pledging and committing to an action, you are demonstrating your commitment to creating an environment of well-being for yourself and your community—with the intention of striving toward Blue Zones Community™ certification.

Small changes to environment over time will have a big impact on well-being for many, many years to come.

YOUR NEXT STEP:

Register and pledge at **www.bluezonesproject.com**
by selecting any orange **JOIN TODAY** button.

GALLUP-HEALTHWAYS WELL-BEING INDEX

A COMPLETE MEASURE OF PHYSICAL, EMOTIONAL, AND SOCIAL WELL-BEING.

Longevity is one goal. Living with a high sense of well-being is another. The science of well-being provides many insights on how to create a good life. Our goal through the Blue Zones Project™ is to increase longevity and improve well-being. In looking at the science of longevity and well-being, one thing becomes evident. It's how you live that matters. Here's how we'll know our efforts are working:

MEASURING OUR SUCCESS

Success of the Blue Zones Project will be measured using the Gallup-Healthways Well-Being Index® — a comprehensive daily measurement of the nation's physical, emotional, and social health.

With 1,000 surveys completed by telephone every day, 350 days a year in the U.S., and more than 1.1 million surveys completed since 2008, the Well-Being Index is the largest and most complete measurement tool for well-being in existence today. The following areas measured by the Index include:

- Life Evaluation
- Emotional Health
- Physical Health
- Healthy Behavior
- Work Environment
- Basic Access

The Gallup-Healthways Well-Being Index will measure the impact of the Blue Zones Project. Gallup® will oversample the population to allow for a high degree of confidence in the survey results, and ensure that they are representative of a community's total population. The Well-Being Index will be administered by telephone to randomly selected individuals living in communities that have been designated Blue Zones Project demonstration sites.

Learn more at **www.well-beingindex.com**.

BE A PART OF THE TRANSFORMATION

MAKE A DIFFERENCE IN YOUR COMMUNITY'S WELL-BEING.

It's time to start dreaming about a well-being way of life, and picture the best possible version of yourself and the community you call home. With your support, the Blue Zones Project™ can help make this dream a reality.

Help us spread the word about the Blue Zones Project and the healthy changes coming to your community.

1. **Pledge to participate by visiting www.bluezonesproject.com**
2. **Create a personal profile**
3. **Invite others to do the same**

BLUE ZONES PROJECT™
by HEALTHWAYS

www.bluezonesproject.com

Discovering the Blue Zones Solution

TRANSFORM YOUR HEALTH—AND LIVE LONGER

If you're carrying around a few too many pounds, it's probably not your fault. Americans today are drowning in a sea of cheap calories. We can't walk through an airport, pay cash for gasoline, or buy cough medicine without being confronted by a barrage of salty snacks, candy bars, and sodas. Today, the average American adult consumes 79 pounds of fat and 8,000 teaspoons of added sugar annually. And we wash it all down with 57 gallons of soda a year.

At the same time, we've engineered physical activity out of our lives. There's a button to push for yard work, another for housework. Our grandparents burned five times as many calories in the daily activities of work and life without resorting to "exercise."

Does that mean we're bad people? That we lack the discipline of our forefathers? That we care less about our health and our children's health than our grandparents did? Of course not. We've simply gone from an environment of hardship and scarcity to one of abundance and ease. The question is: How can we make the most of this abundance without letting it ruin our health?

The traditional answer is "Go on a diet and start an exercise program." The problem with that is it requires long-term discipline and routine. Of 100 people who start a diet today, fewer than 5 will still be on that diet's maintenance plan two years later. Therefore, diets are largely useless as a strategy to lose weight, much less to avoid heart attacks or live longer.

This special issue offers an alternative—food ideas and eating practices, plus easy ways to change your environment—that makes it all the more likely that you will live a longer, healthier life. We've adapted lessons from the areas around the world where people live the longest, healthiest lives—places called the Blue Zones because a team of researchers once circled a target region on a map with blue ink. And we've translated the foods from those regions into easy recipes designed for every taste and family—kids included—and die-hard meat-and-potato lovers too.

We've also launched community makeover projects across the country in what's been described by the *Dallas Morning News* as the "biggest healthy living experiment in America." From a small town in Minnesota to the entire states of Iowa and Hawaii, we're helping to tweak whole environments so people don't even have to think about being healthier because their communities are built to get them there. We want people to love what they eat, how they spend their days, and the people they spend time

with. We want them to feel their lives are getting better, whether they start by embracing the Blue Zones' ideas on a small scale at home or become inspired to transform their whole neighborhood, town, or city.

As residents of these communities have realized, something is wrong with the way life is organized in most of our nation—something about the foods we consume, the frantic pace of life we keep, the relationships we make, and the communities we create—that keeps us from being as happy and healthy as we could be. I know this because for more than a decade, I've been traveling the world, meeting people who enjoy happy, healthy lives all the way to—and past—100 years old.

Working with *National Geographic* and demographer Michel Poulain, I set out to find places that had not only high concentrations of 100-year-olds but also clusters of people who had grown old without problems like heart disease, obesity, cancer, or diabetes. We found five places that met our criteria:

- **Ikaria, Greece,** an island in the Aegean Sea with one of the world's lowest rates of middle-age mortality and the lowest rates of dementia
- **Okinawa, Japan,** the largest island in a subtropical archipelago, and home to the world's longest-lived women
- **Ogliastra region, Sardinia,** mountainous highlands on an Italian island that boasts the world's highest concentration of centenarian men
- **Loma Linda, California,** a community with the highest concentration of Seventh-day Adventists in the United States, where some residents live 10 more healthy years than the average American

Beehives, the source of this Blue Zone's local honey, sit on a hill in Ikaria's Raches Village.

»**Nicoya Peninsula, Costa Rica,** where residents have the world's lowest rates of middle-age mortality and the second highest concentration of male centenarians

What is their secret? Is it good genes, a special diet, optimal habits? We assembled a team of medical researchers, anthropologists, dietitians, demographers, and epidemiologists to tease out the answers. Over time, we identified a core list of lifestyle practices and environmental factors that we called the Power Nine (see page 9).

What we discovered is that the path to a long, healthy life comes from creating an environment around yourself, your family, and your community that nudges you into following the right behaviors subtly and relentlessly, just as the environments of the Blue Zones do for their populations.

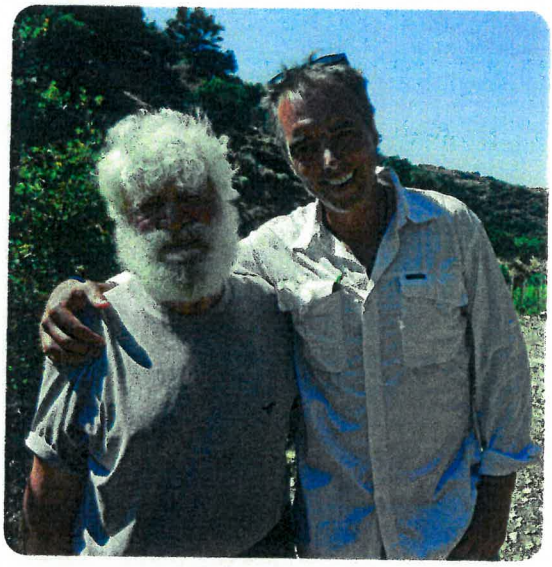
Betsy Price knows this as well as anyone else. As mayor of Fort Worth, Texas, she's helping to champion the largest Blue Zone community makeover in the nation. All across her community—at worksites, schools, restaurants, grocery stores, faith-based organizations, clubs, groups, and civic organizations—residents are making changes to turn Fort Worth into a model of healthy living.

"Poor health results in $17 billion in lost productivity in Dallas–Fort Worth annually," said Barclay Berdan, chief executive officer of Texas Health Resources, the presenting sponsor of the Fort Worth transformation. "The Blue Zones Project is not only the right thing to do; it will benefit generations to come and set Fort Worth apart. We want to become recognized as a magnet of well-being and health in North Texas."

As Price also knew, more than a third of the residents in her community were struggling with weight issues and other issues, which had contributed to a big jump in health care costs.

Price, who has been a cyclist for nearly four decades, took me on a bike tour a few years ago through Fort Worth's historic stockyards district, where sprawling 19th-century livestock markets have been replaced by museums, shops, and restaurants. One of those restaurants, Los Vaqueros, was recently named a Blue Zones Project–approved eatery, where healthy options, such as avocado enchiladas and fresh fruit, are offered on the menu.

DAN BUETTNER



Dan Buettner (right) is the founder of Blue Zones, an organization that helps Americans live longer, healthier lives. His teams have helped residents in communities across the country lose weight, reverse disease, and increase life satisfaction. A National Geographic Fellow, he has written three national best-selling books: *The Blue Zones: Lessons for Living Longer From the People Who've Lived the Longest; Thrive: Finding Happiness the Blue Zones Way;* and *The Blue Zones Solution: Eating and Living Like the World's Healthiest People.* Dan has keynoted speeches for Bill Clinton's Health Matters Initiative, Google Zeitgeist, TED, TEDMED, Aspen Ideas Fest, and others. He can be found on Facebook (facebook.com/BlueZones) and Twitter (@BlueZones), as well as through his website, bluezones.com. He lives in Minneapolis, Minnesota.

Sardinians get exercise from herding sheep along rocky hills, but the animals are rarely used for meat.

Consider as well what has happened in three Southern California towns. During the past five years, more than 23,000 people in Redondo Beach, Hermosa Beach, and Manhattan Beach have made lifestyle changes such as walking at least three times a week, riding a bike, learning a new hobby, growing a vegetable garden, or dedicating a spot for quiet time, meditation, or prayer. During this same period, the Beach Cities, as they're known, have seen a 17 percent decrease in smoking, a 50 percent drop in the childhood obesity rate, and $12 million savings in annual health care costs, according to a Gallup-Healthways Well-Being Index poll.

Or consider Bob Fagen's story. One blustery November evening a few years ago, the 54-year-old city manager of Spencer, Iowa, stepped up to the microphone at a town meeting and told his friends and neighbors how the Blue Zones Project was transforming their community. The town was rethinking Main Street as a place not just for cars but also for humans, he said. New policies had been proposed to limit sprawl; ensure that everyone has easy, affordable access to vegetables; and give everyone access to gyms and playgrounds when school is out.

Then he shared something personal with the group. After discovering a problem with his kidneys, Fagen had resolved to change his own behavior as well by walking more and riding a bike. He'd also started eating better, including more salads. "Every time I sat down for a meal, I thought about Marybelle and Violet, my two granddaughters," he said. "I couldn't imagine not being there for them.

"Well, I went back to see the specialist this week to get my latest tests and he gave me the news: My kidneys are functioning at 100 percent." Soon everyone was standing, applauding thunderously.

"So I challenge all of you tonight," Fagen told the crowd, tears welling in his eyes. "Think of

whatever it is that's important to you. Don't wake up one day and wonder what happened to your life."

Fagen was on the right track. As a burgeoning body of research has suggested, you too can make long-term changes to your personal environment that will nudge you into moving more, socializing more, hungering for less, and eating better.

The idea behind the Blue Zones Project is to make sure that vitality ensues for you. Besides sharing with you the best Blue Zones foods—as well as delicious ways to prepare them and powerful practices to enjoy them with your family and friends—my ultimate goal is for you to have a Bob Fagen moment of your own: discovering that, without knowing exactly how or when it happened, you're healthier and happier than you ever thought possible.

The Power Nine

Many residents of the original Blue Zones practice nine healthy lifestyle habits that help them live longer, healthier, happier lives.

1. **Move naturally.** The world's longest-lived peoples are constantly nudged into moving by the environment that surrounds them. Every trip to work, to a friend's house, or to church occasions a walk.

2. **Purpose.** In all of the Blue Zones, people say they have something to live for beyond work—what they describe as "why I wake up in the morning." Research shows that a sense of purpose is worth up to seven years of extra life expectancy.

3. **Downshift.** Long-lived people have developed routines to shed stress: Okinawans take a few moments each day to remember their ancestors, Adventists pray, Ikarians take a nap, and Sardinians enjoy a happy hour.

4. **80 percent rule.** In Japan's Okinawan Blue Zone, people remind themselves to stop eating when their stomachs are 80 percent full with the phrase *Hara hachi bu.* If Americans adopted this rule, they could lose an average of 17 pounds in the first year.

5. **Plant slant.** Beans, including fava, black, soy, and lentil, are the cornerstone of most centenarian diets, which also include relatively small amounts of meat.

6. **Wine @ 5.** People in all the Blue Zones (even some Adventists) drink alcohol moderately and regularly—one to two glasses a day with friends or food. Moderate drinkers tend to outlive nondrinkers.

7. **Right tribe.** Social circles support healthy behaviors. Okinawans, for example, create *moais*—groups of five friends who are committed to each other for life.

8. **Community.** Research has shown that attending faith-based services four times a month adds 4 to 14 years of life expectancy. The choice of denomination doesn't seem to matter.

9. **Loved ones first.** Successful centenarians in the Blue Zones put their families first. They invest in their children with time and love, and children care for their elders. Additionally, having a life partner can add up to three years to life expectancy.

Okinawa, Japan

A DIET FROM THE WORLD'S LONGEST-LIVED WOMEN

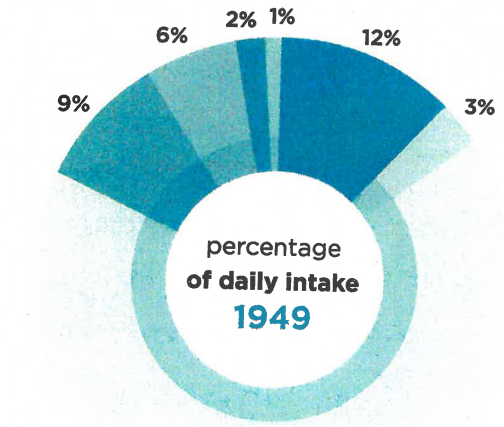
A thousand miles south of Tokyo lies a cluster of islands with sugar-sand beaches, palm trees, and a people descended from the ancient Ryukyu kingdom. For almost a millennium, this Pacific archipelago has maintained a reputation for nurturing extreme longevity. Reports from early Chinese expeditions referred to these tiny islands as the land of the immortals.

Today Okinawans over the age of 65 still enjoy the world's highest life expectancy. Men are expected to live to about 84 and women to almost 90. People here also have one of the highest centenarian ratios in the world: About 6.5 in 10,000 live to age 100. And they suffer at a fraction of the rates from diseases that kill Americans: a fifth the rate of cardiovascular disease, a fifth the rate of breast and prostate cancer, and less than half the rate of dementia seen among similarly aged Americans.

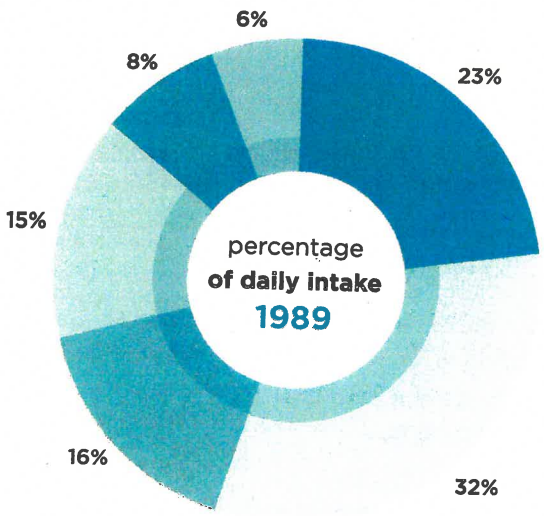
What do Okinawan centenarians eat that might help to explain their long, healthy lives? Gerontologist Craig Willcox, and his brother Bradley, authors

TYPICAL DAILY DIET OF OKINAWANS, 1949 AND 1989

Sweet potatoes represented two-thirds of the typical daily diet of Okinawans in 1949. Through the postwar decades, islanders continued to eat more greens as well as more yellow, orange, and red vegetables than other Japanese. Okinawans also tended to eat more meat—primarily pork—than other Japanese, but at the same time, they ate less fish, less salt, and much less added sugar.



- Rice 12%
- Other Grains 3%
- Sweet Potatoes 67%
- Other Vegetables 9%
- Legumes 6%
- Fish, Meat, Poultry 2%
- Other Foods 1%



- Grains 23%
- Vegetables 32%
- Beans 16%
- Fish, Meat, Eggs 15%
- Dairy 8%
- Other Foods 6%

Takako Takamine, 76, gathers *asa,* a seaweed used in miso soup, from the shores of the Sea of Japan.

with Makoto Suzuki of the *New York Times* best-seller *The Okinawa Diet Plan,* have been seeking answers to that question for more than a decade. Greg Plotnikoff, a U.S.-trained physician and authority on integrative medicine, has also been investigating the puzzle.

The Willcoxes' work, which includes meticulous data collection, offers important insights into the actual diets of Okinawa's centenarians. During the first third of their lives, roughly before 1940, the vast majority of the calories they consumed—more than 60 percent—came from one food: the *imo,* or Okinawan sweet potato. A purple or yellow variety related to our orange sweet potato, the imo came to Japan from the Americas about 400 years ago and took well to Okinawan soils. That was lucky for pre–World War II Okinawans, who were otherwise calorie starved. This sweet potato—high in flavonoids, vitamin C, fiber, carotenoids, and slow-burning carbohydrates—is one of the healthiest foods on the planet. In fact, the traditional Okinawan diet was about 80 percent carbohydrates because of the imo, the Willcoxes found.

A GREAT LONGEVITY DIET

Before 1940 Okinawans consumed fish at least three times per week together with seven servings of vegetables and maybe one or two servings of grain per day. They also ate two servings of flavonoid-rich soy, usually in the form of tofu. They didn't eat much fruit; they enjoyed a few eggs a week. Dairy and meat represented only about 3 percent of their calories. Never influenced by Buddhism, 20th-century Okinawans observed no taboos against eating meat, but they still only did so rarely. On special occasions, usually during the Lunar New Year, people butchered the family pig and feasted on pork—probably an important protein source at the time.

A typical traditional meal of the time, the Willcoxes said in an article they authored for the *Journal of the American College of Nutrition,* began with Okinawan-style miso soup with seaweed, tofu, sweet potato, and green leafy vegetables. The main dish was *champuru,* stir-fried vegetables that might include goya (bitter melon), daikon (radish), Chinese okra, pumpkin, burdock root, or green

papaya, sometimes accompanied by smaller servings of fish, meat, or noodles prepared with herbs, spices, and cooking oil. To drink, they served freshly brewed *sanpin* (jasmine) tea and perhaps a little locally brewed *awamori* (millet brandy).

Three foods in the Okinawan diet of those days—turmeric, sweet potato, and seaweed—provided an additional benefit that we understand better today: They mimic caloric restriction, a digestive survival mode that has longevity benefits. As food is digested, mitochondria in our cells convert calories into energy. By-products of this process are free radicals, oxidizing agents that deteriorate the body from the inside out just as oxidation forms rust on iron and ultimately destroys it. Free radicals can stiffen the arteries, shrink the brain, and wrinkle the skin. In caloric restriction mode, our cells protect themselves by producing less energy but also throwing off fewer free radicals and thus slowing the aging process.

One way to turn on caloric restriction is to eat about 40 percent fewer calories than the average American consumes (about 2,500 for a man and 1,800 for a woman). But recent research from the Willcoxes has shown that regular consumption of turmeric, sweet potato, and seaweed can provide some of the benefits of caloric restriction, tripping genetic triggers that minimize production of free radicals without causing hunger.

FAST FOOD INVASION

As healthful as they were, some of these Okinawan food traditions floundered midcentury. Following World War II, the United States established an army base in the middle of Okinawa. Western influences—and economic prosperity—crept into traditional life, and food habits changed. According to detailed Japanese government surveys, sweet potatoes dropped from 60 percent to fewer than 5 percent of Okinawans' daily calories between 1949 and 1960. Meanwhile, they doubled their rice consumption, and bread, virtually unknown before, also crept in. Milk consumption increased; meat, eggs, and poultry consumption increased more than sevenfold. Not coincidentally, cancers of the lung, breast, and colon almost doubled.

100 REGIONAL CENTENARIAN

GOZEI SHINZATO

Gozei Shinzato, 104, was showing me her arsenal of longevity supplements: Okinawan sweet potatoes, soybean mugwort, turmeric, and goya. All grew in neat rows just 15 steps outside her house. Shinzato lived alone in a furnitureless, three-room house partitioned by rice-paper doors. Upon awaking, she wrapped her elfin 85-pound frame in a cobalt blue kimono and then made an offering at the ancestor shrine in her living room. After working in the garden for a few hours, she had lunch, and then read comic books or watched a baseball game on television and napped. Neighbors stopped by in the afternoon, and a couple of days a week, her moai—four women who had committed to one another for life—came by for mugwort tea and conversation. Whenever things had gotten rough in Shinzato's life, as when her husband died 46 years ago, she counted on her moai to support her. And they counted on her.

OPPOSITE: **On the beach 84-year-old Fumiyasu Yamakawa practices *ikigai*—a daily exercise that includes yoga—as training for an annual decathlon.**

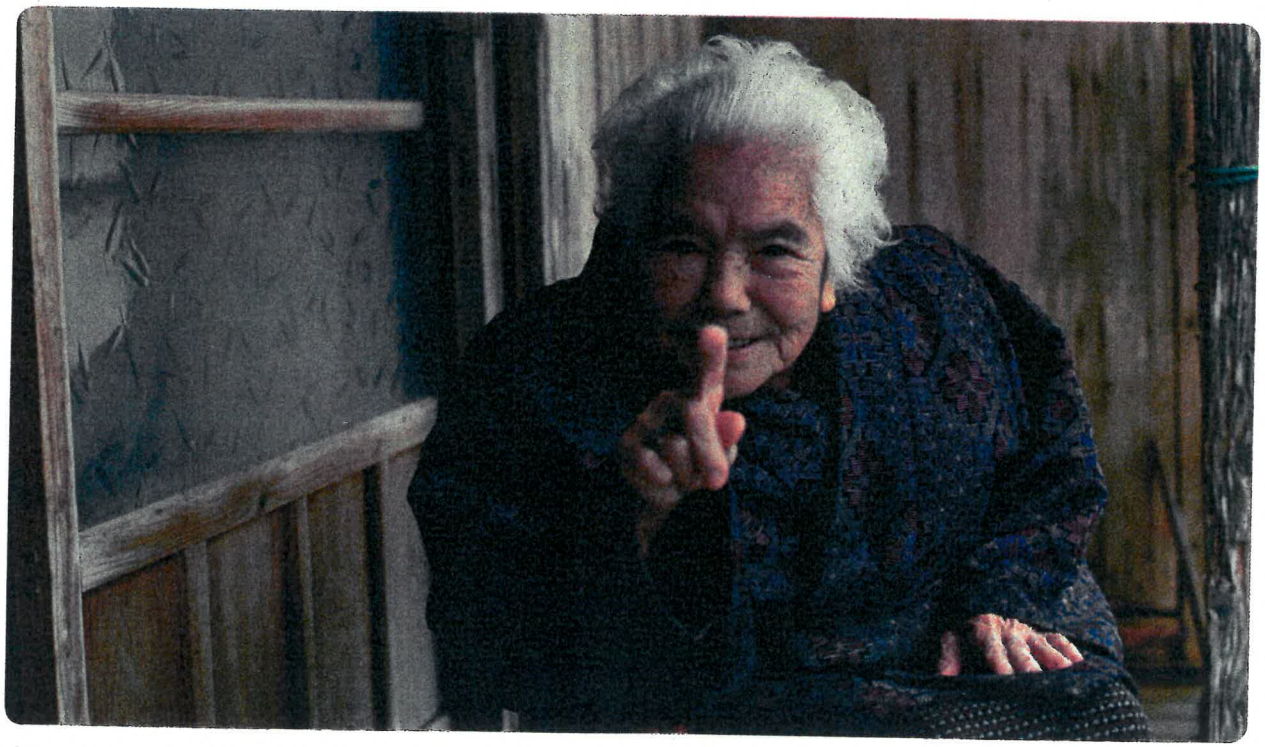
The meat in their diet gave me pause. When I first struck off on my Blue Zones research in 2000, I was absolutely convinced I'd find that a vegan diet yielded the greatest health and life expectancy. So when I discovered that older Okinawans not only ate pork but loved it, I thought their example must be an outlier—that they were living long despite pork. Pork is high in saturated fat, which, when consumed in excess, often leads to heart disease. But again, we learned a few lessons. Okinawans stewed the pork for days, cooking out and skimming off the fat. What they ate, in the end, was mostly the high-protein collagen.

One dietary expert I met in Okinawa, Kazuhilo Taira, believed that it was this pork protein that explained their longevity. His theory was that we all suffer small tears in the blood vessels that bring blood to our brains. Severe tears result in strokes, but minor tears often go unnoticed while still doing damage. Pork protein actually acts like a caulking of sorts, for the pig protein is very similar to human protein. And it was this protein that Okinawans love.

"Oh yes, I like meat, but not always," one centenarian had told me. "When I was a girl, I ate it only during New Year festivals. I'm not in the habit of eating it every day."

But today fast-food restaurants serving quick-cooked burgers and other meat sandwiches abound in Okinawa. The island boasts the largest A&W Root Beer stand in the world. In 2005 Okinawans, who live on an island only 70 miles long and 7 miles wide, consumed tons of Spam, a processed meat product introduced by American GIs after World War II. Between 1949 and 1972, Okinawans' daily intake increased by 400 calories. They were consuming more than 200 calories per day more than they needed—like Americans. And health statistics show the effect of those changes. By 2000 Okinawa ranked 26th among Japan's 47 prefectures for life expectancy of men at birth, while older Okinawans, whose diets had solidified before that time period, are the world's longest-lived people.

Some traditions do not die—and apparently some food traditions keep Okinawans living long and healthy lives, even with the onslaught of the modern fast-food culture.



Living alone in the village of Motobu, Kamada Nakazato, 102, has lived long enough to meet her great-great-granddaughter.

»TOP LONGEVITY FOODS *From Okinawa*

» **BITTER MELON** Known as goya, this long, knobby gourd looks something like a warty cucumber. It is often served in stir-fried dishes. Recent studies found it an "effective antidiabetic" as powerful as pharmaceuticals in helping to regulate blood sugar.

» **TOFU** Okinawans eat tofu like the French eat bread: It's a daily habit. Studies show that people who eat soy products in place of meat have lower cholesterol and triglyceride levels, which reduces their risk of heart disease.

» **SWEET POTATOES** Okinawan imo is a supercharged purple sweet potato, a cousin of the yellow-orange sweet varieties. Despite its sweet, satisfying taste, the supercharged purple imo does not cause blood sugar to spike as much as a regular white potato does.

» **GARLIC** Sometimes eaten pickled, garlic is one of nature's most powerful natural medicines. A recent scientific review found that "intake of garlic by humans may either prevent or decrease the incidence of major chronic diseases associated with old age."

» **TURMERIC** Ginger's golden cousin, turmeric figures in the Okinawan diet as both a spice and a tea. A powerful anticancer, antioxidant, and anti-inflammatory agent, turmeric contains several compounds now under study for anti-aging properties.

» **BROWN RICE** Okinawan brown rice, tastier than the brown rice Americans know, is soaked in water to germinate until it just begins to sprout, unlocking enzymes that break down sugar and protein and giving the rice a sweet flavor and softer texture.

» **GREEN TEA** Okinawans drink a special kind of green tea they call *shan-pien,* or "tea with a bit of a scent," made by adding jasmine flowers and often a little turmeric. Green tea contains substances that may protect against a host of age-related problems.

» **SHIITAKE MUSHROOMS** These smoky-flavored fungi help flavor Okinawans' customary miso soup and stir-fries. They contain more than 100 compounds with immune-protecting properties.

» **SEAWEEDS (KOMBU AND WAKAME)** Seaweeds in general provide a filling, low-calorie, nutrient-rich boost to the diet. These two are used in many soups and stews on Okinawa. They are rich in carotenoids, folate, magnesium, iron, calcium, and iodine.

Loma Linda, California

AN AMERICAN BLUE ZONES DIET

At midmorning on any given day, Ellsworth Wareham, age 101, presides over a breakfast of biblical proportions. Spread out on the kitchen table before him at his home in Loma Linda is a giant bowl of whole-grain cereal floating in soy milk, a cornucopia-like fruit bowl, a stack of whole-grain toast with nut butter, a large glass of full-pulp orange juice, and a handful of nuts.

From his kitchen window he commands a view of orange groves and the waves of smoky brown foothills that ascend to the snowcapped San Jacinto Mountains. Later in the day, around 4 p.m., Wareham resumes his place at the kitchen table. This time it is to tuck into his second—and only other—meal of the day: mounds of beans, raw vegetables, cooked asparagus, cabbage, and broccoli, finished with a handful of nuts and dates for dessert—the exact diet, he might add, that God prescribed for the garden of Eden. And, as one of America's largest and most robust epidemiology studies has shown, it's also the healthiest diet for humankind today.

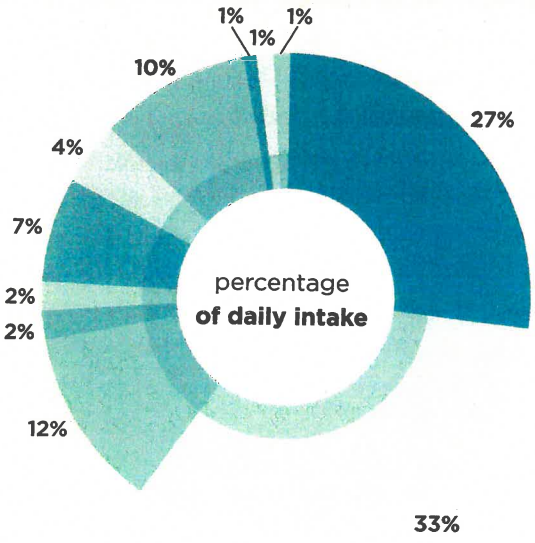
I first met Wareham in 2005 when I was researching an article about longevity for *National Geographic* magazine. I'd sought him out because he seemed to be an iconic Seventh-day Adventist, following a branch of Christianity whose members live longer than any other Americans. Seventh-day Adventists are conservative Protestants who distinguish themselves from other Christians in that they evangelize with health and celebrate the Sabbath on Saturday instead of Sunday.

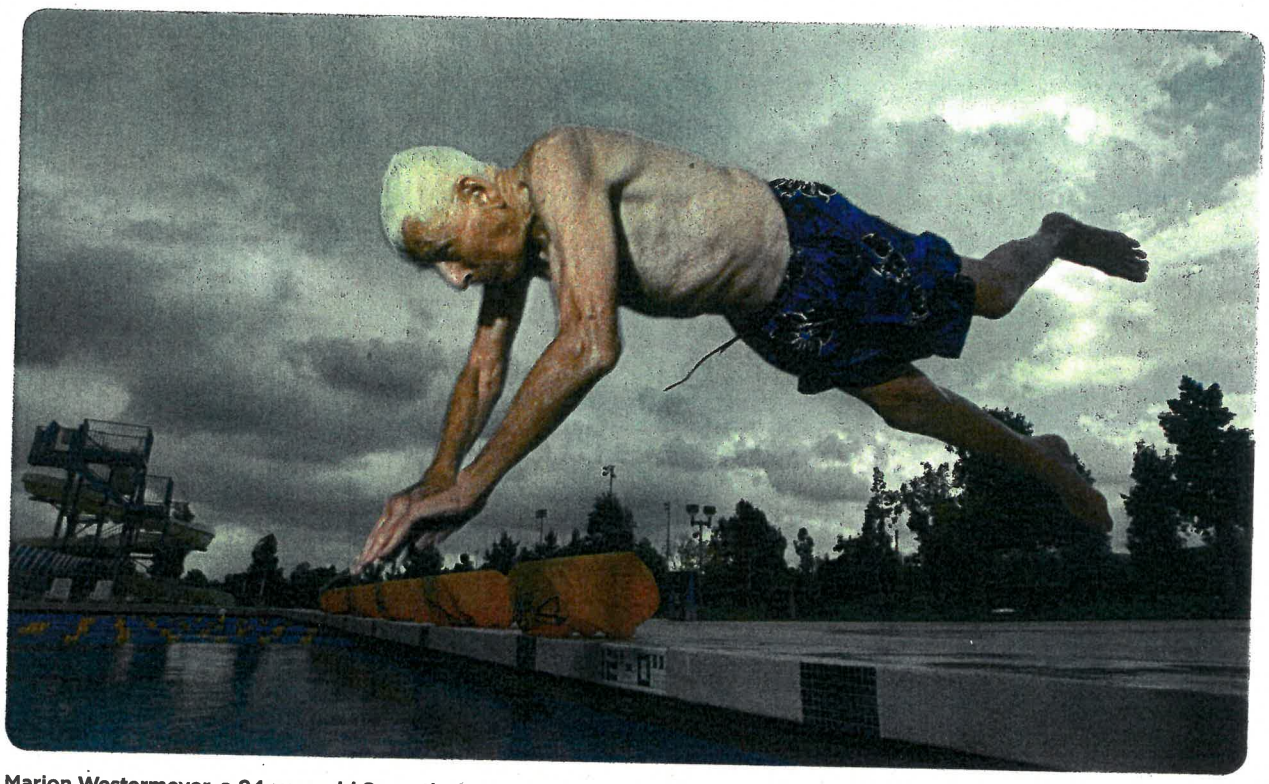
From sunset on Friday until sunset on Saturday, every week, Seventh-day Adventists create a "sanctuary in time," spending most of the 24 hours in quiet contemplation or attending church and avoiding TV, movies, and other distractions. At midday on Saturday after church, they join other Adventists for potluck lunches. Later in the afternoon, they strike out with friends and family on a nature walk for

TYPICAL DAILY DIET OF SEVENTH-DAY ADVENTISTS

This chart represents the average intake of various food groups for Adventists participating in Adventist Health Study 2 (AHS-2). The averages were weighted proportionally from African-American subjects and white subjects to reflect a more accurate average. AHS-2 is one of the few large health studies to focus on different ethnicities.

- Fruits 27%
- Vegetables 33%
- Legumes and Soy Foods 12%
- Added Fats 2%
- Nuts and Seeds 2%
- Grains 7%
- Meat and Poultry 4%
- Dairy 10%
- Fish 1%
- Eggs 1%
- Added Sugars 1%





Marion Westermeyer, a 94-year-old Seventh-day Adventist, is known for his energetic diving at the Loma Linda pool.

healthy doses of sunshine and fresh air. They shun smoking, drinking, and dancing.

In support of a biblical diet of grains, fruits, nuts, and vegetables, Adventists cite Genesis 1:29: "And God said, Behold, I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat." The Adventists encourage a well-balanced diet including nuts, fruits, and legumes and low in sugar, salt, and refined grains. Their diet prohibits foods deemed "unclean" by the Bible, such as pork or shellfish. The only beverage endorsed is water, at least six glasses a day.

Today the Adventist diet in its current interpretation is demonstrably yielding the healthiest Americans. It is a plant-based diet that emphasizes nuts, whole grains, beans, and soy products. It's also very low in sugar, salt, and refined grains. It includes small amounts of meat, dairy, and eggs and discourages coffee and alcohol. A recent study has found that adherents have the nation's lowest rates of heart disease and diabetes and very low rates of obesity. They also live up to a decade longer than the rest of us.

THE ADVENTIST HEALTH STUDIES

Gary Fraser, of Loma Linda University, probably understands the Adventist lifestyle better than anybody else. Trained as a cardiologist and epidemiologist and an Adventist himself, he has directed the Adventist Health Studies, an enormous project entailing several studies tracking tens of thousands of Adventists for decades. In simple terms, the study asks scores of questions about what people eat and then follows them long enough to see if they develop heart disease or cancer or die. Looking back on the data, Fraser can see which diets are associated with shorter or longer life spans. He can also cite the cause of death, whether it's heart disease, cancer, diabetes, or stroke.

The first Adventist Health Study, the AHS-1, funded by the National Institutes of Health, followed 34,000 Adventists in California for 14 years. In that study, Fraser calculated that Adventists who most strictly followed the religion's teachings lived

about 10 years longer than people who didn't. The practices most likely to yield that longevity? Fraser winnowed them down to five, each adding about two years to life expectancy:

- Eating a plant-based diet with only small amounts of dairy or fish
- Not smoking
- Maintaining medium body weight
- Eating a handful of nuts four to five times per week
- Doing regular physical activity

Think about this for a moment. These are Americans. They live among us, drive by the same fast-food restaurants, shop in the same grocery stores, breathe the same air, and work in the same jobs we do. But they're living up to a decade longer than the rest of us!

In 2002 Fraser and his colleagues launched an even more ambitious study. The Adventist Health Study 2 (AHS-2) recruited 96,000 men and women of all ethnicities. It asked each participant at least 500 questions about their health histories, eating habits, and physical activity, among other topics. To figure out how diet affected longevity, the study divided subjects into four general categories: (1) vegans, (2) ovo-lacto vegetarians (who consume eggs and dairy), (3) pesco-vegetarians (who eat fish and very little meat), and (4) nonvegetarians.

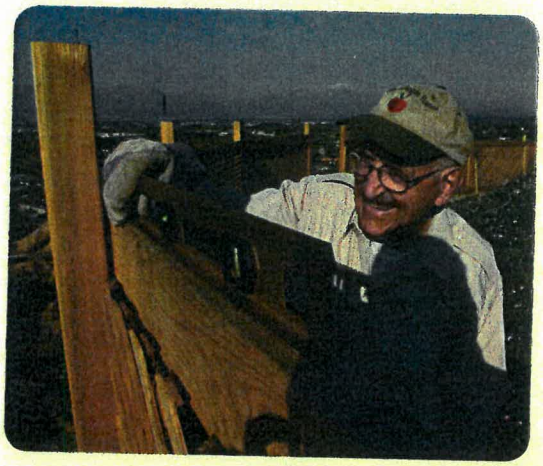
They gleaned several new insights. Meat eaters, for one thing, tended to consume more soft drinks, desserts, and refined grains than vegetarians. They also tended to be fatter. If you were to take two men of equal height, one a meat eater and the other a vegan, the meat eater was likely to weigh an extra 20 pounds and was likely to die sooner. Although vegans tended to weigh less, they didn't live the longest, the study found. That distinction went to pesco-vegetarians, or pescatarians, those who ate a plant-based diet with up to one serving of fish per day.

OPPOSITE: **Eating a handful of nuts every day can help lower rates of cholesterol, blood pressure, chronic inflammation, and diabetes.**

HOLD THE BACON

When a prominent medical journal published the results of Fraser's study, I phoned Ellsworth Wareham. I was interested in his take on the article, but mostly I wondered how he, as a practitioner of the Adventist diet, had managed to stick with it for more than half a century. (At the time he was

100 REGIONAL CENTENARIAN



ELLSWORTH WAREHAM

Until he was 95 years old, Ellsworth Wareham could be found in the operating room, assisting the lead cardiac surgeon. An early pioneer in open-heart surgery, Wareham had spent years doing three to four surgeries per week, before retiring from full-time duties at 75. In fact, the epiphany that led him to adopt the Adventist lifestyle came to him in an operating room. "In the early days we'd need to connect the arterial line into the leg artery. Later it would be straight into the aorta," he said. "I observed when I was cutting down into the legs of these patients that those who were vegetarians had better arteries—smooth and supple." Nonvegetarians tended to have heavy calcium and plaques in their arteries. Some lost toes or feet to vascular disease. "I began thinking about it," he said. "At middle age, I decided to become a vegan. With the exception of an occasional piece of fish, all I eat are plants."

99 and still in perfect health.) Most diets fail after nine months.

"All human tastes, except mother's milk, are acquired," he told me. "You start by eating a little bit of plant-based food and grow with it. You keep eating it, and pretty soon you start to enjoy it."

He told me that eating only two meals a day helped him to keep his weight down. "I love to eat," he said. "When I eat, I eat a lot, and I really enjoy it. So twice daily is enough." He almost never ate out at restaurants unless he had a hankering for salmon. Nuts were usually part of the menu.

"I know walnuts are supposed to be good, but I also enjoy peanuts and cashews and almonds. Purists will tell you to eat them raw, but salted is OK too—whatever is handy," he said. "And you know I'm very much against sugar except natural sources like fruit, dates, or figs."

Wareham said he prefers to drink water, a beverage he claimed kept the weight off. He drank at least two glasses when he woke up. "I want to make sure before I get busy and forget," he said. Then he kept drinking water throughout the day. "One of my little rituals is to never pass a water fountain without having a little drink."

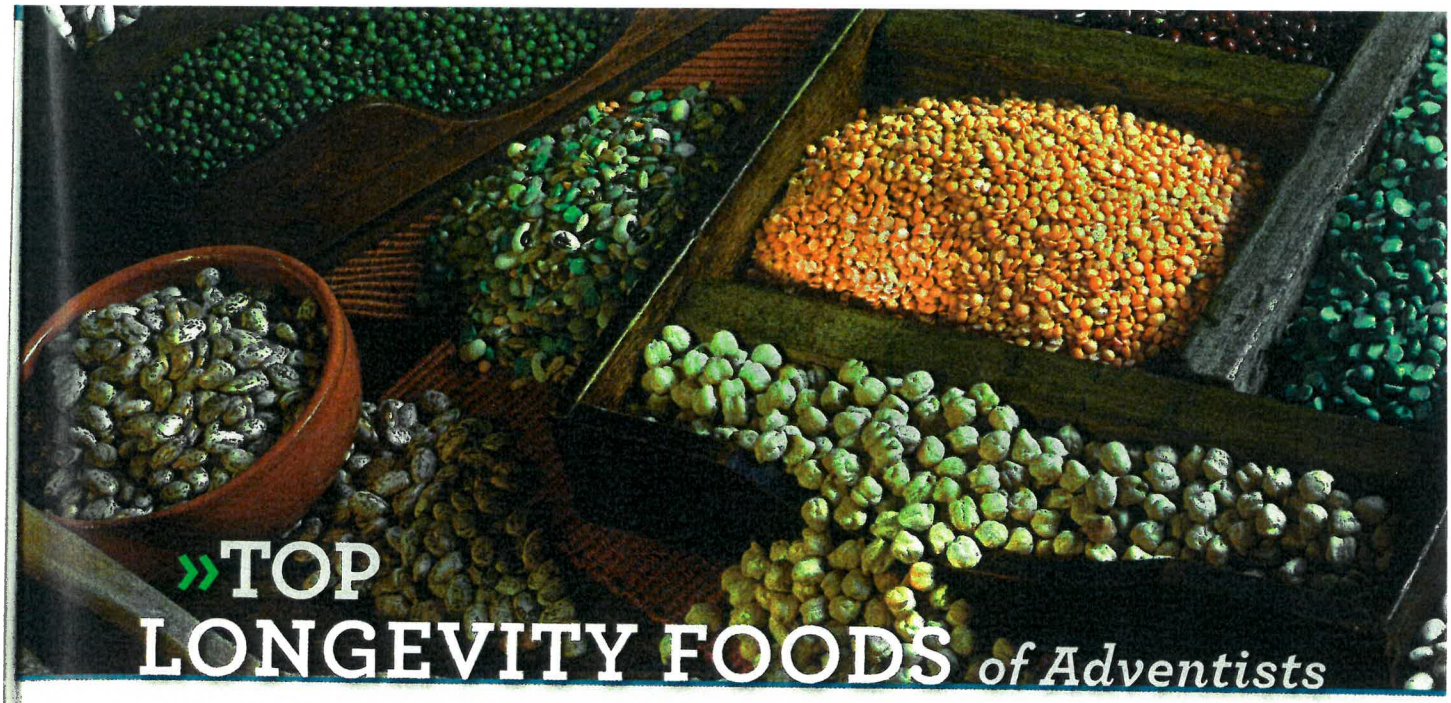
As Wareham described his diet, I was thinking that it sounded pretty bland, the type of food that might excite a rabbit, and I told him so. "Once you get used to being a vegetarian, the very idea of eating a cow's secretion or an animal's muscle is much less appealing," he replied.

I asked him if he ever thought about mortality, about dying. "Well, Dan, I do," he said. "When we first met, I remember you asking me if I would ever get to age 100, and now I'm pretty sure I will. I feel good. My mind is sharp. I still mow the lawn. If I have any problems, I'm not aware of them."

I told him I was writing a new book and asked him how I should describe how he feels to readers.

"Tell them I still feel like I'm 20," he said.

The Rawson family heads out for a family dirt bike ride in the hills that surround their home in Loma Linda, California.



»TOP LONGEVITY FOODS *of Adventists*

» **AVOCADOS** High in potassium and low in salt, avocados may help reduce blood pressure and the risk of stroke. Ounce for ounce, an avocado contains 30 percent more potassium than a banana, a dietary staple for many people with high blood pressure.

» **SALMON** The longest-lived Adventists eat plant-based food and up to one serving of fish per day, most often salmon, well known for its heart-healthy properties. Research has suggested that one to two three-ounce servings a week of fish rich in omega-3 fatty acids reduce the chances of dying from a heart attack by a third.

» **NUTS** A study during the 1990s found that Adventists who ate a handful of nuts at least five times a week lived two to three years longer than people who didn't eat any nuts. More research since then has found links between nut eaters and lower rates of cholesterol, blood pressure, chronic inflammation, diabetes, and myriad other troubles that contribute to cardiovascular disease.

» **BEANS** For vegetarian Adventists, beans and other legumes such as lentils and peas represent important daily protein sources.

» **WATER** Ellen G. White, founder of the Adventist Church, prescribed six to eight glasses of water daily. Apart from its well-known hydrating and toxin-flushing benefits, water consumption likely pushes diet sodas, fruit juices, and other sugar-sweetened or artificially sweetened beverages out of the diet.

» **OATMEAL** A staple for Adventists, slow-cooked oatmeal provides a balanced portion of fats, complex carbohydrates, and plant protein, along with good doses of iron and B vitamins. Its high fiber content makes it filling.

» **WHOLE WHEAT BREAD** True 100 percent whole wheat bread adds only 70 calories per slice to a sandwich, plus small amounts of a wide variety of nutrients.

» **SOY MILK** Adventists use real soy milk (not the sweetened, flavored variety) as a topping for breakfast cereals, a whitener for herbal teas, and an all-around healthy alternative to dairy. High in protein and low in fat, soy milk contains phytoestrogens that may protect against certain types of cancer. Because it's so versatile, it can figure into daily breakfast, lunch, and dinner.

PopulationCentric Intelligence Platform

Fallbrook Community Populations

Fallbrook Regional HEALTH DISTRICT

CentraForce Health™

Objectives

Community Garden Population

In 2018, FRHD would like to use CentraForce Health to help shape and implement the three to five year strategic plan. Critical to developing the plan is the intelligence to help craft the programming and communication of a Wellness Center and a Community Garden, utilizing the proceeds from the pending sale of Fallbrook Hospital.

Olivewood Gardens, in National City, in being considered as a model for developing a Community Garden in FRHD. FRHD's intention is similar to Olivewood Garden's stated purpose. "Our purpose is to build healthy families and a healthy environment. We do this through science based environmental education lessons, hands-on gardening, and hands-on cooking for students and families from underserved communities." By understanding the similarities and differences in the populations, FRHD can craft their program for the greatest success.

Community Garden Population

Population Definitions – Population %'s and #'s approximate

Population	Population Description	% Population	Population #
Community Garden Population 1	Leisure Activities/Hobbies - last 12 months: Gardening AND any agree: when shopping for food, I especially look for Organic OR Natural Foods or Organic Foods: Household Uses Yes AND Bought last 12 months: vegetable seeds/plant or seeds, vegetable/flower garden fertilizer or composting material	5.1%	2,177
Community Garden Population 2	Leisure Activities/Hobbies - last 12 months: Gardening AND any agree: when shopping for food, I especially look for Organic OR Natural Foods or Organic Foods: Household Uses Yes	10.8%	4,607
Community Garden Population 3	Leisure Activities/Hobbies - last 12 months: Gardening AND any agree: when shopping for food, I especially look for Organic OR Natural Foods or Organic Foods: Household Uses Yes OR any agree: I make an extra effort to buy locally grown food when grocery shopping	15.1%	6,468
Community Garden Population 4	Leisure Activities/Hobbies - last 12 months: Gardening AND Eco-friendly activities done on a regular basis: Buy locally grown food OR Buy organic food	26.2%	11,172

Community Garden Population

Population Age % by Definition

	18+ Adults	CG Population 1	CG Population 2	CG Population 3	CG Population 4
Ages 18-34	35.2%	22.2%	22.1%	18.9%	27.3%
Ages 35-54	33.9%	39.2%	38.4%	37.2%	31.5%
Ages 55+	31.0%	38.6%	39.4%	43.9%	41.2%
Population #		2,177	4,607	6,468	11,172

Community Garden Population

Population Income by definition

	18+ Adults	CG Population 1	CG Population 2	CG Population 3	CG Population 4
Under $25,000	15.3%	10.7%	13.6%	14.7%	14.1%*
$25,000 - $49,999	20.7%	17.7%	17.3%	17.8%	15.5%*
$50,000 - $74,999	15.8%	14.8%	17.7%	19.3%	20.7%
$75,000 - $99,999	33.9%	18.5%	19.0%	18.7%	16.2%
$100,000 - $249,999	25.5%	33.9%	27.5%	26.4%	30.1%
$250,000 or More	3.9%	6.0%	5.3%	4.5%	3.3%

Community Garden Population

Children by Population Definition

	18+ Adults	CG Population 1	CG Population 2	CG Population 3	CG Population 4
None	61.3%	62.1%	61.8%	64.8%	61.4%
One - Three	37.8%	36.0%	36.2%	33.2%	36.8%

Objectives

Health & Wellness Population

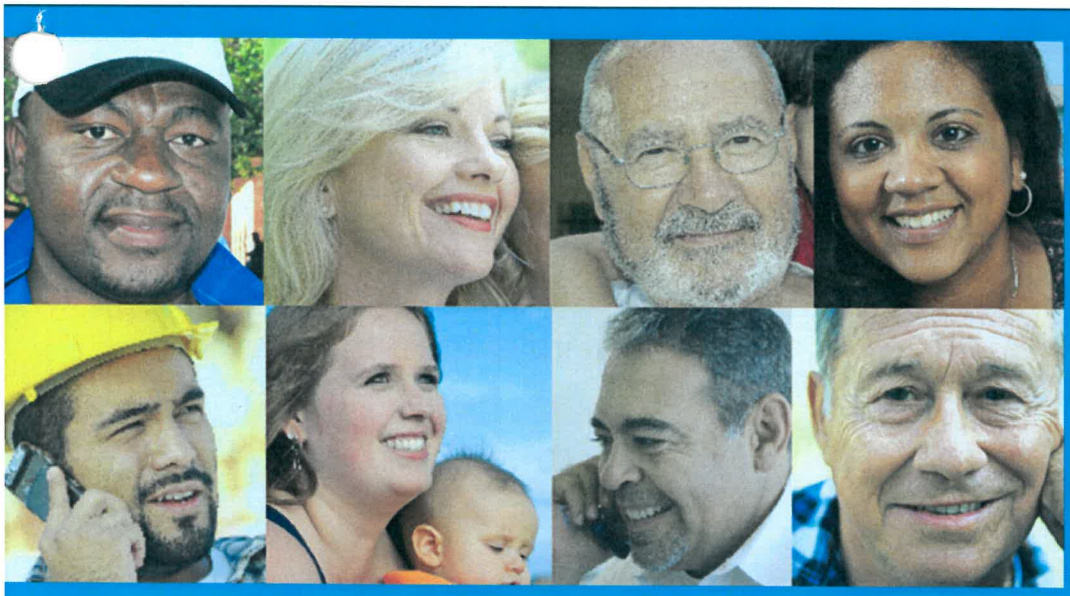
In 2018, FRHD would like to use CentraForce Health to help shape and implement the three to five year strategic plan. Critical to developing the plan is the intelligence to help craft the programming and communication of a Wellness Center and a Community Garden, utilizing the proceeds from the pending sale of Fallbrook Hospital. The Beach Cities Health District has implemented a successful Center for Health and Fitness and Blue Zones Project. In crafting their strategy, FRHD would like to understand how the Beach Cities Heath District population is similar and/or different from the Fallbrook Community and what aspects FRHD could emulate, or would have to create, to optimize their program.

In defining this population, CentraForce took the approach that anyone who was in the Health and Wellness population, could be ideally healthy –or- was likely to become ideally healthy. The propensity is towards anyone who is prone to want the ideal health and wellness.

Health and Wellness Population

Question	Answer
Exercise is important to my diet and nutrition plan	Any agree (agree a little and agree a lot)
I always try to eat healthy foods and maintain balanced diet	Any agree
I am better informed about my health than most people	Any agree
I participate in preventative healthcare	Any agree
I prefer alternative/holistic approaches to standard medical practice	Any agree
I research healthcare information so that I am better informed about different healthcare treatment options	Any agree
Reasons for currently participating in nutrition program	to achieve good health, to control blood pressure, to lose weight, to lower/maintain cholesterol levels, to maintain weight
Number of days exercised in past 7 days	1+ days

Case Study: Driving Population Health



Fallbrook Regional HEALTH DISTRICT

"I was quickly able to understand the community's health needs and where the money should be spent"

Health District Need

In early 2016, Bobbi Palmer, MBA, MSW took over the reigns of the Fallbrook Regional Health District (FRHD), a non-enterprise health district supported by taxpayer dollars. Serving approximately 57,000 residents of the Fallbrook, Bonsall, Rainbow and De Luz areas of northern San Diego County, the district's mission is to "Promote health for the people of the District by reducing the impact of identified major health issues in our District."

PopulationCentric Solution

Palmer needed a comprehensive picture of the community's health, quickly, in order to develop programs to reduce the impact of major health issues. In the absence of a hospital within the district, and thus a Community Health Needs Assessment, there was a lack of complete information about the Fallbrook community's health, health needs and socio-behavioral aspects.

CentraForce Health provided Palmer with **data-driven Community^2 reports** which profiled the two zip codes of the Fallbrook community on Health Indicators, Health Behaviors, Healthcare Utilization, Adherence, Social and Physical Determinants, Psychosocial and Engagement and Media. These data-driven insights allowed Palmer to immediately understand the needs of the entire Fallbrook community and get plans into action.

Speed and Ease to Actionable Insights

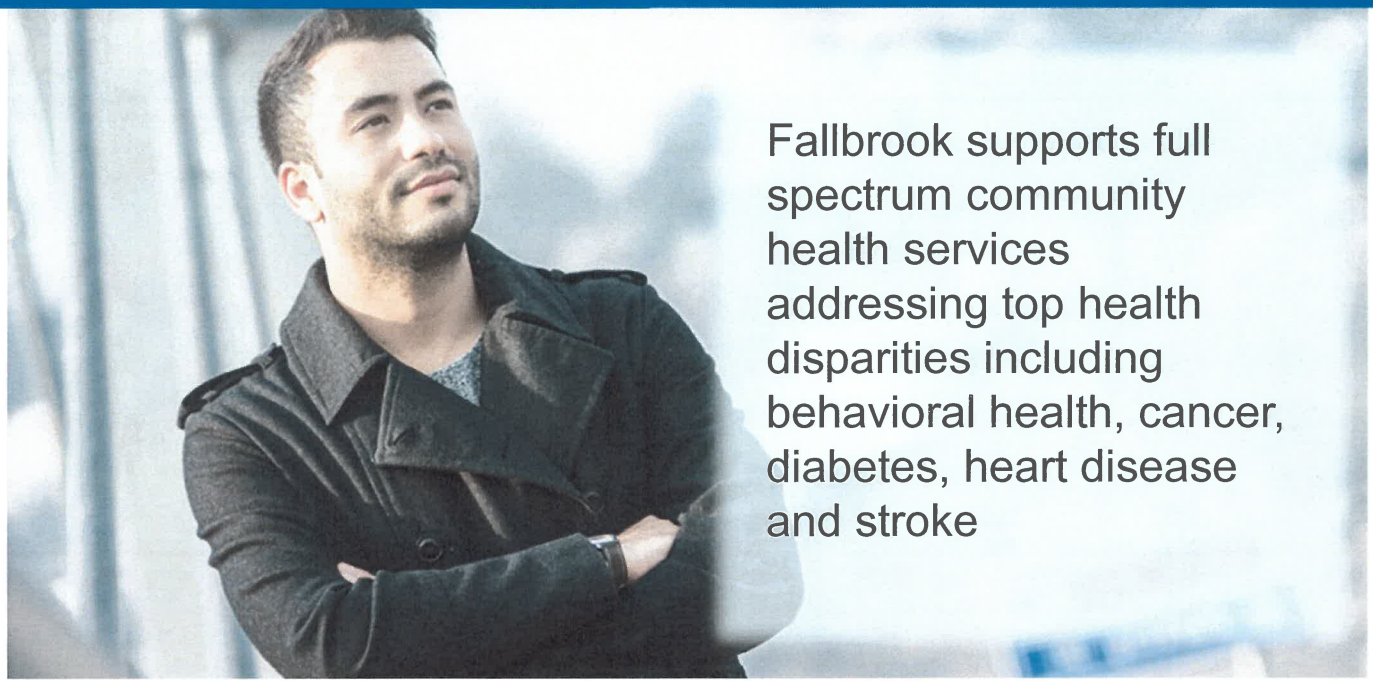
CentraForce Health provides a new kind of intelligence. With our integrated, proprietary dataset, we produce the geospatial intelligence you need on any defined population.

Only CentraForce Health can provide deep **socio-behavioral insights** on populations as broad as the community or as granular as a cohort defined and attributed to a specific geography. With over 8,000 data points, visualizations and interpretive analyses, CentraForce Health helps you drive ROI into your clinical and business strategies.

CentraForce Health™
Precise. Predictive. Powerful.

centraforcehealth.com

Case Study: Responding to Behavioral Health Needs



Health District Need

In 2016, utilizing the Community[2] reports, FRHD identified Behavioral Health as one of the most critical community needs, especially with a large military population within the district. The team at FRHD engaged with CentraForce Health, to better understand the socio-behavioral aspects of the Behavioral Health population in their care and how to engage with them and best support their needs.

PopulationCentric Solution

Utilizing the proprietary dataset fueling the PopulationCentric Intelligence Platform, CentraForce Health profiled the Behavioral Health population isolating only those in the Fallbrook zip codes who had been diagnosed or treated for Behavioral Health issues.

Population mapping: Since FRHD encompasses two zip codes, quantifying the population by block group was important to understanding the most pressing pockets of geographical needs.

Persona for Messaging and Intervention Planning: Utilizing the numerous data points around Social Determinants, Engagement and Health Behaviors, CentraForce Health crafted a Behavioral Health persona with jumpstarted FRHD's engagement and intervention planning.

Results

- **Resource Allocation:** Fallbrook learned that a significant portion of the **Fallbrook Behavioral Health Population** was comprised of Men 18-34 and one-third of this age cohort was Hispanic. FRHD allocated additional grant money to a clinic primarily servicing the Hispanic population.

- **Communication Preferences**: The Internet is this populations "go-to" for finding information quickly. Researching their conditions online gives them the confidence to speak to medical professionals about them. **21% spend 20 hours or more per week browsing the internet.** The district provided links on their website regarding behavioral health resources.

CentraForce Health™
Precise. Predictive. Powerful.

centraforcehealth.com

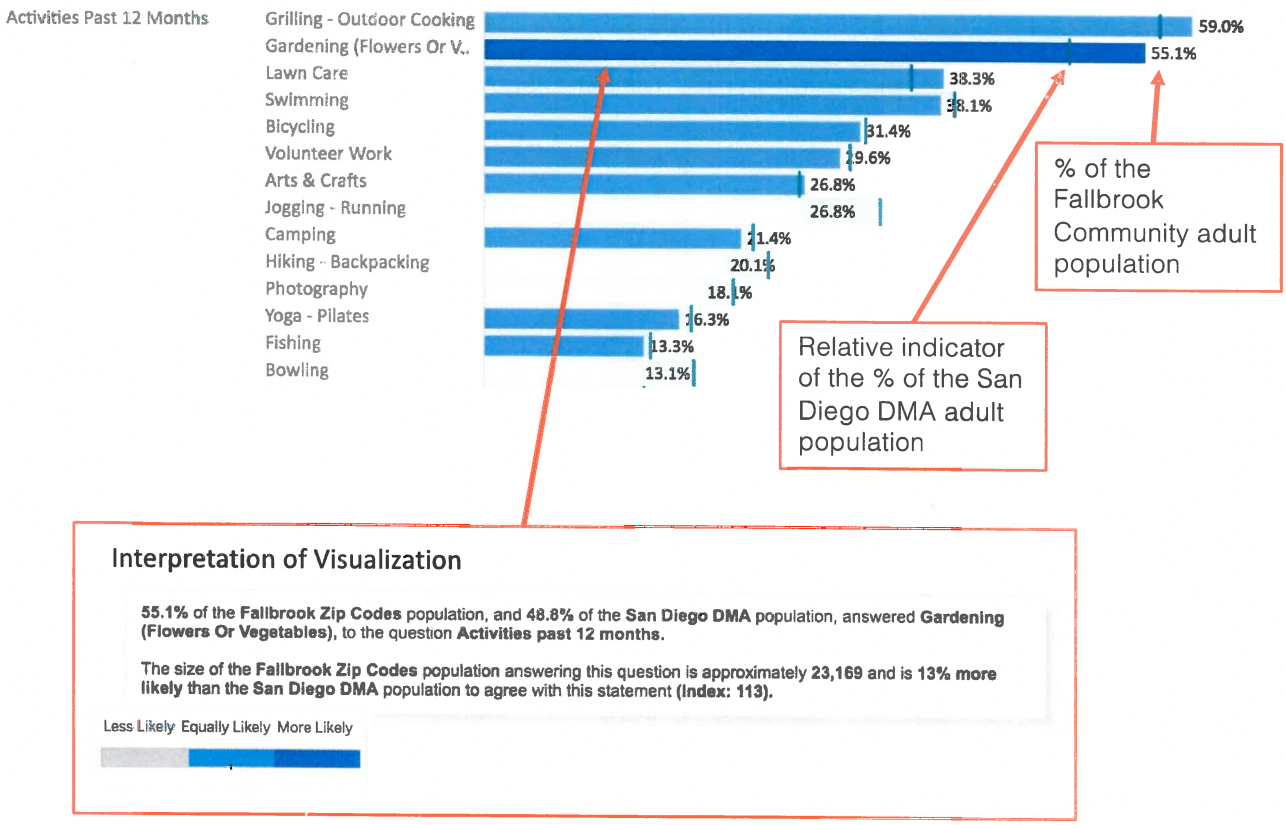
Fallbrook Community Overview

Methodology

In this Population Overview, we'll understand the similarities and differences in two adult populations for the purpose of creating a snapshot of their media and engagement behaviors. Graphics are provided to give a visual picture. Grey bars indicate that the 18+ adults are "less likely," light blue indicates "equally likely" and medium blue signifies "more likely" than the comparison population. The green vertical bar demarcates the percentage for the comparison population (San Diego DMA 18+ adults are the comparison population).

Fallbrook Community 18+ Adults vs. San Diego DMA 18+ Adults

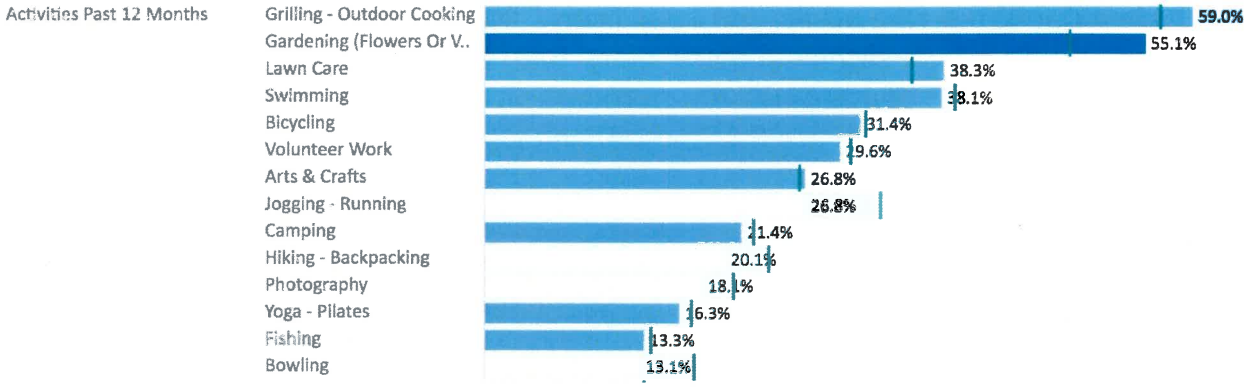
Activities



Lifestyle and Health Behaviors

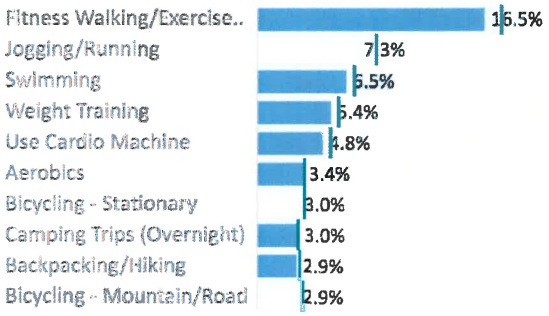
Lifestyle

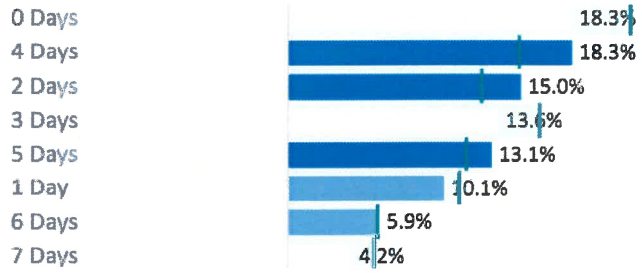
The Fallbrook Community and San Diego DMA are outdoor people with grilling, gardening, lawn care, and swimming as their favorite activities. Gardening especially rates high with the Fallbrook Community perhaps because so many of them live in a single family home and have outdoor space. The San Diego DMA has more joggers and runners again showing that they have a younger population.



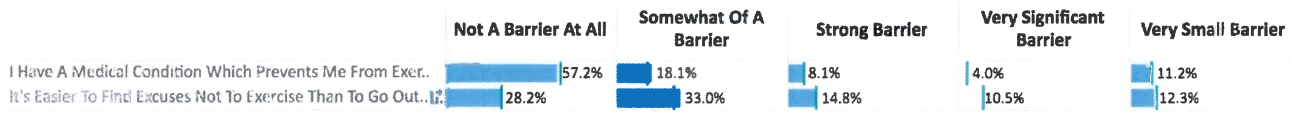
Exercise

Only 18.3% of the Fallbrook Community did not say they exercised at all in the last week. 23.2% exercised the recommended 5+ times/week. Health club or gym memberships is at 18.3%. When they exercise, it's walking, running, swimming and weight training. The San Diego DMA is similar in sport activities.





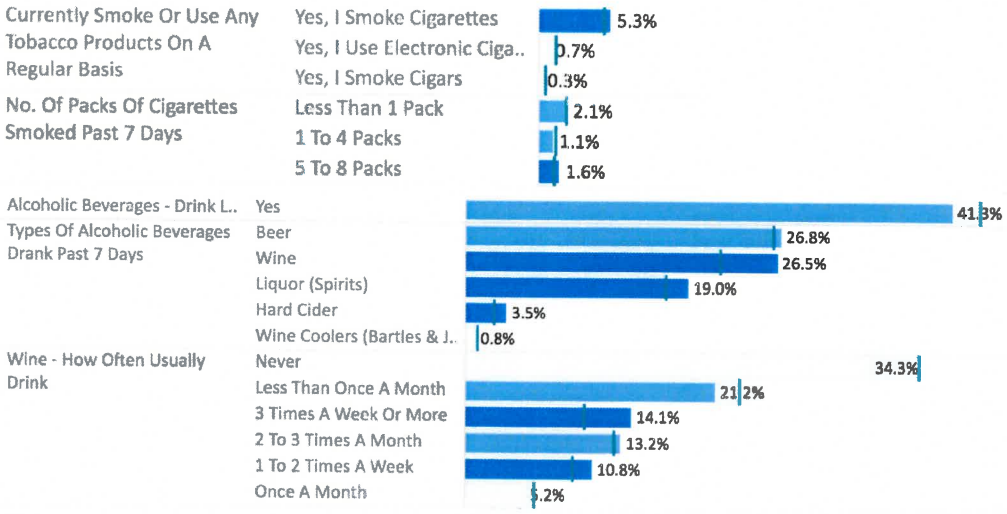
In both adult populations, around 57.2% responded that there's "no barrier at all" to exercise, due to a medical condition. A majority of the population has "somewhat of a barrier" when it comes to sabotaging themselves by finding excuses to get out of exercising



Lifestyle and Health Behaviors

Alcohol and Smoking

Smoking is a small percentage of the population. Around 5.3% smoke and 41.3% - 43.5% drank alcohol in the last 30 days. However frequency is a little higher for Fallbrook with 14.1% drinking 3 or more times a week versus 10.1% of the San Diego DMA.

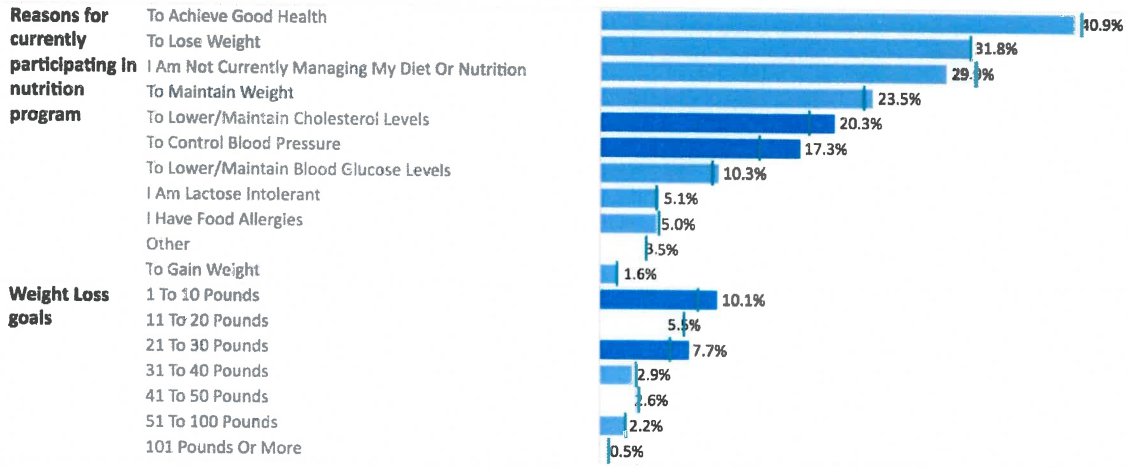


Diet

45.2% of the Fallbrook Community believe they have an average diet with 30.4% saying that they have a healthy diet.

Overall the Fallbrook Community population participating in a nutrition program want to achieve good health at 40.9%.

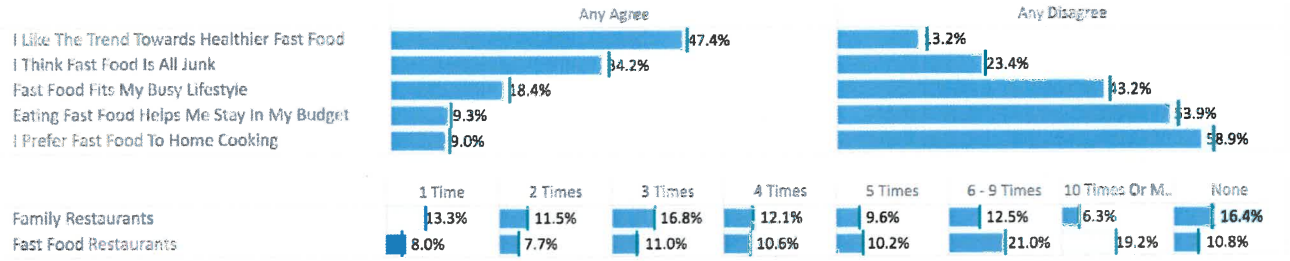
For those who are dieting, their reasons are to lose/maintain weight, control blood pressure, cholesterol and blood glucose levels. The amount of weight to lose is not overwhelming with 10.1% wanting to lose 1-10 lbs. and 13.2% want to lose 11-30lbs



Food

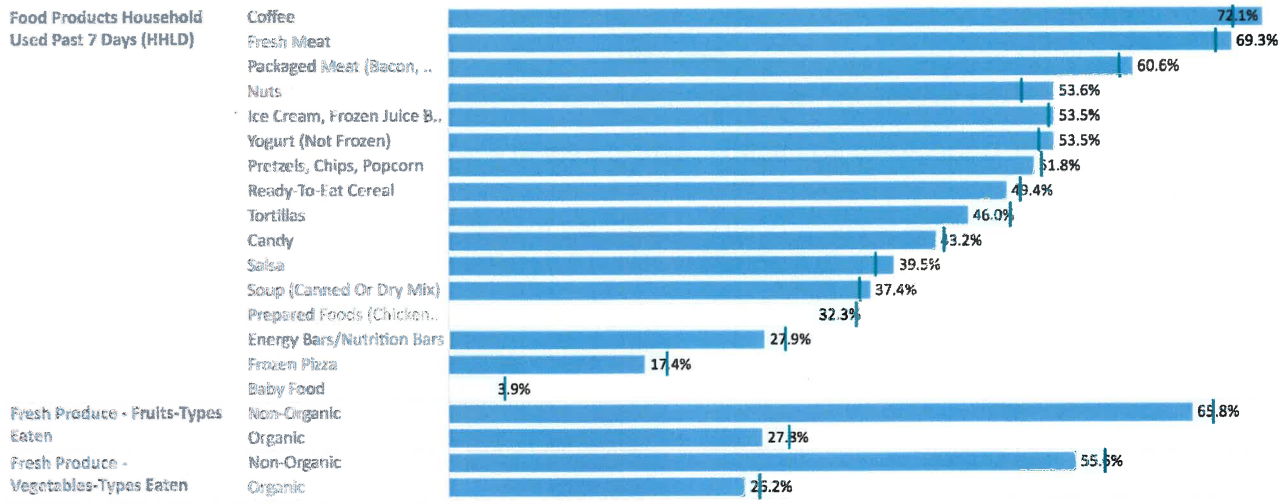
Fast Food Attitudes

The majority of both populations, do not endorse fast food from the perspective of "I prefer fast food to home cooking," "Eating fast food helps me stay in my budget" or "Fast Food fits my Busy Lifestyle." This is in contrast to the number of times that these populations visit fast food establishments. Over half of both populations visited fast food 5+ times in the past 30 days.



Shopping

Weekly food shopping reflects the eating habits of the household. Except for Prepared Foods (Chicken, Salad Bars, Sandwiches, Etc.) and baby food, both populations shop for fairly similar items.



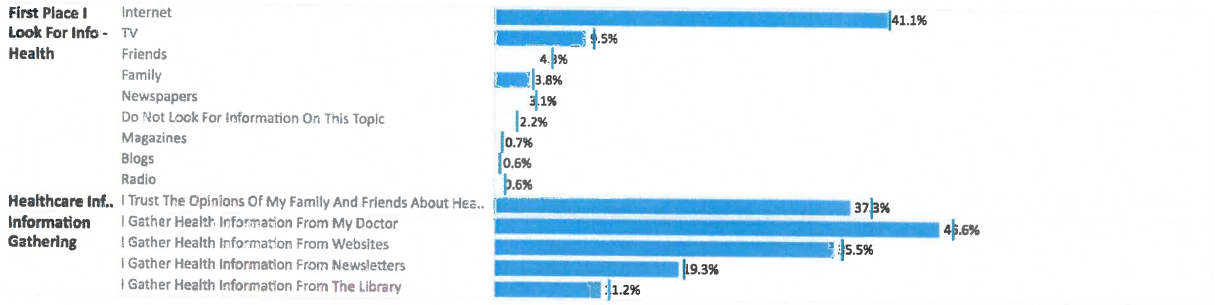
Engagement

Health Information Gathering

Both populations are again similar when it comes to the "first place I look for info- health." They look to the internet overwhelmingly at close to 42%. Both populations gather health information mostly from their doctors, but also utilize websites, and less so with newsletters. 37.3% and 39.5% of the San Diego DMA population "Trust The Opinions Of My Family And Friends About Health Related Issues".

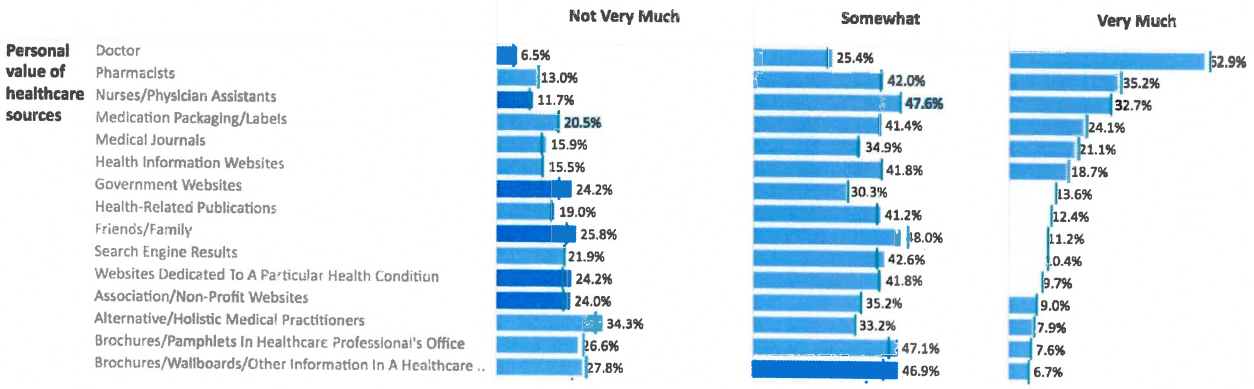
The web is not a place to discuss health concerns, for both populations, slightly under 15% of both populations are "More Comfortable Talking About Health And Wellness Concerns Online Than Face-To-Face"

Concerning health, while the internet is used as a resource for information, it is not considered the method to confirm a diagnosis.



The doctor is the healthcare source that both populations value "very much." Similarly, they are likely to value "very much" pharmacists, nurses/physician assistants, medication packaging and health information websites. Friends/family are regarded as "somewhat" influential but not the authority.

It's also instructive to look at what healthcare sources are valued "not very much."



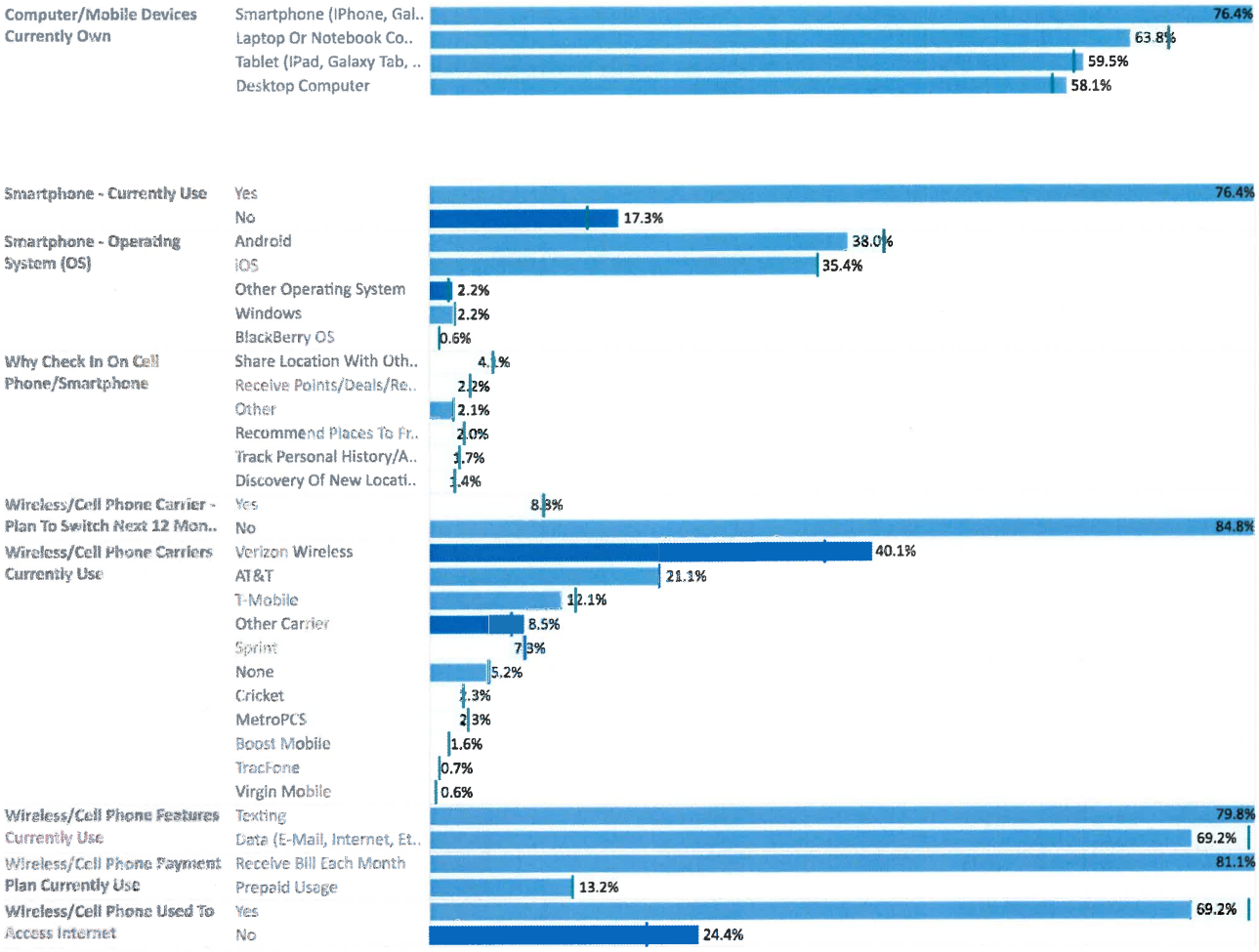
Engagement

Technology and Internet

Both populations are equally likely to have smartphones and laptops.

They slightly are more likely to be an Android user and must be fairly satisfied with their service, since 85% are most likely not to switch carriers.

This population is also more likely to use their phones to access the internet.

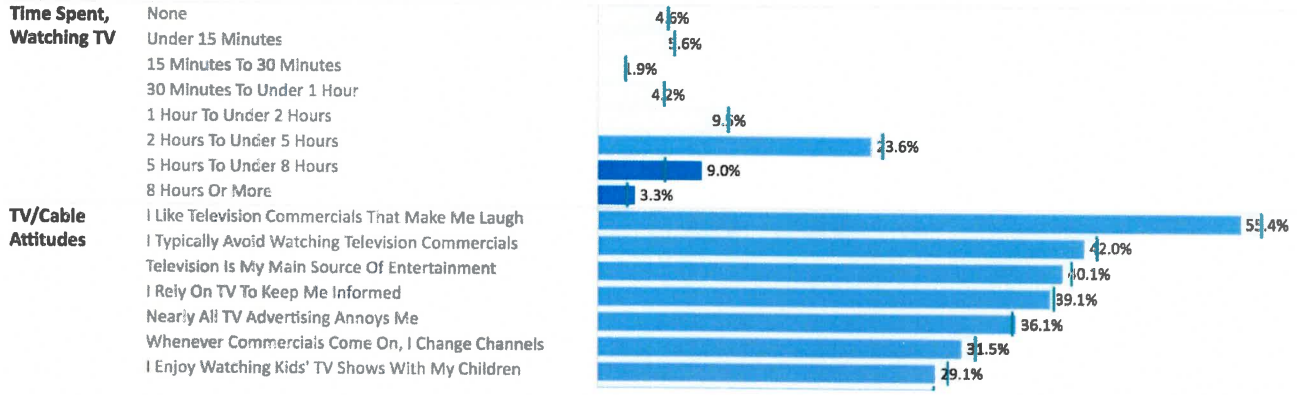


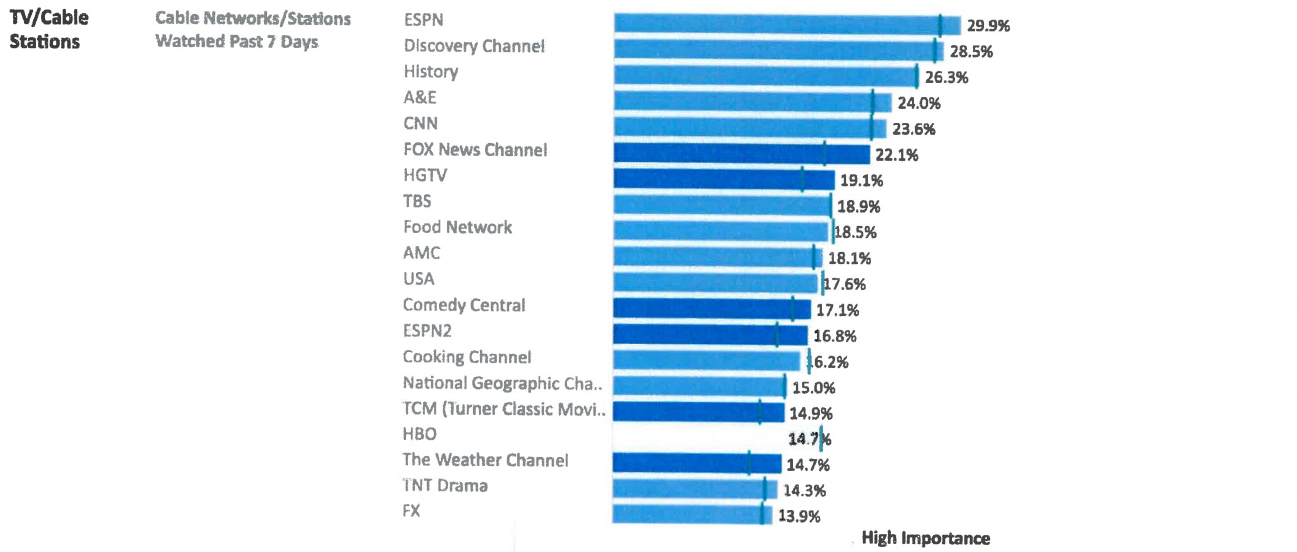
Engagement

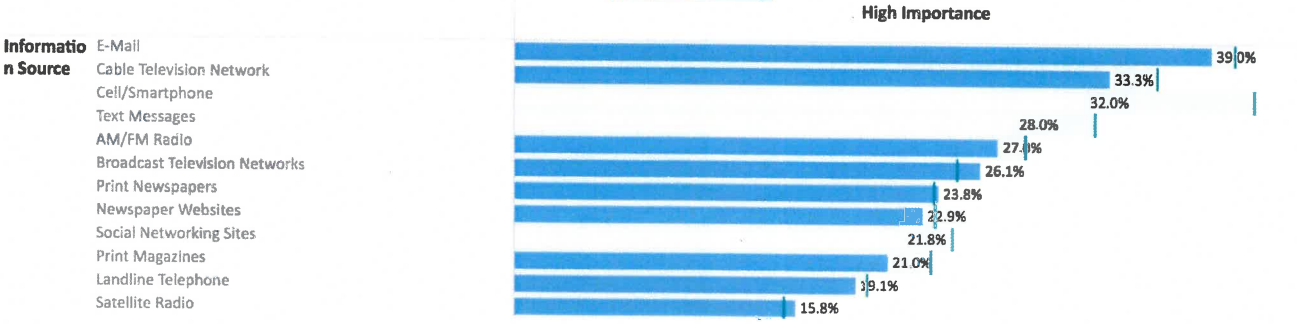
TV

The Fallbrook Community watches TV a little longer than the San Diego DMA. 32.6% of the Fallbrook population watches 2-8+ hours of TV daily. This is compared to 30.3% of the San Diego DMA population.

Email comes in first as an information source with TV coming in second for the Fallbrook Community. The San Diego DMA population go to their cellphones first. This shows again the age difference in these two populations.



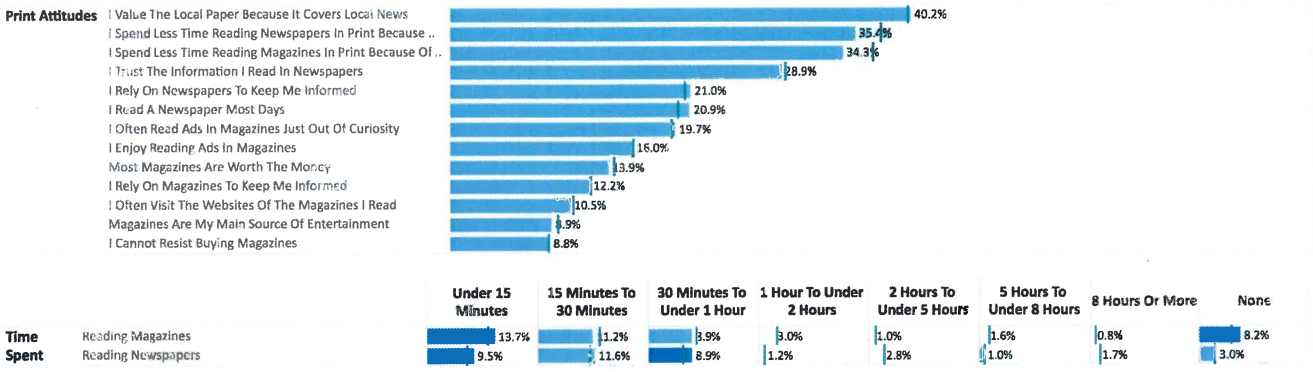




Engagement

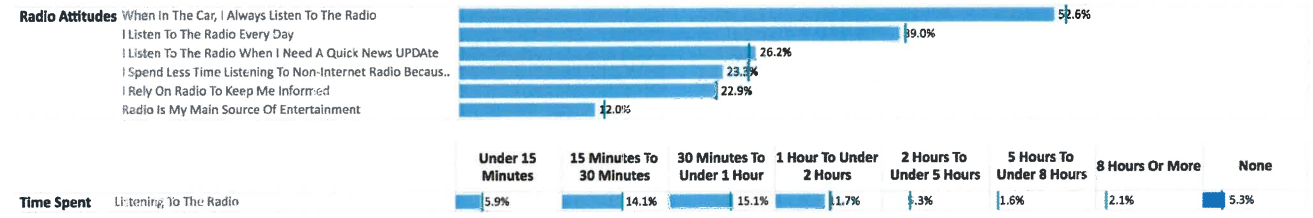
Print

While print does not have the impact that it used to, close to 40% of each of the populations still spend some time reading newspapers and magazine.



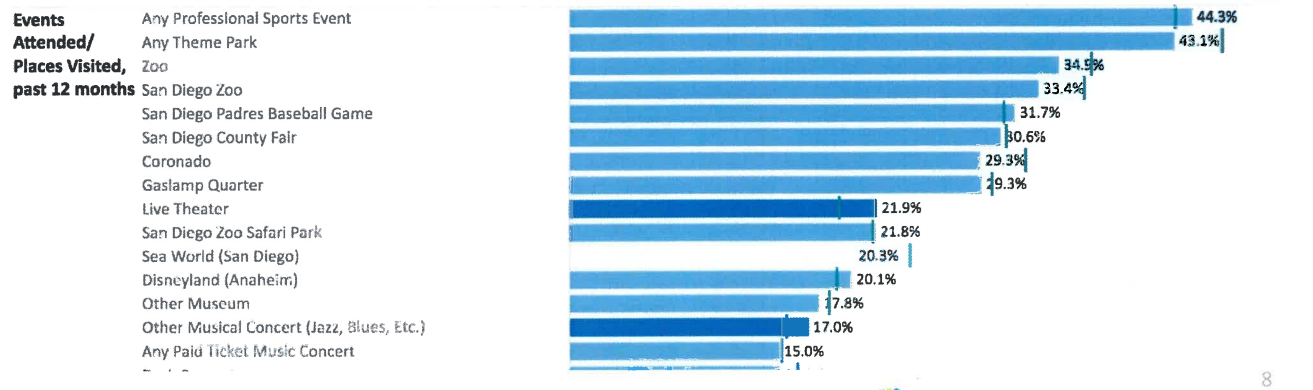
Radio

Half of both populations listen to the radio. Most have it on in the car and about 40% listen every day.



Events Attended

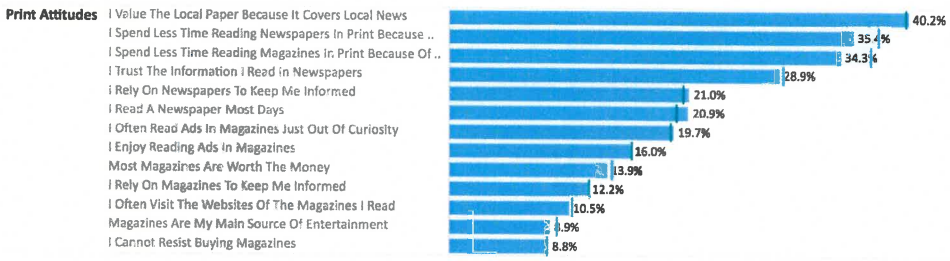
The most popular events for both populations are sports, with theme parks close behind. The Fallbrook Community enjoy the theater and jazz/blues concerts more tan San Diego DMA population.



Engagement

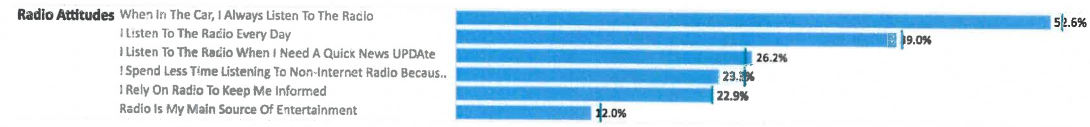
Print

While print does not have the impact that it used to, close to 40% of each of the populations still spend some time reading newspapers and magazine.



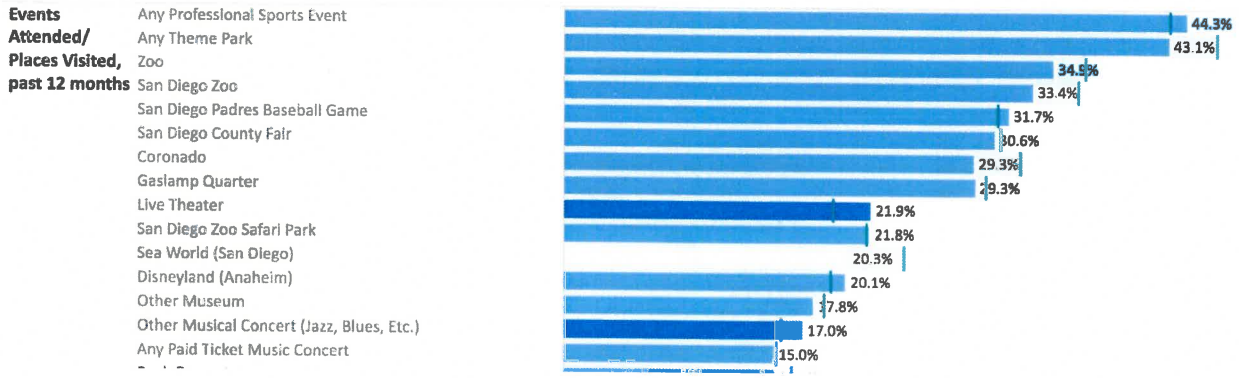
Radio

Half of both populations listen to the radio. Most have it on in the car and about 40% listen every day.



Events Attended

The most popular events for both populations are sports, with theme parks close behind. The Fallbrook Community enjoy the theater and jazz/blues concerts more tan San Diego DMA population.



Engagement

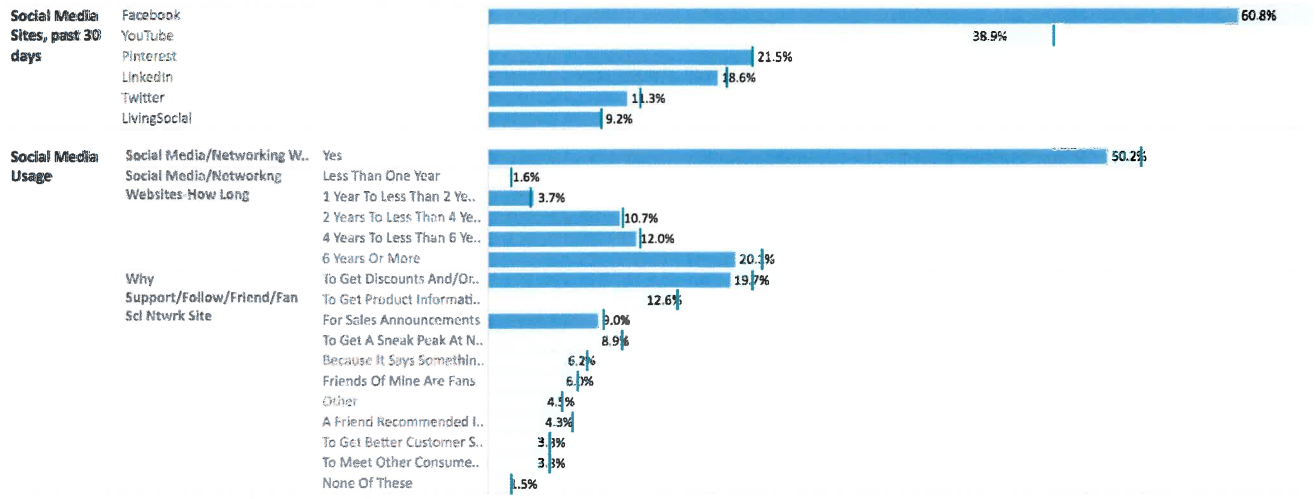
Email

Almost one fifth of the both populations "..like to hear about new products and services via email."

All in all the San Diego DMA population spend more time on emailing.

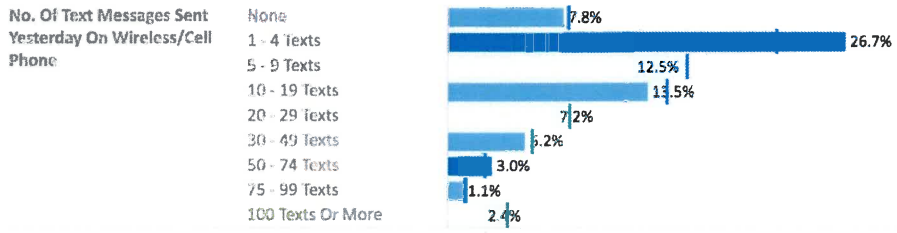
Social Media

50.2% of the Fallbrook Community is on social with 53% of the San Diego DMA adult population. Most use social media/ Some follow sites to get discounts but the majority use social media to connect with friends. Facebook, YouTube and Pinterest are most popular. Twitter is used by about 12% each population.



Text

71.6% of the Fallbrook Community population are texters. One quarter keep it to one to four texts a day.



Salud America! (https://salud-america.org)

November 17, 2017

The Dire Impact of Childhood Obesity on Mental Health

by Amber Trevino (https://salud-america.org/author/trevinoam/)

By The Numbers

22

PERCENT

OF LATINO YOUTH HAVE DEPRESSIVE SYMPTOMS (A RATE HIGHER THAN MOST OTHER GROUPS).

LEARN MORE (HTTP://SALUD-AMERICA.ORG/ISSUES/HEALTHY-MINDS/)

You probably know obesity is bad for a child's health.

But did you know obesity takes a toll on children's minds, too?

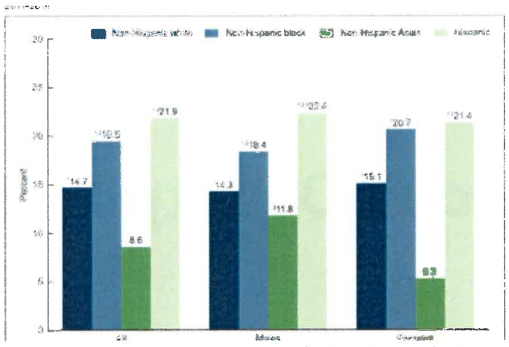
An overweight or obese child has three times the risk for depression in adulthood as a normal-weight child. Risk rises four times for children who are overweight or obese in both childhood and adulthood, according to a new study, *CBS News* reports (https://www.cbsnews.com/news/overweight-obese-children-higher-risk-depression-as-adults/).

Sadly, Latinos suffer high rates of both obesity and mental health conditions.

That is why knowing the facts—and having the resources available can alter the effects of obesity on mental health—can lead child to a healthy lifestyle.

The Facts on Obesity

Childhood obesity is defined as a diagnosis for any child (same sex and age) "with a Body Mass Index at or above the 95th percentile", according to the Center of Disease and Control (CDC) (https://www.cdc.gov/obesity/childhood/defining.html). Overweight is a BMI at or above the 85th percentile and below the 95th percentile for children and teens.



(https://salud-america.org/wp-content/uploads/2017/11/Fig.4-Youth-obesity-bar-graph-e1510700350751.png)

Source: CDC/NCHS, National Health and Nutrition Examination Survey, 2011-2014

You can calculate your BMI or your child's BMI with a Body Mass Index Calculator. (https://nccd.cdc.gov/dnpabmi/Calculator.aspx)

Latino kids have a higher rate of obesity (21.9%) than non-Latinos, according to the CDC.

The reasons for Latino childhood obesity are complex, ranging from limited access to healthy food (http://salud-america.org/food-latino-kids-research-review), more access to sugary drinks (http://salud-america.org/sugary-drinks-latino-kids-research-review), health barriers in schools (https://salud-america.org/issues/healthy-schools/), less access to safe places to be physically active (http://salud-america.org/active-spaces-latino-kids-research-review), and developmental issues (https://salud-america.org/state-latino-early-childhood-development-research-review/).

Obesity's Mental Health Effects

Childhood obesity has big health effects. It can increase the risk of asthma, diabetes, sleep apnea, bone and joint problems, and high cholesterol.

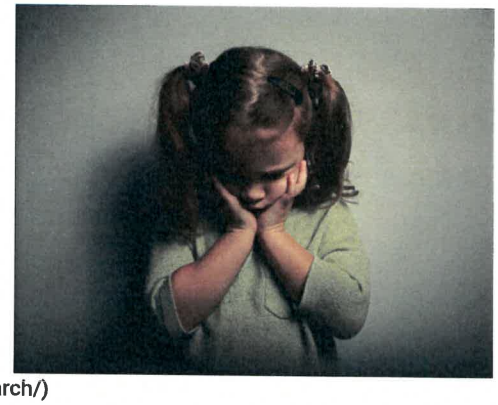
Obese children are more likely to become obese adults, too. Adult obesity is linked to increased risk of serious health conditions including; Type 2 diabetes, heart disease, and cancer.

(https://salud-america.org/wp-

content/uploads/2017/05/iStock-467795160.jpg)Obesity's mental health impact is critical, too.

Childhood obesity can lead to sleeping disorders, anxiety, depression, and low self-esteem. Obesity can make it harder for kids to participate in activities, and even chores may become dreadful.

Kids also become a target for bullying. Many children will experience being teased or bullied, because of their excessive weight. Trying to reach that ideal body weight bears self-esteem on an individual, and self-esteem leads to depression.



Latino kids already face a lot of bullying due to discrimination, according to *Salud America!* Mental Health Research. (https://salud-america.org/healthymindsresearch/)

With the rise in adolescent obesity and the increased use of social media influence on body image, its important to understand the associations between obesity and depression.

A Healthy Lifestyle

So what can we do?

The authors of the new study on childhood obesity and depression told *CBS News* that parents help their children achieve a healthier weight through eating healthy and being physically active. But don't focus too much on size.

James Zervios of Obesity Action Coalition told *CBS News* that it takes a whole-family approach to tackle obesity.

"I also think it's important to talk with your child and see if they're being bullied or if they're being fat-shamed at school," Zervios said. "That can obviously impact the child's well-being and mental health."

Check out these other healthy lifestyles resources:

- Dietary Guidelines for Americans (https://health.gov/dietaryguidelines/2015/guidelines/)
- Physical Activity Guidelines for Americans (https://health.gov/paguidelines/guidelines/)
- Read more on Childhood Obesity (https://salud-america.org/?s=childhood+obesity+)

And don't forget to tell us your big idea for healthy change (https://saludamerica.salsalabs.org/schoolactionpack/index.html) in your child's school!

Explore More:

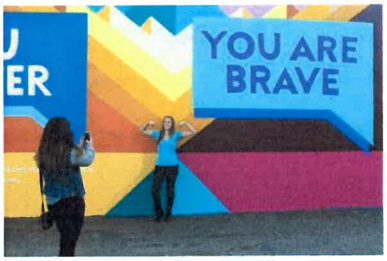
Bullying (https://salud-america.org/category/healthy-minds/bullying/), Depression (https://salud-america.org/category/healthy-minds/depression/)

Read Stories About Depression

(https://salud-america.org/therapeutic-video-series-cues-latina-women-to-confront-their-emotions/)

NOVEMBER 10, 2017

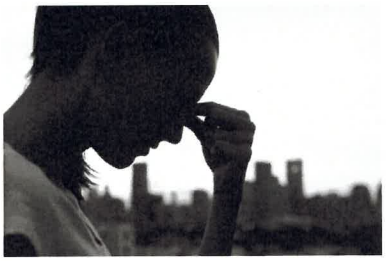
New Videos Help Latinas



(https://salud-america.org/murals-with-a-message-bring-hope-in-mental-health-campaign/)

NOVEMBER 1, 2017

Murals With a Message



(https://salud-america.org/undiagnosed-depression-common-among-latino-cancer-patients/)

OCTOBER 25, 2017

Share your thoughts

Salud America!

UT Health San Antonio Institute for Health Promotion Research

Robert Wood Johnson Foundation (//www.rwjf.org/)

ABOUT US

Salud America! is a national Latino-focused organization that creates culturally relevant and research-based stories and tools to inspire people to drive healthy changes to policies, systems, and environments for Latino children and families. The network is a project of the Institute for Health Promotion Research (IHPR) (http://ihpr.uthscsa.edu) at UT Health San Antonio (http://www.uthscsa.edu).

CONNECT WITH US

(https://ww[illegible]Salud/today/)

Salud America! 7411 John Smith Ste. 1000 San Antonio, TX 78229 (210)562-6500 saludamerica@uthscsa.edu (https://salud-america.org/join/)

Mindful Living Everyday Keeps the Doctor Away

Beach Cities Health District

Beach Cities Health District (BCHD) is one of the largest preventive health agencies in the nation serving the communities of Hermosa Beach, Manhattan Beach, and Redondo Beach since 1955. It offers an extensive range of dynamic health and wellness programs, with innovative services and facilities to promote health and prevent diseases in every lifespan—from children to families and older adults.

California Special District **asked BCHD to talk about some of those programs and services that enrich the communities they serve.**

BCHD implements the Blue Zones Project®. Please tell us about the Blue Zones Project® and how BCHD is involved.

Blue Zones are the five areas of the world where people live the longest and the Blue Zones Project® is a community well-being improvement initiative designed to change the way people experience the world around them. By impacting environment, policy, and social networks, Blue Zones Project® makes healthy choices easier. As a result, people can live longer, better, and communities can lower healthcare costs, improve productivity, and boost national recognition as a great place to live, work, and play. (From healthways.com/bluezonesproject)

The Beach Cities (Hermosa Beach, Manhattan Beach, and Redondo Beach) joined the national Blue Zones Project® movement in 2010 and achieved certification as a Blue Zones Community® in 2016. Blue Zones Project® allows BCHD to directly address population health issues and utilize a world-class measurement tool (Gallup polling) to chart our progress. The Beach Cities are the largest community to ever reach certification and are experiencing arguably the most dramatic health outcomes – including measurable declines in overweight, smoking and stress rates among residents. Changes supported by the Blue Zones Project® in the Beach Cities include:

- Bike lanes including a protected bike path and reverse angle parking
- More than 130 Blue Zones Restaurants® (healthy restaurants program)
- Comprehensive tobacco control ordinances
- City adoption of a bike master plan, Beach Cities Livability Plan and Living Streets policy

Beach Cities Health District

Established: 1955
Population: 123,000
Location: Los Angeles

Website: www.bchd.org
Budget: $11 million

Blue Zones Project® focuses on the **Power 9 principles** (http://www.bchd.org/power-9-principles) and helping to make the healthy choice the easy choice:

- ***Move Naturally*** – The world's longest-lived people live in environments that constantly nudge them into moving without thinking about it.
- ***Purpose*** – Having a sense of purpose is worth up to seven years of extra life expectancy.
- ***Down Shift*** – Stress leads to chronic inflammation, associated with every major age-related disease. Reverse disease by creating a stress-relieving strategy that works for you.
- ***80% Rule*** – Eat mindfully and stop when 80 percent full. The 20 percent gap between not being hungry and feeling full could be the difference between losing or gaining weight. People in Blue Zones eat their smallest meal in the late afternoon or early evening and then don't eat any more the rest of the day.
- ***Plant Slant*** – Adding more fruits and veggies to your plate can add years to your life. Beans, including fava, black, soy, and lentils, are the cornerstone of most centenarian diets.
- ***Wine @ 5*** – Enjoying company with others is important for social connection.
- ***Belong*** – Research shows that attending faith-based services four times per month will add four to 14 years of life expectancy.
- ***Loved Ones First*** – Successful centenarians in Blue Zones areas put their families first.
- ***Right Tribe*** – The world's longest lived people also choose—or are born into—social circles that support healthy behaviors. Research shows that smoking, obesity, happiness, and even loneliness are contagious. The social networks of long-lived people favorably shape their health behaviors.

How has BCHD's implementation of the Blue Zones Project® improved outreach to the communities BCHD serves and what are some measurable outcomes of the program?

The Blue Zones Project® is a community-wide initiative – meaning it depends on community involvement. The Blue Zones Project® in the Beach Cities has partnered with local schools, restaurants, workplaces and organizations to implement Blue Zones Project® programming. Beach Cities showed the following results on the Gallup-Sharecare Well-Being Index from 2010 - 2017:

- The number of obese residents came in at less than half the national average.
- Just 12.1 percent of residents are obese, compared to 23.8 percent statewide and 28.1 percent nationally.
- Smoking declined more than 17 percent.
- Daily significant stress dropped 9 percent from the rate measured in 2010, which at the time was on par with post-Katrina New Orleans and recession-ravaged Detroit.

BCHD also hosts a variety of school and youth programs – one being the Walking School Bus. Please tell us about this program and how it has benefited the communities taking part.

The goal of Walking School Bus is simple: Students will safely walk to school on a regular basis with adult supervision. The program increases daily physical and social activity for children as well as engages adult volunteers, thereby promoting a well-rounded healthy community.

Since 2011, BCHD has partnered with school officials, volunteers and parents that want to offer the Walking School Bus program. In 2016-17 school year, 60 volunteers led 30 Walking School Bus routes with hundreds of students. In the last decade, a strong culture of walking has been adopted by school districts in the Beach Cities because of the program's success
In addition to the Walking School Bus, BCHD locally directs, in partnership with the Hermosa Beach, Manhattan Beach and Redondo Beach school districts, the MindUP program. This research-driven curriculum blends mindful awareness practices with the science behind how the brain functions and reacts to stimuli like stress, anger and anxiety – emotions that research shows to be increasingly prevalent among young people today – to help students become emotionally articulate and grow socially. One example is Pennekamp

Continued on page 42

What's So Special [continued]

Elementary in Manhattan Beach where each morning begins the same way – before the first class bell sounds, roughly 600 students, teachers, and parents gather together in organized groups on the blacktop for a full minute of complete and utter silence.

BCHD provides local teachers with the required training to administer the in-class lessons, which include daily breathing exercises, meditation and interactive lessons on the parts of the human brain that regulate different emotions. Each teacher is encouraged to tailor the lessons to fit their personal teaching style and classroom culture. Since first implementing the program in select Beach Cities schools six years ago, a significant number of principals and administrators have reported fewer incidences of bullying, disciplinary office visits and emotional outbursts on campuses where MindUP has taken hold.

Did BCHD programs develop out of a need from the community?

Since 2010, BCHD programs have saved 21 million in direct medial costs. For every tax dollar received, BCHD returns $3.50 in programs and services to the community. BCHD has an evidence-based strategic planning process to prioritize and guide funding and programmatic decisions. The plan includes a community needs assessment process, which informs BCHD's Community Health Snapshot Report. This critical data helps BCHD achieve its vision and meet its strategic planning goals.

BCHD's partnership with Blue Zones Project® has also afforded access to the Gallup-Sharecare Well-Being Index (WBI). The WBI is a national measure of well-being that provides leaders with the information they need to create solutions for making their community healthier. ■

For more information on these programs, please visit:

- bchd.org/bluezonesproject
- bchd.org/walkingschoolbus
- bchd.org/snapshot

I AM BRINGING MY AWARENESS outward. I am perceiving the dense humidity of a summer afternoon as I stand on a city sidewalk and the way the hot air feels inside my lungs. I am present to observe the passage of time and how it seems somehow slowed down. I am cognizant of sharing this space with a small cluster of men and women around me. Or to put it another way, the meditation teacher has stood up the class. Some days, the lessons in mindfulness take you in unexpected directions.

Ask 10 people to define "mindfulness," and you'll likely get 10 different responses. But the basic concept of the word is straightforward. It's about putting down our juggling balls for a little bit. It's about embracing the beauty of monotasking. It's about, as mindfulness author and instructor Jon Kabat-Zinn has put it, "paying attention in a particular way: on purpose, in the present moment and nonjudgmentally."

Mindfulness is about putting down our juggling balls for a little bit. It's about embracing the beauty of monotasking.

Though the contemplative practice has its roots in several of the world's major belief systems—most recognizably Buddhism but also in Hinduism, Judaism and Christianity—you don't have to subscribe to any particular religion or philosophy to experience mindfulness. And if lately you've felt that some psychic decluttering might be just what the doctor ordered, you're far from alone.

It's no coincidence that as we find ourselves increasingly barraged with distractions—a 2013 University of Southern California study estimated that the average American consumes an astonishing 13-plus hours of media a day—we simultaneously find ourselves in the midst of a mindfulness revolution. You can see evidence everywhere. Hospitals across the country are increasingly using meditation, yoga, guided imagery and similar alternative practices as part of the health-care offerings to patients undergoing surgery, pain management, cancer treatment and more. Corporations such as American Express and Nike have been jumping on the bandwagon, taking mindfulness training programs to their staff. Apps like Headspace—"a gym membership for your mind"—have been downloaded millions of times. A 2012 study by the National Institutes of Health found that more than 33% of Americans said they had used alternative health practices, including meditation, over the course of the year.

I am a longtime, if erratic and extraordinarily imperfect, practitioner of meditation. But recently, as the demands of 21st-century life—work, parenting, a seemingly limitless and often self-imposed deluge of emails to answer and texts to reply to and Instagram posts to Like—have ramped up, I've found myself embracing one of the greatest side effects of my practice: the mindfulness that helps calm me wherever and whenever, even in the midst of my most cacophonous moments. And like a growing population of individuals similarly chafing against the rigors of what the writer Linda Stone has aptly diagnosed as "continuous partial attention," I've experienced the proven physical and mental benefits of regular pauses.

HEALTH BENEFITS

The perks of mindfulness are tangible. The American Psychological Association cites it as a hopeful strategy for alleviating depression, anxiety and pain. But mindfulness doesn't just seem to boost mood and perception—the effects go deeper. Mindfulness practice can shrink the brain's jumpy "fight or flight" center, the amygdala, according to 2013 research out of the University of Pittsburgh and Carnegie Mellon University. Another study, done at the University of Wisconsin–Madison, found that people who meditate regularly have different patterns of brain electricity, potentially leading to more efficient attention-paying and learning. Change your thoughts, and

Participants attend an evening session at MNDFL, a meditation studio that opened in New York in 2016.

maybe you can even change your brain.

For me, mindfulness has been a powerful tool against my migraines and panic attacks. It's a masterful hack, using my own thoughts to quell my stormy brain, reducing my migraine-medication consumption and my shrink visits. But that doesn't mean I don't still often struggle, like everybody else, through the current of information overload.

"I think there's been a kind of confusion in our culture where people have felt that they have to be anxious, uptight and always on the go to be effective," says psychologist and author Daniel Goleman, whose groundbreaking best sellers include *Emotional Intelligence* and *The Meditative Mind*. Goleman notes that in our competitively frantic culture, "people are feeling a little desperation. It used to be you left work and went home. Now you've got your devices that follow you everywhere. The body is designed to be energetic and active and then recover. People don't have any recovery time—there's been this silent, invisible ratcheting up of invasion of our space." The

result, he says, is that "everyone's multitasking like crazy—and the more you do it, the worse you get at it."

IN PRAISE OF MONOTASKING

It might sound counterintuitive, but it's true. Research out of the University of California, Irvine, reveals that not only do people tend to switch activities an alarming every three minutes during the course of a typical workday, but it takes them significantly longer to get back on the original task. And as U.C. Irvine professor Gloria Mark told *Fast Company* in 2008, all that ricocheting leads to "higher levels of stress, frustration, mental effort, feeling of time pressure and mental workload."

In contrast, Goleman says, "a relaxed, alert state is the optimum for any performance in any field. Athletes try to get in that state, because that's when the brain processes best and the mind functions at its peak."

Many of us, myself included, persistently wear our overstimulation as a badge of honor.

No wonder mindfulness is increasingly being integrated into the workplace, with initiatives such as Google's 10-year-old Search Inside Yourself training program. Since 2007 it has been used by big-name businesses in the tech world and beyond, deploying centuries-old techniques to boost productivity and stave off burnout.

Yet many of us, myself included, persistently wear our overstimulation as a badge of honor. When was the last time you answered a job listing for a position in a thoughtfully paced environment, for a candidate able to handle one thing at a time?

But if you're the kind of person whose immediate reaction to meditation is an insistence that your brain just works too fast and you simply can't, you're exactly the kind of person who needs it most. Author and meditation teacher Sharon Salzberg says, "I hear people say, 'I tried it once; I failed at it.' I think the fear and the sense of having failed are born of some misconception of what is supposed to happen. Most of us have a pretty bad habit of being unjust with ourselves. But if we sat down at the piano for the first time and couldn't play an exquisite piece of music, we wouldn't give up."

It also helps to understand that there are no prizes handed out for attaining the World's Greatest Mindfulness. Salzberg instead advises to think of mindfulness as "about connecting to our experience in a different way—a quality of awareness where we're not adding stuff." Call it the life-changing magic of tidying up your own thoughts. She adds, "For many of us, we start wondering what's it going to feel like next week, next month. When you see that anticipation rising, you can come back to the now. Mindfulness helps us wake up."

That's how my friend Whitney, a digital editor at a high-profile media company, learned to let go and found her flow. Living in New York shortly after 9/11, she was experiencing a variety of stress-related health issues when a friend persuaded her to attend a meditation class. It was not exactly a duck-to-water experience.

"I'm incredibly speedy; I'm incredibly distracted," she says. "I remember the first time I sat in meditation, I was just thrilled that I could sit still for a half-hour. There are some people who are immediately like, 'Yup, got it,' but it was so not the case for me." Instead, she admits, "I honestly think for the first few years I just kinda sat there." She adds, "Meditation is an amazing practice, but what matters is what happens off the cushion. It's the application and how you work with mindfulness in your life. It means I'm trying to stay in the present in the way that I approach my work or the way I'm washing a dish. I'm trying to pay more attention."

Richard Davidson, the founder of the Center for Healthy Minds at the University of Wisconsin–Madison, has built his career on studying just these issues. Consistent practice, he says, can improve your skill set to "accept things without strongly attaching to them"—a major stress-busting technique.

"It's not that we don't experience intense emotions," he says. "It's that they will recover to baseline more quickly. We may experience emotion that's appropriate in the situation but then not have it bleed over into the next. There's no lingering, no stickiness."

Over time, I have come to look upon my practice as I do my local pizzeria and my weekend naps: not always great, but usually plenty good enough for my spirit. Mindfulness for me has meant purging a slew of apps from my phone and my notifications from almost everything. It's meant overcoming my dread of boredom and sometimes going out for a run without listening to music. It's meant similarly giving myself permission to not eat lunch in front of my computer. It's been taking a moment to sniff a tomato before chopping it for a salad or to take a few slow, steadying breaths when I'm feeling overwhelmed. These are not exactly revolutionary practices. They are challenging. I often blow it. That's kind of the point.

Consistency in mindfulness matters more than all-or-nothing, built-to-fail extremes. It's a lifelong project.

MAKING THE COMMITMENT

I am sitting on a cushion in New York's tranquil and spacious MNDFL studio. My eyes are closed and my breath is steady. I am listening to our instructor guide us through a compassion-awakening meditation. I am in the zone. Then I remember I need to stop on the way home for milk and bananas. But that's not a failure of my meditation—that's an example of mindfulness. I recognize that I've tuned out, and I try again. "If you drift off, you're just getting to know what's going on in your mind," MNDFL co-founder Lodro Rinzler later affirms to me. Mindfulness, he says, is "something that's hard to mess up."

As if to prove the point, when class is over and I'm standing at the supermarket line, I am doing something remarkable. I'm not looking at my phone. I'm not listening to a podcast in one ear while listening to the grocery Muzak in the other. I'm just . . . buying food. It feels surprisingly civilized. As Goleman puts it, "Every time you do a rep with a free weight, you're strengthening a muscle. Every time you bring your mind back, the stronger it gets, the more focused."

If there's any downside to mindfulness, though, it's that lately, I can't help feeling inundated by, well, mindfulness. The word appears on popular adult coloring books and vegan mayonnaise labels. At times, mindfulness seems like this year's kale—a hipster buzzword on the brink of wearing out its welcome.

But authentic self-care is not about sandwich spreads, and it definitely shouldn't be dismissed for being trendy. Rinzler points out, "Back in the '50s, if you said you were going for a run, someone would ask, 'Who's chasing you?' I think this is the next wave of that. I think we're hitting this point with mindfulness—all these studies have come out that show you're going to sleep better; you're going to be less reactive. Now it's your doctors and not just your hippie friends talking about it." Like engaging in physical exercise or eating a more balanced, plant-based diet, consistency matters more than all-or-nothing, built-to-fail extremes. And like all of those things, a dedication to mindfulness is a lifelong project.

I am a work in progress. If you happen to pass me sometime on the street, you will note that I will not be floating serenely above the sidewalk as light pours out of my third eye. You will instead see a busy mom, most likely hustling her kids to the next thing they need to be hustled to, tapping on her phone in reply to some new urgent demand from somebody, gamely trying to navigate the throng like a character in an '80s-era arcade game. But I'm trying to pay as much attention as I can, as often as I can. I keep trying because it keeps being worth it, because, as the philosopher Simone Weil observed, decades before the digital age, "Attention is the rarest and purest form of generosity." And it's the gift worth giving ourselves.

Eight Ways to Be Zen at Work

This is how you can improve well-being on the job

BY MANDY OAKLANDER

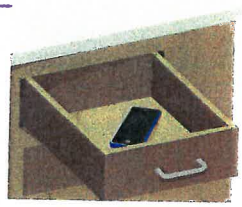
TALLYING UP SICK DAYS ISN'T THE ONLY WAY TO TELL HOW SOMEONE AT WORK IS FARING. A recent analysis of American workers found that despite the rise of corporate wellness programs, disengagement at the office costs the U.S. $550 billion each year, and work-related stress tacks on an additional $300 billion. But new studies are turning up surprising strategies that improve both well-being and productivity. For starters, people are happier and more engaged when they accept that work is the pits sometimes, a recent study suggests. Another idea: find ways to detach. "If your goal is feeling better, you need to get your head out of work," says Reb Rebele, a researcher with Wharton People Analytics at the University of Pennsylvania. Experts recommend these evidence-based tricks for reducing stress on the job. (And don't worry: "Learn to meditate at your desk" isn't on the list.)

Do someone a five-minute favor

Volunteering helps people connect to others, which aids in recovering from stress. You can do the same thing at work by, say, getting a cup of coffee for someone who's having a bad day. Spot a need, and, for five minutes, be the one to fill it.

Play with a puppy

Beg your boss, if necessary: one study showed that when employees brought their dogs to work, they felt less stressed and were just as productive as they were on canine-free days.



Hide your phone

Even if you're not using it, simply being able to see a cellphone hinders your ability to focus on tough tasks, a pair of 2014 studies found. The mere presence of a phone also made people trust and like each other less than if it weren't present, according to other research.

Take a break before lunch

People who take breaks in the morning feel more restored and less emotionally exhausted than people who take breaks in the afternoon, a 2016 study found. Morning breakers were more likely to say they were satisfied with their jobs, too.

Let yourself procrastinate

In one study, a researcher gave people a task and let some of them play five minutes of Minesweeper. Those who played the game generated ideas considerably more creative than those who got right to the task. Their minds were most likely chewing away at the problem in the background.

Disappear for a bit

Take a 10-minute walk daily—it helps to put it on your calendar—and don't ruminate about work while you're gone, Rebele advises. Instead, listen to a podcast, make a phone call, do a walking meditation or bring a friend to talk about something non-work-related [see right].

Gossip with your co-workers

"Social time is really valuable, even for introverts," Rebele says. But to truly detach—and reap the productivity and wellness benefits of a solid break—you have to keep the conversation office-free.

End the day like you mean it

A 2016 study found that if people think they should be reachable after work, they feel less in control and have more of the stress hormone cortisol. Meanwhile, another study shows that as long as your work gets done, putting in more hours doesn't make you a better worker in your boss's eyes.

Sources: Global Wellness Institute, *Journal of Occupational Health Psychology*; *Social Psychology*; *International Journal of Workplace Health Management*; *Journal of Applied Psychology*, *Originals*, by Adam Grant; *Harvard Business Review*

Fallbrook Regional HEALTH DISTRICT

Memo

From: Bobbi Palmer, MBA, MSW, Executive Director

To: Board of Directors

Behavioral Health Data Trends and Projections

2010-2020

CentraForce Community Assessment data is highly specific and localized to our District.

Following are data points related to "burden of disease" and prevalence in San Diego County. More specifically and based on CentraForce Data the following four (4) disorders demonstrates a consistent uptrend of behavioral health need indexes in the Fallbrook Healthcare District. These projections in the next six (6) years will account for the Fallbrook Healthcare District area and is comprised of Fallbrook, Bonsall, Rainbow and Deluz.

1. **Diagnostic Criteria for Major Depressive Disorder and Depressive Episodes; DSM-V for Mood Disorders (MDD)**
2. Anxiety
3. Acute Alcohol Disorder
4. Impulse Disorder

Compared to the county average, Fallbrook Healthcare District residents and more specifically behavioral health needs are projected to be 6.0-10% higher than the county average. Based on this population; 52% of residents are 55 and older which includes a higher percentage of those 75 years and older.

Used prescription medication for anxiety and panic (%of adults) demonstrate there will be an increase of approximately 5.3 to 6.6% in the next 6 years. Included in the trends and influences related to health indicators, estimate that the number of residents diagnosed with Alzheimer's disease and other Dementias of 55 year olds and older will increase by approximately 23% by the year 2030.

CBS NEWS *June 20, 2017, 4:07 PM*

Hospital's Fresh Food Pharmacy program prescribes food instead of pills

Many health care providers nationwide are prescribing food instead of medicine to tackle the obesity epidemic.

Doctors in more than a dozen states are moving away from recommending surgery or pills, and participating in programs that offer healthy food to patients struggling with medical issues related to their weight.

One hospital in central Pennsylvania is taking the effort even further, reports CBS News' Jan Crawford.

At Geisinger Hospital in central Pennsylvania, food deliveries turn medical professionals into temporary grocers.

It's all part of a new Fresh Food Pharmacy, now open in the heart of coal country, where shuttered mines have contributed to high unemployment and rising poverty, which has made healthy eating a low priority.

The program was created by Dr. Andrea Feinberg, Geisinger's medical director for health and wellness.

Dr. Andrea Feinberg / CBS NEWS

"We have a higher incidence of obesity, a higher incidence of diabetes and food insecurity," Feinberg said. According to Feinberg, the program is offering people hope and a "new way to look at diabetes."

"There are pockets of communities around the United States where the word has not gotten out that food is really medicine," she explained.

The pilot program, which started just nine months ago, currently serves more than 60 patients and their families, providing healthy food free of charge to more than 200 people each week along with nutrition classes and cooking advice.

But making a drastic change in diet isn't easy. Feinberg admits, some people do complain.

"They're not that excited. First of all we ask them just to be flexible. 'Try it. You don't like it, no problem. Come back and tell us, we'll come up with new recipes,'" Feinberg said.

Geisinger is one of the first to set up a standalone Food Pharmacy, but it draws inspiration from more than 70 food prescription programs across the country hoping to reverse a frightening trend.

More than 100 million Americans are either diabetic or pre-diabetic, and the Centers for Disease Control predicts that by the year 2050 one in three adults in the U.S. could have diabetes.

Rita Perkins has had diabetes for more than 20 years. After enrolling in the Food Pharmacy program in March, she cut her blood sugar and cholesterol in half.

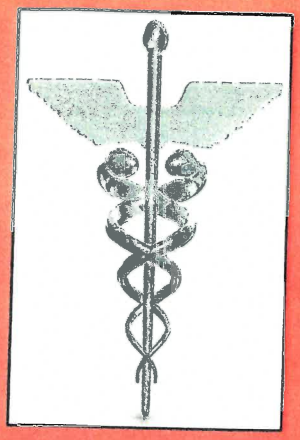
Perkins said the program is indeed making a difference in her life. How long does she plan to stick with it? "Probably for the rest of my life," Perkins said.

Feinberg says those results are not unique.

"It's over-the-top successful," Feinberg said, telling CBS News it's worked for "every single patient."

"We're talking about reversing the diabetes. Curing the type 2 diabetes and help the patients move themselves from the sick category to the healthy category," Feinberg said.

Geisinger says despite giving away food for free, the program is expected to actually save money by reducing long-term medical costs. The Fresh Food Pharmacy program has been so successful, they're already planning to expand — hoping to put similar programs in place at a dozen other locations across Pennsylvania and New Jersey



Food Is Medicine

Opportunities in Public and Private Health Care for Supporting Nutritional Counseling and Medically-Tailored, Home-Delivered Meals

CENTER FOR HEALTH LAW
& POLICY INNOVATION
Harvard Law School

Food Is Medicine Opportunities in Public and Private Health Care for Supporting Nutritional Counseling and Medically-Tailored, Home-Delivered Meals

Written by Malinda Ellwood, Sarah Downer, Emily Broad Leib, Robert Greenwald, Duncan Farthing-Nichol, Eusebius Luk, and Adrienne Mendle

CENTER FOR HEALTH LAW
& POLICY INNOVATION
Harvard Law School

Acknowledgements

We gratefully acknowledge the generous support and insight provided by the M·A·C AIDS Fund and members of the food and nutrition services community in making this paper possible. We are particularly indebted to Community Servings in Boston. This organization's dedicated CEO and other staff were the first partners to share with us their expertise and insight in providing medical nutrition therapy, home-delivered, medically-tailored meals, and other essential food and nutrition services to their critically and chronically ill clients. The content of this paper builds on our organizations' joint effort to integrate food and nutrition services more fully into Massachusetts health care and to examine opportunities for new food and nutrition service funding support through the state's Medicare and Medicaid programs and private health insurance system.

Following our work with Community Servings, we began to deepen our connections to the broader food and nutrition services community, and to research potential sustainable funding streams and integration opportunities for food and nutrition services on a national level. With assistance from the M·A·C AIDS Fund, Community Servings (Boston), God's Love We Deliver (New York), Moveable Feast (Baltimore), MANNA (Philadelphia), Project Angel Heart (Denver), Project Open Hand (San Francisco), Project Angel Food (Los Angeles), Heartland Health (Chicago), Mama's Kitchen (San Diego), and many others, we offer this paper as a tool to assist Medically-Tailored Food and Nutrition Providers (MTFNP) in exploring opportunities to support and integrate the critical services they provide into the larger health care infrastructure as a means to improve health outcomes and lower health care costs.

While we recognize that the concept of food is medicine is broad and encompasses a wide spectrum of interventions, it is our ultimate hope that this paper will be one of many that contributes to shifting the current medical paradigm of health care to one that encompasses all aspects of health, including access to healthy, nutritious food.

About The Center for Health Law and Policy Innovation (CHLPI)

The Center for Health Law and Policy Innovation of Harvard Law School (CHLPI) advocates for legal, regulatory, and policy reforms to improve the health of underserved populations, with a focus on the needs of low-income people living with chronic illnesses and disabilities. CHLPI works with consumers, advocates, community-based organizations, health and social services professionals, food providers and producers, government officials, and others to expand access to high-quality health care and nutritious, affordable food; to reduce health disparities; to develop community advocacy capacity; and to promote more equitable, and effective health care and food systems. CHLPI is a clinical teaching program of Harvard Law School and mentors students to become skilled, innovative, and thoughtful practitioners as well as leaders in health, public health, and food law and policy.

Table of Contents

I. *Introduction: The Case for Medically-Tailored Food and Nutrition Intervention Services*

For critically and chronically ill people, food is medicine. With adequate amounts of nutritious food, people who are sick have a better response to medication, maintain and gain strength, and have improved chances of recovery. Ultimately, access to healthy food leads to improved health outcomes and lower health care costs.

Food is increasingly recognized as a core component of preventive and ameliorative health care. A variety of innovative initiatives aimed at embedding nutrition into medical care are underway, such as efforts by local food banks to package diabetes-appropriate food boxes for pick-up by pre-diabetic clients or pilot programs that empower providers to prescribe fresh produce vouchers for their undernourished patients.[1]

While we recognize that the concept of food as medicine is broad and encompasses a wide spectrum of interventions, this paper focuses on the provision of nutritional counseling and the delivery of medically-tailored, home-delivered meals to those with debilitating chronic or acute illnesses. These types of interventions, hereafter known as medically-tailored food and nutrition intervention services or MTFNI, have been proven to dramatically reduce monthly and overall health care costs for high-risk, high-need patient populations.[2] They also reduce the frequency of hospital admissions and length of hospital stays, and increase the probability that patients will be discharged from the hospital to their homes instead of to acute care facilities.[3]

For years, the Ryan White HIV/AIDS Program, a discretionary federal program that provides funding for core medical and support services for low-income individuals living with HIV/AIDS, has recognized this important connection between food and health. The Ryan White Program provides reimbursement for "Medical Nutrition Therapy" as a core medical service. It defines this service to include "nutritional supplements provided outside of a primary care visit by a licensed registered dietitian; [that] may include food provided pursuant to a physician's recommendation and based on a nutritional plan developed by a licensed registered dietitian."[4]

---

[1] Presentation Slides: The Bristol-Myers Squibb Foundation Together on Diabetes Initiative, *Strategies and Policy Recommendations for an Equitable Response to the Type 2 Diabetes Epidemic*, Feeding America Diabetes Initiative, Preliminary Results: 6 Month Behavioral and Health Outcomes, http://www.nmqf.org/presentations/13DoykosPMEtAlJCP1.pdf.; *Wholesome Wave's Fruit and Vegetable Prescription Program to Launch in New York City Hospitals.* www.wholesomewave.org, http://wholesomewave.org/fvrxlaunchinnychospitals/ (last visited September 9, 2013).

[2] Jill Gurvey, Kelly Rand, Susan Daugherty, Cyndi Dinger, Joan Schmeling, and Nicole Laverty, *Examining Health Care Costs Among MANNA Clients and a Comparison Group*, Journal of Primary Care & Community Health (June 2013), 4-5.

[3] Id.

[4] HIV/AIDS Bureau, Division of Metropolitan HIV/AIDS Programs, *National Monitoring Standards for Ryan White* (2013), *available at* http://hab.hrsa.gov/manageyourgrant/files/programmonitoringparta.pdf.

These services are often provided by community-based organizations, many of which were developed in response to the growing need for nutrition support within the HIV community and rely exclusively on Ryan White Program funding. These community-based organizations and the services they provide are an integral part of the larger, whole-person model of care for HIV that has been developed through the Ryan White Program. This model has helped transform HIV/AIDS from a deadly disease to a chronic illness. Recognizing the potential for food and nutrition interventions to improve health outcomes for other disease populations, some organizations which have relied on Ryan White funds have been able to expand their services over the years to include individuals living with other chronic and critical illnesses.

Organizations that provide MTFNI to clients with debilitating illness (whether HIV or another condition), hereafter known as Medically-Tailored Food and Nutrition Providers or MTFNPs, play a crucial role in keeping medically vulnerable people healthy and at home in their communities. Their services respond to the fact that people with acute and chronic illnesses often have difficulty obtaining and preparing adequate food. Malnourished patients are twice as likely to be readmitted to a hospital within 15 days of discharge and have a much higher risk of death than patients who are well-nourished.[5] With such high stakes and the potential for significant health benefits and cost savings, it is imperative to advocate for full integration of MTFNI into health care delivery systems.

This paper explores opportunities for MTFNPs to broaden their client base and seek reimbursement for their services in the public and private health care systems, both as these systems exist currently and as they continue to evolve according to the requirements of the Patient Protection and Affordable Care Act (ACA). It begins by explaining how MTFNPs are different from other meal-delivery programs, and why the medical nutrition expertise of MTFNPs uniquely positions them to provide services to people with distinct health conditions and nutritional needs. It then discusses common issues that MTFNPs will need to address as they seek to maximize their funding streams through health insurance reimbursement for services. Ultimately, this paper provides a five-section overview of opportunities for MTFNPs in different public and private insurance structures.

- In Section A, we discuss opportunities for increased integration of MTFNI and reimbursement for services under current and future iterations of Medicaid. We also look at a new coordinated care model created by the ACA, Medicaid Health Homes, and address its implications for coverage of MTFNI.

- In Section B, we examine opportunities under Medicare and a new coordinated care model for Medicare recipients, the Accountable Care Organization.

---

[5] Su Lin Kim, Kian Chung Benjamin Ong, Yiong Huak Chan, Wai Chiong Loke, Maree Ferguson, and Lynne Daniels, *Malnutrition and its impact on cost of hospitalization, length of stay, readmission, and 3-year mortality,* Clinical Nutrition (June 1, 2012), Vol. 31, no. 3 pp.345-50.

- In Section C, we discuss programs for people who are dually eligible for both Medicare and Medicaid, including the Program of All-Inclusive Care for the Elderly (PACE) and Integrated Care Organizations (ICOs).
- In Section D, we identify opportunities for MTFNPs to be part of innovative demonstration projects funded by the Center for Medicare and Medicaid Innovation.
- Finally, in Section E, we address opportunities to contract with private health insurers and advocate for strong federal and state support of MTFNI in the private insurance marketplace.

We also include an appendix summarizing government food support programs that may provide other sources of funding for MTFNPs, including the Supplemental Nutrition Assistance Program (SNAP), Title III of the Older Americans Act, the Child and Adult Care Food Program (CACFP), and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

In each section, we discuss the potential for reimbursement of two services typically provided by MTFNPs: nutrition counseling and the provision of home-delivered meals. With a rapidly changing health care landscape focused on cost-saving and innovative delivery models, opportunities for reimbursement of home-delivered meal services coupled with nutritional counseling are likely to grow.

We understand that providing medically-tailored food and nutrition intervention services to critically and chronically ill individuals is just one example of how food acts as medicine. Access to healthy food over the course of a lifetime can entirely prevent people from developing debilitating and devastating illness. This paper is the first segment in the Center for Health Law & Policy Innovation's larger exploration of food as a central and fundamental building block of health. Identifying existing opportunities for integration and reimbursement of medically-tailored food and nutrition intervention services for critically and chronically ill individuals is an important first step in promoting greater recognition and understanding of all food and nutrition services as critical components of health.

Medically-Tailored Food and Nutrition Intervention Providers (MTFNPs): Why They Are Unique Among Meal-Delivery Programs

This paper uses the term MTFNP to refer to organizations that provide home-delivered meals that are nutritionally appropriate for specific medical needs. MTFNPs include but are not limited to organizations such as Community Servings in Massachusetts, God's Love We Deliver in New York, and MANNA in Philadelphia, which all provide home-delivered frozen meals that are both medically and culturally tailored to meet the individual needs of the health-compromised client. At Community Servings, for example, a registered dietitian meets with every new client to assess the client's nutritional needs and prescribe a meal plan customized

to the client's particular illness.[6] God's Love We Deliver provides illness-specific nutrition education and counseling to clients, along with their families and care providers.[7] MANNA's clients can meet with a registered dietitian at MANNA's office or at any of their partner organizations in the greater Philadelphia community.[8] The emphasis on meeting each client's unique medical-nutritional needs with high-quality meals and nutritional counseling distinguishes MTFNPs from other meal-delivery programs. MTFNPs help their clients access a healthy and varied diet of quality foods that are appropriate for their health conditions, medications, and cultural and religious requirements and preferences, so that they may heal and thrive.

Key Considerations in Expansion of Service Reimbursement for MTFNPs

Because many MTFNPs developed in response to the HIV/AIDS epidemic, they have traditionally been reliant on the Ryan White Program for their major source of funding. As these programs grow, it is critical to identify opportunities for more sustainable sources of funding that are not based on discretionary appropriations and grants. Diversification of funding will expand access to these needed services to individuals outside the HIV community, and will help integrate MTFNI services into the larger health care delivery infrastructure. Opportunities for such reimbursement, expansion, and integration exist in both public and private health care programs. Regardless of the opportunities MTFNPs ultimately choose to pursue, three issues will be common to all efforts at integration and expansion. These include: first, assessing and navigating the increased administrative burden associated with securing reimbursement for services from new funding sources and third-party billing; second, investing time and human capital in developing knowledge of complex health care delivery structures and building relationships with key government officials, medical providers, and private insurers; and third, obtaining data that demonstrate the efficacy of the interventions offered by MTFNPs and using that data to advocate for medical nutrition therapy and medically-tailored, home-delivered meals as core components of cost-effective, outcome-driven health care.

1. *Assessing and Navigating the Administrative Burden of Third-Party Reimbursement and Potential Changes in Program Delivery Models*

New sources of funding often bring increased reporting and documentation requirements. In order to determine whether they can utilize health care coverage to reimburse the services they provide, MTFNPs must assess the insurance status and eligibility for reimbursement of

---

[6] Community Servings, *About Us: Our Mission available at* http://www.servings.org/about/index.cfm (last visited Dec. 1, 2013).

[7] God's Love We Deliver, *About Us: Our Mission, available at* https://www.glwd.org/about/mission.jsp (last visited Dec. 1, 2013).

[8] MANNA, *Counseling, available at* http://www.mannapa.org/nutrition/counseling/ (last visited Dec. 1, 2013).

current and future clients. They must also weigh the cost in staff time and necessary investments in client billing and record-keeping infrastructure required by third-party billing.

In addition, third-party reimbursement may require changes or flexibility in program delivery. For example, some insurers may have rules about how meals must be delivered in order to be eligible for reimbursement, such as requiring a specified number of deliveries per week or delivery within a specified geographic service area or to particular locations. MTFNPs must consider their capacity to meet the requirements of potential partner entities.

2. *Building Knowledge of State-Specific Health Care Structures and Relationships with Key Decision-Makers*

In order to engage in effective advocacy at the state level, MTFNPs must understand the mix of federal and state agencies and government officials that control the relevant health care programs. Because states are charged with administering many of the programs discussed in this paper and each state also has its own marketplace for private health insurance, the hierarchical structures will vary from state to state. In every state, implementation of the ACA, including the debut of the private health insurance marketplace in October of 2013, is moving at a rapid pace. Some states are also making plans to expand their Medicaid programs in 2014. MTFNPs will need to become familiar with the public insurance and private marketplace administration structures in their states, particularly as many programs and regulations are in a state of fluctuation. Wherever possible, MTFNPs should become active participants in the dialogue surrounding development of these new structures by designating a staff person or staff team to monitor the progress of health reform implementation in their state.

To pursue opportunities with public and private insurance programs and maximize the potential for service referrals from medical providers, MTFNPs will also need to invest time in building relationships with key decision-makers. This might include attending public meetings of health care program working groups, making presentations about their services to public and private insurers, or engaging in outreach to clinics or hospitals that serve a large number of MTFNP clients or potential clients.

3. *Using Data to Drive Integration of MTFNI into Health Care*

Both public and private insurance programs seek to provide quality health care for the lowest possible cost. MTFNPs are well-positioned to advocate for inclusion in existing and future health care infrastructures. Research has already demonstrated that patients who are nutritionally compromised have worse health outcomes and higher overall health care costs than those who are well-nourished.[9] The interventions offered by MTFNPs respond to this need for assistance among nutritionally-vulnerable patients. The provision of medically-tailored,

---

[9] Su Lin Kim, Kian Chung Benjamin Ong, Yiong Huak Chan, Wai Chiong Loke, Maree Ferguson, and Lynne Daniels, *Malnutrition and its impact on cost of hospitalization, length of stay, readmission, and 3-year mortality,* Clinical Nutrition (June 1, 2012), Vol. 31, no. 3 pp.345-50.

home-delivered meals has been shown to improve health outcomes and dramatically reduce costs.[10]

For example, a 2013 study of MANNA's client outcomes showed that monthly health care costs were 31% lower for clients who received the organization's home-delivered meals than for similarly-situated individuals in a comparison group.[11] Furthermore, the cost of health care for MANNA clients, all of whom have a serious chronic or acute debilitating illness, decreased by 28% after initiation of MANNA's services.[12] MANNA clients had half the number of hospital admissions as the comparison group, and their length of stay at each visit was 37% shorter than the stays of those who were not receiving MANNA services.[13] When they were hospitalized, MANNA clients were more likely than individuals in the comparison group to be discharged and able to go back to their homes rather than enter an acute care facility.[14] Broadening the provision of healthy, nutritionally-tailored food as a medical service has the potential to produce significant cost savings and help people stay in their communities. More data and similar studies of other MTFNPs and their clients will strengthen the case for reimbursement and inclusion of MTFNI in routinely-covered core services.

MTFNPs should be prepared to collect and use data to advocate for full integration of their services into health care delivery systems. Framing the intervention they provide in terms of outcomes and savings will open doors to contracts for reimbursement. MTFNPs must begin or continue to track their own outcomes and costs in order to demonstrate the long-term impact of their interventions. At the same time, forming partnerships with health care provider and payment entities may provide MTFNPs with additional resources and infrastructure for quantitative data collection and evaluation.

---

[10] Jill Gurvey, Kelly Rand, Susan Daugherty, Cyndi Dinger, Joan Schmeling, and Nicole Laverty, *Examining Health Care Costs Among MANNA Clients and a Comparison Group,* Journal of Primary Care & Community Health (June 2013), 4-5.
[11] *Id.*
[12] *Id.*
[13] *Id.*
[14] *Id.*

II. *Opportunities for Reimbursement and Integration of Medically-Tailored Food and Nutrition Providers with Public and Private Insurance*

The following five sections provide an overview of opportunities for MTFNPs to obtain current and future reimbursement-based funding streams from public and private insurance. Each section begins with an overview of the program or insurance landscape and, where relevant, discusses the implications of health reform for each section topic. Each section also describes specific opportunities for reimbursement of MTFNP services and MTFNI integration advocacy.

A. Medicaid

The Medicaid program offers several ways for MTFNPs to receive reimbursement for nutritional counseling (Medical Nutrition Therapy (MNT)) and home-delivered meals. This section looks at coverage of nutritional counseling under existing Medicaid programs and opportunities for increasing coverage through state participation in Medicaid expansion. It examines three additional options states can exercise to expand Medicaid coverage to include home-delivered meals, including the Home and Community-Based Services 1915(c) Waiver, the Home and Community Based Services 1915(i) State Plan Amendment, and the Section 1115 Demonstration Waiver. Some states are already exercising some or all of these options. This section also addresses opportunities to integrate MTFNI into a new Medicaid care delivery model created by the ACA, the Medicaid Health Home.

Medicaid: An Overview

Medicaid is a federal and state-funded health coverage program that provides health insurance to certain categories of low-income individuals. The federal government requires all states who participate in the Medicaid program to provide coverage for all children, pregnant women, parents, elderly, and disabled individuals who meet certain income criteria.[15] To be eligible, individuals must be citizens or immigrants who have had a green card for more than five years. Aside from these basic federal guidelines, states have flexibility in setting eligibility criteria, and every state Medicaid program is different. For example, Alabama provides health coverage to working parents who have incomes below 23% of the Federal Poverty Level (FPL) (23% FPL = about $5,417 per year for a family of four), while Connecticut covers working parents with

[15] *See* 42 C.F.R. §§ 435, et seq. (*see also* KAISER FAM. FOUND., MEDICAID A PRIMER (2013), *available at* http://kaiserfamilyfoundation.files.wordpress.com/2010/06/7334-05.pdf).

incomes up to 191% of FPL (about $44,981 per year for a family of four).[16] In most states, single adults who are neither parents of dependent children nor disabled are generally excluded from coverage, even if they are extremely low-income and living with a chronic illness.

Every state receives a certain percentage of federal reimbursement (called the Federal Medical Assistance Percentage, or FMAP) for services it provides through its Medicaid program. The federal government, through the Centers for Medicare and Medicaid Services (CMS), sets overall program requirements, and mandates that all states cover certain categories of benefits such as physician services and hospitalizations. States must also follow comparability and state-wideness requirements. This means that states must provide all benefits to all beneficiaries when medically necessary. Beyond these broad requirements, each state administers its own program and has significant discretion over the type, amount, duration and scope of covered services.

The traditional model for reimbursement of Medicaid services is through "fee-for-service," meaning that a healthcare provider bills Medicaid for each individual service provided to a client, such as nutritional counseling. However, many states are now contracting with managed care organizations (MCOs) to manage and pay for all or some of their Medicaid benefits. In a managed care model, Medicaid provides fixed per-member per-month (PMPM) payments to an MCO to cover all or some of the state-required services for Medicaid members that belong to the MCO. The MCO bears some of the risk if the services provided exceed the costs of the capitation, but can also be rewarded if costs are kept low. The MCO may also choose to cover additional services, either because the MCO believes the benefit to health will outweigh the cost of providing such a service, or as a means of attracting clients. MCOs could choose to cover home-delivered meals for all or some of their critically-ill Medicaid enrollees for these reasons.

Medicaid Coverage of Nutritional Counseling

Under federal Medicaid rules, nutritional counseling is not specifically listed as either a mandated or optional benefit in the Medicaid program as it currently exists.[17] However, because of the broad flexibility given to states in defining benefits, a state can choose to cover nutritional counseling as part of its definition of services under one of the existing categories. For example, states can cover it as part of the mandated category of physician services,[18] or as an optional benefit category like preventive services.[19] States may cover nutritional counseling

---

[16] *Adult Income Eligibility Limits at Application as a Percent of the Federal Poverty Level (FPL),* KAISER FAM. FOUND.,http://kff.org/medicaid/state-indicator/income-eligibility-low-income-adults/ (last visited Dec. 1, 2013).

[17] *See* 42 C.F.R. §§ 440.1, et seq*; Medicaid Benefits*, MEDICAID, http://medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Benefits/Medicaid-Benefits.html (last visited Dec. 3, 2013).

[18] Physician services are defined broadly under federal law as "services furnished by a physician-- (1) Within the scope of practice of medicine or osteopathy as defined by State law; and (2) By or under the personal supervision of an individual licensed under State law to practice medicine or osteopathy." 42 C.F.R. § 440.50.

[19] Preventive services are defined as: services recommended by a physician or other licensed practitioner of the healing arts acting within the scope of authorized practice under State law to--(1) prevent disease, disability, and other health conditions or their progression; (2) Prolong life; and (3) Promote physical and mental health and

for all beneficiaries or choose to cover nutritional counseling only for certain populations. For example, states may choose to cover nutritional counseling only as part of chronic disease management for individuals living with HIV, diabetes, or for individuals struggling with obesity.

Generally all Medicaid services must be provided by a physician, nurse practitioner or "other licensed practitioner of the healing arts acting within the scope of authorized practice under state law."[20] This means that if a state wants to offer nutritional counseling, it must be provided by a licensed nutritionist, registered dietitian, or by another professional whose licensure encompasses nutrition services, such as a certified diabetes educator. Individual states may have additional rules that apply, such as only covering nutritional counseling services if they are provided in conjunction with a physician or other traditional medical provider. For example, in Massachusetts, MassHealth (Massachusetts' Medicaid program) generally covers Medical Nutrition Therapy, defined as "nutritional diagnostic therapy and counseling services for . . . management of a medical condition," if the service is provided by a MassHealth-registered physician, a registered dietitian or a licensed nutritionist.[21] A registered dietitian or licensed nutritionist cannot receive reimbursement under MassHealth unless she is under the supervision of a physician or another approved MassHealth provider. Because neither registered dietitians nor licensed nutritionists can become MassHealth providers on their own,[22] for an MTFNP in Massachusetts to receive Medicaid reimbursement for nutritional counseling services, it must partner with a physician or other approved MassHealth provider. By contrast, registered dietitians in Maryland are able to provide services without physician supervision and bill Medicaid directly for reimbursement once referred by a case manager.[23] Moveable Feast, an MTFNP in Baltimore, bills Medicaid directly (using an assigned agency code) for nutritional counseling services provided to its clients by its dietitians after the client is referred for services by the client's Medicaid case manager. [24]

However, recent changes to the definition of "preventive services" under federal law give states more flexibility to allow a broader range of providers, such as community health workers, to offer preventive services, as long as they are provided at the recommendation of a physician

---

efficiency. 42 C.F.R. § 440.130 (2013); see also KATHLEEN SEBELIUS, REPORT TO CONGRESS: PREVENTIVE AND OBESITY-RELATED SERVICES AVAILABLE TO MEDICAID ENROLLEES 9 (2010), http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Downloads/RTC_PreventiveandObesityRelatedServices.pdf.

[20] *See* 42 C.F.R. § 440.50 and § 42 C.F.R. 440.130.

[21] Bulletin from Tom Dehner, Medicaid Director, Massachusetts Office of Medicaid, to Physicians Participating in MassHealth (Jul. 2007).

[22] Id.; *Information About Massachusetts Insurers*, MASS. DIETETIC ASS'N, http://www.eatrightma.org/content5664 (last visited Dec. 1, 2013).

[23] *See Medicaid Waiver for Older Adults Billing and Reimbursement Reference Guide,* 14 (April 2011), http://www.aging.maryland.gov/documents/BillingandReimbursementGuide.pdf (Note, as will be discussed in latter sections of this paper, Maryland Medicaid only covers nutritional counseling for individuals in its waiver population).

[24] E-mail from Thomas Bonderenko, Exec. Dir., Moveable Feast to Duncan Farthing-Nichol, Student, Harvard Law School (Nov. 14, 2012, 12:48 EST) (on file with author); E-mail from Thomas Bonderenko, Exec. Dir., Moveable Feast to Duncan Farthing-Nichol, Student, Harvard Law School (Feb. 3, 2014, 11:13 EST) (on file with author); Interview with Thomas Bonderenko, Exec. Dir., Moveable Feast (Jul. 30, 2013); For more information about Moveable Feast, visit http://www.mfeast.org/ (last visited Dec. 1, 2013).

or other licensed practitioner. [25] Therefore states that choose to offer nutritional counseling as a preventive benefit will have more options in determining who may provide these services.

Medicaid Coverage of Home-Delivered Meals

For most beneficiaries, Medicaid does not provide coverage for home-delivered meals as a health care benefit. There are three routes a state can take to alter or enhance their Medicaid programs in order to make meals reimbursable. These include: (1) a Home and Community-Based Services (HCBS) 1915(c) Waiver;[26] (2) a Home and Community-Based Services (HCBS) 1915(i) State Plan Amendment;[27] or (3) a Section 1115 Demonstration Waiver.[28]

(1) HCBS 1915(c) Waivers

The main option through which states cover home-delivered meals is the Section 1915(c) HCBS waiver. A state may use a Medicaid waiver to cover non-traditional services, provide targeted services to specific populations (in other words, waiving the comparability and state-wideness requirements), and/or perform other activities that the federal Medicaid program would otherwise not cover for a limited period of time (usually 3-5 years).[29] Section 1915(c) HCBS waivers are a particular type of waiver that support in-home services to help states avoid institutionalizing individuals who would otherwise need to be placed in a nursing home.[30] The main target populations for HCBS waiver services are seniors, people with physical and intellectual disabilities, and people with mental illnesses. States can also choose to target HCBS waiver services more narrowly. For instance, a state could obtain an HCBS waiver to provide HCBS benefits to individuals living with HIV/AIDS. While federal law delineates certain specified benefits that states may cover as part of HCBS, it also permits states to request additional

---

[25] Previously, preventive services were defined as: services *provided* by, (as opposed to the new *recommended* by), a physician or other licensed practitioner of the healing arts acting within the scope of authorized practice under State law to--(1) prevent disease, disability, and other health conditions or their progression; (2) Prolong life; and (3) Promote physical and mental health and efficiency. 42 C.F.R. § 440.130 (2012).

[26] *See* 42 C.F.R. §§ 441.300, et seq.; *Home and Community Based 1915(c) Waivers*, MEDICAID, http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/Home-and-Community-Based-1915-c-Waivers.html (last visited Dec. 1, 2013).

[27] 42 U.S.C. § 1396n(i); *see* CTRS. FOR MEDICARE & MEDICAID SERVS. *Re: Improving Access To Home and Community Based Services* 8 (Aug. 6, 2010), http://www.healthreformgps.org/wp-content/uploads/he08092010_waiver.pdf.

[28] *See* 42 C.F.R. §§ 431.400, et seq.; *Section 1115 Demonstrations,* MEDICAID, http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/Section-1115-Demonstrations.html (last visited Dec. 1, 2013).

[29] *Waivers,* MEDICAID, http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/Waivers.html (last visited Dec 1, 2013, 2013). *See also* FAMILIES USA, ISSUE BRIEF, STATE PLAN AMENDMENTS AND WAIVERS: HOW STATES CAN CHANGE THEIR MEDICAID PROGRAMS (2012), *available at* http://familiesusa2.org/assets/pdfs/medicaid/State-Plan-Amendments-and-Waivers.pdf.

[30] *See* 42 C.F.R. §§ 441.300 Et seq.; *Home and Community Based 1915(c) Waivers*, MEDICAID, http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/Home-and-Community-Based-1915-c-Waivers.html (last visited Dec. 1, 2013).

services as may be approved by CMS, and home-delivered meals have been allowed under this category.[31]

To be eligible for HCBS waiver services, federal law requires that an individual meet the state's income and other financial requirements, and that but for the provision of home and community-based services, the individual would otherwise meet the state's criteria for needing to be institutionalized in a nursing facility, hospital or intermediate care facility for individuals with intellectual disabilities.[32] In order to be granted an HCBS waiver, states must demonstrate that the cost of providing HCBS would not exceed the cost of services for the target population in an institution.[33]

Each state has a different mix of HCBS 1915(c) waivers, each with different target populations, benefits, and eligibility criteria, including different criteria for institutionalization. In Massachusetts for example, the Frail Elder HCBS 1915(c) waiver covers nutritional counseling and home-delivered meals, among other services, for people who are age 60 or over, meet certain financial criteria, and require a nursing facility level of care or higher.[34] In Massachusetts, a person meets the nursing facility level of care if she:

a) needs at least one skilled nursing or therapist service daily or
b) needs nursing services at least three times per week, plus two other services per week which can include either additional nursing services or assistance with daily living services, or a combination of the two. [35]

By contrast, in Maryland, older individuals are eligible for HCBS waiver services if it is determined that they need "nursing facility services,"[36] defined as "services provided to individuals who do not require hospital care, but who, because of their mental or physical condition, require skilled nursing care and related services, rehabilitation services, or, on a regular basis, health-related care and services (above the level of room and board) which can be made available to them only through institutional facilities."[37]

In addition, states vary in how these HCBS waivers are administered. In many states, there is a coordinating agency which oversees eligibility, enrollment, and care plan creation. As with

---

[31] 42 C.F.R. §§ 440.180(b)(9).
[32] 42 C.F.R. §§ 441.302(c).
[33] 42 C.F.R. §§ 441.302 (e); For more information on waiver requirements versus other types of state changes to Medicaid programs, see FAMILIES USA, ISSUE BRIEF, STATE PLAN AMENDMENTS AND WAIVERS: HOW STATES CAN CHANGE THEIR MEDICAID PROGRAMS (2012), *available at* http://familiesusa2.org/assets/pdfs/medicaid/State-Plan-Amendments-and-Waivers.pdf.
[34] 130 C.M.R. § 519.007; *see also Home and Community-Based Service Waiver (HCBS)*, MASSRESOURCES.ORG, http://www.massresources.org/masshealth-waiver.html#frailelder (last visited Dec. 1, 2013); Home-delivered meals provided under the Waiver must "comply with the Executive Office of Elder Affairs' Nutrition Standards, and be religiously and ethnically appropriate to the extent feasible." E-mail from Shirley Wong, MassHealth, to Duncan Farthing-Nichol, Student, Harvard Law School (Dec. 3, 2012, 13:05 EST) (on file with author).
[35] 130 C.M.R. § 456.409; *see also Home and Community-Based Service Waiver (HCBS)*, MASSRESOURCES.ORG, http://www.massresources.org/masshealth-waiver.html#frailelder (last visited Dec. 1, 2013).
[36] COMAR 10.09.10.01(B)(41).
[37] COMAR 10.09.55.03(C)(1).

other Medicaid programs, states may offer their HCBS waiver services through traditional fee-for-service programs or through managed care organizations (MCOs). Other states offer a hybrid of the two. For example, in Massachusetts, Aging Services Access Points (ASAPs) administer all Frail Elder Waiver services in the state,[38] and reimbursement includes both a traditional fee-for-service option and a managed care option.[39]

In some instances, MTFNPs may be able to contract with the state directly to provide home-delivered meals services. In Maryland, the Living at Home 1915(c) waiver allows physically-disabled individuals ages 18-64 to receive a range of services, including nutrition services and home-delivered meals.[40] The state's Older Adults waiver includes nutritional services and home-delivered meals among the services Medicaid provides for individuals 65 and older.[41] Moveable Feast, an MTFNP in Maryland, responded to a state Request For Proposal (RFP) to provide home-delivered meal services to individuals covered by these waivers.[42] Moveable Feast was selected by the state as a vendor, and now provides services for eligible individuals at a reimbursement rate that is determined by the state. Moveable Feast does not assess qualifications for HCBS among their clients, but instead receives referrals for MNT and/or home-delivered meals from case managers who coordinate waiver services for individuals already enrolled in HCBS. Once Moveable Feast receives a referral for a service, they provide MNT by a registered dietitian and/or home-delivered meals, and then bill the state directly (note that not all clients receive both interventions, and therefore billing is separate for each service).[43]

In states offering long-term managed care, it may be possible for MTFNPs to negotiate directly with MCOs. For example, God's Love We Deliver (God's Love), an MTFNP in New York City, receives Medicaid reimbursement through contracts with Managed Long-Term Care (MLTC)

---

[38] 651 C.M.R. § 14.03(8).

[39] Eligibility Operations Memo 10-10, from Russ Kulp, Director, MassHealth Operations, Massachusetts Office of Medicaid, to MassHealth Eligibility Operations Staff, (Jun. 15, 2010), *available at:* thttp://www.mass.gov/eohhs/docs/masshealth/eom2010/eom-10-10.pdf.

[40] *MD Living at Home Waiver*, 0353.R02.00, *Waivers, available at:* http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/Waivers.html?filterBy=maryland; *see also Living at Home Waiver,* MARYLAND DEPARTMENT OF HEALTH AND MENTAL HYGIENE (2010), *available at* https://mmcp.dhmh.maryland.gov/docs/Living_Home_Waiver_Fact_Sheet_October_2010.pdf.

[41] *MD Older Adults Waiver*, 0265.R04.00, *available at:* http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/Waivers.html?filterBy=maryland; *see also, Older Adults Waiver,* MARYLAND DEPARTMENT OF HEALTH AND MENTAL HYGIENE (2010), *available at*: https://mmcp.dhmh.maryland.gov/docs/Living_Home_Waiver_Fact_Sheet_October_2010.pdf.

[42] E-mail from Thomas Bonderenko, Exec. Dir., Moveable Feast to Duncan Farthing-Nichol, Student, Harvard Law School (Nov. 14, 2012, 12:48 EST) (on file with author); Interview with Thomas Bonderenko, Exec. Dir., Moveable Feast (Jul. 30, 2013); For more information about Moveable Feast, visit http://www.mfeast.org/ (last visited Dec. 1, 2013).

[43] *Id.*; E-mail from Thomas Bonderenko, Exec. Dir., Moveable Feast to Duncan Farthing-Nichol, Student, Harvard Law School (Feb. 3, 2014, 11:13 EST) (on file with author); Interview with Thomas Bonderenko, Exec. Dir., Moveable Feast (Jul. 30, 2013); For more information about Moveable Feast, visit http://www.mfeast.org/ (last visited Dec. 1, 2013).

plans.[44] MLTC plans are MCOs paid a capitated rate by New York Medicaid to provide comprehensive health services to a long-term care population.[45] God's Love negotiates directly with the MLTC plan and the plan then pays God's Love the cost for the nutritional counseling and/or home-delivered meals provided to the client. While nutritional counseling is required for all clients, some MLTC plans provide their own nutritional counseling services separate from God's Love. In such cases, the reimbursement for the client covers only the cost of the meals.

(2) HCBS 1915(i) State Plan Amendment

In addition to the HCBS waiver, states can also offer home and community based services through an HCBS 1915(i) State Plan Amendment to individuals with incomes below 150% FPL who need assistance with care but are not yet at a level requiring institutionalization (as is required for HCBS waivers).[46] Prior to the ACA, the types of services states could provide under this option were more limited than those under HCBS waivers, and could not be targeted to specific populations. However, the ACA makes several changes to the 1915(i) option in order to make it more attractive to states.[47] First, it allows states to offer the full range of HCBS waiver services, including benefits such as home-delivered meals, that CMS may approve. Second, as with the HCBS waiver, benefits can now be targeted to specific populations, such as individuals living with HIV/AIDS or other chronic illnesses. Third, the ACA gives states the option to create a separate Medicaid eligibility category for individuals eligible for 1915(i) services (i.e., individuals do not have to meet an additional Medicaid eligibility requirement, such as being disabled, or the parent of a child). Finally, it allows states to expand eligibility for HCBS 1915(i) services to individuals who meet the eligibility criteria for HCBS waiver services with incomes up to 300% of the Supplemental Security Income (SSI) benefit rate.

Generally, a 1915(i) State Plan Amendment is a permanent change to the Medicaid program, where the 1915(c) waiver comes with the administrative burden of having to be periodically renewed.[48] However, when the 1915(i) option is used to provide services to targeted

---

[44] Interview with Alissa Wassung, Executive Policy and Planning Associate, God's Love We Deliver, in New York, NY (Nov. 15, 2012). Note that New York actually provides these home and community based services through a different kind of waiver, the 1115 Demonstration waiver, discussed later in the paper). E-mail from Alissa Wassung, Executive Policy and Planning Associate, God's Love We Deliver to author (Aug. 26, 2013, 1:23 EST) (on file with author).

[45] *Id.*

[46] 42 U.S.C. § 1396n(i).

[47] *See* CTRS. FOR MEDICARE & MEDICAID SERVS., *Re: Improving Access To Home and Community Based Services* 8 (Aug. 6, 2010), *available at* http://www.healthreformgps.org/wp-content/uploads/he08092010_waiver.pdf; SARAH SOMERS, NATIONAL HEALTH LAW PROGRAM, COVERING HCB SERVICES THROUGH THE 1915(I) STATE PLAN OPTION STATE (NATIONAL) (Nov. 23, 2010) *available at* http://www.healthlaw.org/issues/medicaid/medicaid-expansion-toolbox/state-resources/qa-covering-hcb-services-through-1915i-state-plan-option; *see also* KAISER FAM. FOUND., STATE OPTIONS THAT EXPAND ACCESS TO MEDICAID HOME AND COMMUNITY-BASED SERVICES (2011), *available at* http://www.kff.org/medicaid/upload/8241.pdf; DAVID MACHLEDT, NATIONAL HEALTH LAW PROGRAM, PROMOTING COMMUNITY LIVING: UPDATES ON HCBS & THE ACA 5 (2012), *available at* http://healthlaw.org/images/stories/Promoting_Community_Living_Updates_on_HCBS_&_the_ACA.pdf.

[48] KAISER FAM. FOUND., STATE OPTIONS THAT EXPAND ACCESS TO MEDICAID HOME AND COMMUNITY-BASED SERVICES (2011), *available at* http://www.kff.org/medicaid/upload/8241.pdf; DAVID MACHLEDT, NATIONAL HEALTH LAW PROGRAM,

populations, the option must be renewed at the end of five years. There is flexibility in the type of targeted services that can be provided through a 1915(i) State Plan Amendment. For example, Montana recently proposed an amendment to provide certain mental health services (such as peer support and home-based therapy) to youth with serious emotional disturbances.[49] No state has requested a 1915(i) State Plan Amendment in order to specifically cover home-delivered meals or nutritional counseling. However, the ability to make a change that targets specific services to populations who may not yet need to be institutionalized makes the 1915(i) State Plan Amendment an important option for expanding state Medicaid coverage of home-delivered meals. In addition, unlike the option to change Medicaid through a waiver, there is no requirement to demonstrate cost or budget neutrality.

(3) Section 1115 Demonstration Waiver

In addition to waivers and state plan amendments that are specific to HCBS services, states also have the option to apply for section 1115 demonstration waivers.[50] Section 1115 demonstration waivers are designed to give states broad options to expand eligibility, offer different kinds of benefits, and experiment with various care delivery models in order to improve Medicaid programs. These waivers must be budget neutral, meaning that a state must demonstrate that the changes they are requesting would not require any more federal dollars over the course of the project than what would have been the case if the state had not enacted the waiver.[51] Massachusetts, for example, has an 1115 waiver that expands Medicaid eligibility

---

PROMOTING COMMUNITY LIVING: UPDATES ON HCBS & THE ACA 5 (2012), *available at* http://healthlaw.org/images/stories/Promoting_Community_Living_Updates_on_HCBS_&_the_ACA.pdf. For a more detailed explanation of the administrative requirements for waivers compared to state plan amendments (i.e., making a change to the state's overall Medicaid program rather than asking the federal government to temporarily waive certain requirements), see FAMILIES USA, ISSUE BRIEF, STATE PLAN AMENDMENTS AND WAIVERS: HOW STATES CAN CHANGE THEIR MEDICAID PROGRAMS (2012), *available at* http://familiesusa2.org/assets/pdfs/medicaid/State-Plan-Amendments-and-Waivers.pdf.

[49] *1915(i) Home and Community Based Services State Plan Program For Youth With Serious Emotional Disturbance* (2013), MONTANA DEP. OF HEALTH AND HUMAN SERVS., *available at* http://www.dphhs.mt.gov/mentalhealth/children/i-home/PolicyManual.pdf.

[50] *See* 42 C.F.R. §§ 431.400, et seq.; *Section 1115 Demonstrations,* MEDICAID, http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/Section-1115-Demonstrations.html (last visited Dec. 1, 2013); ROBIN RUDOWITZ, ET AL., KAISER FAM. FOUND., A LOOK AT MEDICAID 1115 DEMONSTRATION WAIVERS UNDER THE ACA: A FOCUS ON CHILDLESS ADULTS (Oct. 9, 2013), *available at: http://kff.org/report-section/section-1115-medicaid-demonstration-waivers-issue-brief/.*

[51] Calculations for budget neutrality can be complex and varies by state. Generally cost-neutrality is enforced through use of capped funds: the federal government will agree to expend only a certain amount of money through the duration of the waiver, with the state at risk for expenditures beyond that amount. For more information, *see* ROBIN RUDOWITZ, ET AL., KAISER FAM. FOUND., A LOOK AT MEDICAID 1115 DEMONSTRATION WAIVERS UNDER THE ACA: A FOCUS ON CHILDLESS ADULTS, (Appendix A) (Oct. 9, 2013), *available at:* http://kff.org/report-section/section-1115-medicaid-demonstration-waivers-appendix/; THE ROBERT WOOD JOHNSON FOUND., STATE COVERAGE INITIATIVES ISSUE BRIEF, MEDICAID 1115 WAIVERS AND BUDGET NEUTRALITY: USING MEDICAID FUNDS TO EXPAND COVERAGE (May 2001), *available at* http://www.statecoverage.org/files/Section%201115%20Waivers%20and%20Budget%20Neutrality%20-%20Using%20Medicaid%20Funds.pdf; U.S. GOV'T ACCOUNTABILITY OFFICE, MEDICAID DEMONSTRATION WAIVERS APPROVAL PROCESS RAISES COST CONCERNS AND LACKS TRANSPARENCY (Jun. 2013) *available at*:

for all individuals living with HIV/AIDS in the state with income below 200% FPL ($22,980/year for an individual), among other initiatives.[52] Some states, like New York, use 1115 waivers to provide HCBS services. States could also use an 1115 waiver to offer home-delivered meals as part of a benefits package for certain individuals. For example, a state might apply for an 1115 waiver to expand coverage to individuals with certain chronic illnesses, such as HIV/AIDS or diabetes, and include home-delivered meals among the benefits offered. As an alternative to pushing for a change that covers the whole population, advocates can frame the 1115 waiver as a way for their state to test the efficacy of providing MTFNI to certain populations in order to decrease costs and improve health outcomes. Like the HCBS state plan option, the 1115 waiver is another means for covering meals through Medicaid that advocates could urge their states to pursue.

Medicaid and the ACA[53]

Prior to the ACA, in most states individuals had to be both low-income and meet a particular category of eligibility (e.g., by being either a parent of a child or by being disabled) in order to qualify for Medicaid. Beginning in 2014, the ACA gives states the option to eliminate categorical eligibility requirements and expand their Medicaid programs to all individuals with incomes below 133% FPL (about $15,282 year for a single person in 2013), meaning that most individuals will be eligible for Medicaid so long as they meet the income standards. The law as originally passed required all states to participate in this expansion, but due to a Supreme Court decision in July of 2012, expanding Medicaid is now optional for states.[54] There is no deadline by which states must decide whether to expand Medicaid, but there are financial incentives in the form of increased federal reimbursement rates for states that expand their Medicaid programs prior to 2020.

Newly eligible Medicaid beneficiaries under the ACA expansion must have access to health plans that cover at least ten categories of services, called Essential Health Benefits or EHBs.[55]

---

http://www.gao.gov/assets/660/655483.pdf. For additional information on 1115 waivers and cost-offsets for HIV populations, *see* HARVARD LAW SCHOOL HEALTH LAW AND POLICY CLINIC, TREATMENT ACCESS EXPANSION PROJECT, AND AIDS FOUNDATION OF CHICAGO, 1115 WAIVERS: A BRIDGE TO 2014 FOR PEOPLE LIVING WITH HIV (Nov. 2010), *available at:* http://www.taepusa.org/Library/PowerpointPresentations.aspx

[52] *See Massachusetts Section 1115 Demonstration Factsheet* (Sept. 11, 2013), MEDICAID, *available at* http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/ma/ma-masshealth-fs.pdf.

[53] For a comprehensive summary of the Affordable Care Act, *see* KAISER. FAM. FOUND., FOCUS ON HEALTH REFORM: SUMMARY OF THE AFFORDABLE CARE ACT, P.L. 111-148, (April 23, 2013) *available at* http://kaiserfamilyfoundation.files.wordpress.com/2011/04/8061-021.pdf.

[54] National Federation of Independent Business v. Sebelius, 132 S.Ct. 2556 (2012).

[55] 42 C.F.R. § 440.347; Essential Health Benefits include items and services within 10 categories including: ambulatory patient services; emergency services; hospitalization; maternity and newborn care; mental health and substance use disorder services, including behavioral health treatment; prescription drugs; rehabilitative and habilitative services and devices; laboratory services; preventive and wellness services and chronic disease management, and pediatric services, including oral and vision care; see also *Glossary: Essential Health Benefits,* WWW.HEALTHCARE.GOV,, https://www.healthcare.gov/glossary/essential-health-benefits/ (last visited Dec. 3, 2013).

These ten categories include, among other benefits, both preventive care and chronic disease management. As part of the EHB package, benefits packages must include coverage without cost-sharing of all preventive health services that receive an "A" or "B" rating from the United States Preventive Services Task Force (USPSTF).[56] This has particular implications for Medicaid coverage of nutritional counseling, referred to in many Medicaid programs as medical nutrition therapy. While general nutritional counseling for all populations has not yet been given an A or B rating, the USPSTF does give a "B" rating to nutritional counseling "for adult patients with hyperlipidemia and other known risk factors for cardiovascular and diet-related chronic disease."[57] This means that all Medicaid plans for the newly eligible beneficiaries must cover MNT at least at the level recommended by the USPSTF.

Beyond covering specified USPSTF preventive services, there are very few specific service requirements for EHB categories.[58] Initially, advocates had hoped that EHB mandates would present an opportunity to set a comprehensive federal floor of required coverage. However, since the passage of the ACA, the federal government has decided that each state will be responsible for defining its own EHB package by reference to a chosen "benchmark" plan. In Medicaid, health plans for newly eligible individuals are called Alternative Benefits Plans (ABPs). States must create an ABP package from a prescribed set of benchmark plans (including the state's existing Medicaid package) or may create their own ABP with federal government approval.[59] All ABPs must cover all ten EHB categories, including USPSTF A and B recommended services. States could choose to include coverage of home-delivered meals and nutritional counseling in their APBs for all their newly eligible beneficiaries who need these services, though they are not mandated to do so. States also have the opportunity to create more than one ABP for different populations, and vary the types of services each ABP covers. For example, states could create a separate ABP for newly eligible individuals living with HIV, cancer or other chronic illness that includes coverage of home-delivered meals. Regardless of how many different ABPs a state creates, each package must include coverage of all EHB categories.

Since many states have not yet selected their ABPs and states have the authority to create new ABPs, there is still time for MTFNPs in Medicaid expansion states to advocate for inclusion of nutritional counseling and home-delivered meals. In order to expand Medicaid, each state must submit an amendment to their Medicaid state plans to the federal government describing their new ABPs. Prior to initiating this amendment, states will need to provide advance notice to the public and a "reasonable opportunity" for comment.[60] Note that some states have also begun

---

[56] See *Glossary: What Are My Preventive Care Benefits,* WWW.HEALTHCARE.GOV, https://www.healthcare.gov/what-are-my-preventive-care-benefits/ (last visited Dec. 1, 2013).

[57] *USPSTF A and B Recommendations*, UNITED STATES PREVENTIVE SERVICES TASK FORCE, http://www.uspreventiveservicestaskforce.org/uspstf/uspsabrecs.htm (last visited Dec. 1, 2013).

[58] For a list of United States Preventive Services Task Force (USPSTF) A and B Recommendations, *see USPSTF A and B Recommendations,* UNITED STATES PREVENTIVE SERVICES TASKFORCE, http://www.uspreventiveservicestaskforce.org/uspstf/uspsabrecs.htm (last visited Dec. 1, 2013).

[59] 42 C.F.R. § 440.300, et seq.; see also .*Frequently Asked Questions on Essential Health Benefits Bulletin*, (Nov. 16, 2011), CTRS. FOR MEDICARE & MEDICAID SERVS .*available at* http://www.cms.gov/CCIIO/Resources/Files/Downloads/ehb-faq-508.pdf.

[60] 42 C.F.R. §440.386 (new as of July 2013).

to use 1115 Medicaid waivers to implement their expansion programs rather than a state plan amendment.[61] The 1115 waiver process also requires opportunities for public comment. In this context the opportunity for comment must be at least 30 days and the state must hold a minimum of two public hearings.[62] MTFNPs should participate in any public comment periods and/or hearings to advocate for inclusion of their services.

Even prior to the public comment period, MTFNPs should also consider joining coalitions of advocates for the chronically ill to collectively urge their state to cover medically-tailored food and nutrition intervention services for all newly eligible beneficiaries or, in the alternative, to develop different ABPs for these populations. ABPs for the chronically ill could include nutritional counseling, home-delivered meals, more expansive case management, and other benefits that are particularly critical to this population.

However, it is important to note that under the ACA, newly eligible and existing Medicaid beneficiaries might be treated differently when it comes to coverage of preventive services like nutritional counseling.[63] For the existing Medicaid population, in both expansion and non-expansion states, the state is not required to make any changes to the current level of benefits or cost-sharing. The federal government has tried to incentivize states to voluntarily cover preventive services recommended by the USPSTF without cost-sharing for their existing population, by increasing their Federal Medical Assistance Percentage (FMAP) funds by 1% if they do, but this is not required. [64] Therefore, after Medicaid expands, some individuals within the same state with similar medical profiles may not be entitled to receive the same services at the same cost-sharing levels, even though they are both enrolled in the state's Medicaid program.

New Coordinated Care Options for Medicaid: Medicaid Health Homes (MHH)

In addition to expanding eligibility, the ACA creates the Medicaid Health Home option, a new opportunity for states to provide additional care coordination and support services to individuals on Medicaid who are living with chronic illnesses. Medicaid Health Homes (MHH) build on the concept of the Patient-Centered Medical Home (PCMH) model of care, which emphasizes coordinated and holistic primary care services for patients as overseen by a

---

[61] States that are using this process are usually opting for waivers because they are requesting permission to expand Medicaid in the form of premium assistance for private plans rather than through the creation of new Alternative Benefit Plans (ABPs) in their existing Medicaid programs. In this model, the state instead uses Medicaid dollars to help newly eligible enrollees purchase qualified health plans (QHPs) on the new private health insurance marketplaces. See, for example, THE ARKANSAS HEALTH CARE INDEPENDENCE PROGRAM (PRIVATE OPTION)-DEMONSTRATION, (Sept. 27, 2013) *available at* http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/ar/ar-private-option-ca.pdf.

[62] 42 CFR § 431.412.

[63] *Existing Medicaid Beneficiaries Left Off the Affordable Care Act's Prevention Bandwagon*, Sara E. Wilensky and Elizabeth A. Gray, Health Affairs 32 No. 7 (2013), 1188-1195.

[64] SARA ROSENBAUM, HEALTHREFORMGPS, UPDATE: MEDICAID PREVENTIVE SERVICES COVERAGE INCENTIVE FOR TRADITIONAL ADULT BENEFICIARIES COVERED UNDER THE STANDARD MEDICAID PROGRAM (Feb., 21, 2013), *available at* http://healthreformgps.org/wp-content/uploads/Rosenbaum-Medicaid-Prevention-Incentive-SMD.pdf.

particular provider or group of providers. Many Medicaid programs (like MassHealth in Massachusetts, for example) and/or private MCOs are likely to require most enrollees to get their primary care from a PCMH in the future.

The MHH option is a formal Patient-Centered Medical Home for Medicaid recipients living with two or more specified chronic health conditions, or who have a specified chronic condition and are considered to be at risk for another. MHHs have a particular emphasis on providing integrated behavioral health services, meaning that MHHs must have a plan to ensure access to coordinated primary care, mental health, and substance-use disorder services. States that take up the MHH option receive increased federal matching dollars for the provision of MHH care coordination services.[65] These services must at least include: comprehensive care management and coordination; health promotion; comprehensive transitional care and follow-up; incorporation of patient and family support; and referral to community and social support services. Any state can create MHHs regardless of whether the state participates in the Medicaid expansion.[66]

MHH providers are expected to coordinate all aspects of a patient's health, including chronic disease management, and must help to connect the patient with outside community social supports as needed. States have the option of allowing three different types of entities to serve as an MHH: 1) a designated provider, such as physician or health center; 2) a team of health professionals, which may include a nutritionist; or 3) a health team, which must include a nutritionist, among other providers. [67] Although states have discretion in whether and how to offer MHHs, the law's specific mention of nutritionists in two types of provider categories indicates that nutrition services should be part of care delivery, management, and coordination in all MHHs. Moreover, MHHs need to meet specific quality metrics. CMS has suggested that such metrics include documentation of the number of enrollees who receive an Adult Body Mass Index (BMI) assessment and reduced acute inpatient readmission, both of which can be improved by access to nutrition services and/or home-delivered meals.[68] The MHH's focus on comprehensive, holistic, and cost-effective care for chronically ill individuals aligns with the mission and client population served by MTFNPs, creating an important opportunity for partnership and integration.

---

[65] *Health Homes*, MEDICAID, http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Long-Term-Services-and-Support/Integrating-Care/Health-Homes/Health-Homes.html (last visited Dec. 1, 2013).
[66] ACA, 42 U.S.C. § 2703 (2010); *see also* CTRS. FOR MEDICARE & MEDICAID SERVS. *Re: Health Homes for Enrollees with Chronic Conditions* 8 (Nov. 16, 2010), *available at* http://downloads.cms.gov/cmsgov/archived-downloads/SMDL/downloads/SMD10024.pdf.
[67] ACA, 42 U.S.C. § 2703(a) (2010).
[68] CTRS. FOR MEDICARE & MEDICAID SERVS. *Re: Health Homes Core Quality Measures* (Jan. 15, 2013), *available at* http://www.medicaid.gov/Federal-Policy-Guidance/downloads/SMD-13-001.pdf.

Opportunities for Medicaid Advocacy

In traditional Medicaid, any coverage of nutrition services, including home-delivered meals and nutritional counseling, is optional for states. As a result some states only cover nutritional counseling and/or home-delivered meals on a very limited basis, while others do not cover these services at all. As Medicaid programs expand under the ACA, newly eligible Medicaid beneficiaries will gain access to coverage of nutritional counseling for certain conditions, as defined by the USPSTF, but not all states will choose to expand their programs, and home-delivered meals are not included as part of the newly required services. [69]

MTFNPs could advocate for their state Medicaid programs to begin to cover, or expand existing coverage of, both nutritional counseling and home-delivered meals as part of their current Medicaid benefit plans, and as part of ABPs for newly eligible enrollees in Medicaid expansion states. If states do not already cover these services, this would require a legislative or administrative change, depending on the state. Some states require legislative approval prior to making a change to Medicaid benefits, while others only require administrative approval by the state Medicaid office. In the first instance, state advocates would need to urge passage of a state law that requires the state Medicaid program to cover nutritional counseling and/or home-delivered meals. In other states, advocates may be able to work directly with Medicaid administrative officials to make this change.

In either case, in order to change Medicaid benefits, states must ultimately amend their Medicaid state plans or apply for waivers, and all proposed changes must be approved by the federal government. There are no federal restrictions that prohibit the ability of a state to offer either nutritional counseling or home-delivered meals.[70] Because of the broad flexibility given to states in defining the amount, duration and scope of offered benefits, it is possible for nutritional counseling or home-delivered meals to be included as a benefit under one of the existing mandatory or optional categories (such as physician services or preventive services), or as a separate CMS-approved benefit. In addition to advocacy at the state level, as will be discussed later in the paper, the federal standards for essential health benefits (EHB) requirements will be reviewed and potentially revised in 2016, at which time there may be another opportunity to advocate for inclusion of MTFNI as a required benefit.

---

[69] For a list of United States Preventive Services Task Force (USPSTF) A and B Recommendations, *see USPSTF A and B Recommendations,* UNITED STATES PREVENTIVE SERVICES TASKFORCE, http://www.uspreventiveservicestaskforce.org/uspstf/uspsabrecs.htm (last visited Dec. 1, 2013).

[70] Some states may have restrictions that prohibit entities from billing Medicaid for services that are provided for free to non-Medicaid clients, which may have an impact on the ability of Medically-Tailored Food and Nutrition Intervention Providers to bill Medicaid clients while continuing to offer their services free of charge to other non-Medicaid clients. However, this is not a requirement in federal Medicaid law. For a brief discussion of this issue in the context of the Ryan White Program, *see* NATIONAL ASSOCIATION OF STATE AND TERRITORIAL AIDS DIRECTORS AND THE HARRISON INSTITUTE FOR PUBLIC LAW, GEORGETOWN LAW , STATE HEALTH DEPARTMENT BILLING FOR HIV/AIDS AND VIRAL HEPATITIS: AN ANALYSIS OF LEGAL ISSUES IN FIVE STATES (Feb. 2013), 7-8, *available at: http://nastad.org/docs/NASTAD-Harrison-Report-HD-Billing-Legal-Regulatory-Challenges.pdf.*

In states that choose to establish MHHs, MTFNPs can move to establish relationships with these new care teams as a community-based resource for their MHH clients. MHH providers are committed to a team-based care structure that provides case management and connects high-needs patients to community-based services. This means that they are already attuned to their patients' whole health, and therefore likely to appreciate the value of MTFNI as a key component of effective care.

To make the case for inclusion of MTFNI in Medicaid, new Medicaid benefit packages, and Medicaid Health Homes, MTFNPs will need to demonstrate the potential for cost savings and health benefits. While available research supports the idea that the provision of medically-tailored home-delivered meals coupled with nutritional counseling is an effective intervention, MTFNPs will need to think strategically about how to track the impact of their services within their own client communities. As decision-makers realize the value of nutritional counseling and home-delivered meals, MTFNPs will have greater success in advocating for inclusion of their services in routine health care.

B. Medicare

Like Medicaid, Medicare offers reimbursement opportunities for MTFNPs. Individuals who are enrolled in Medicare Advantage or in a Medicare Special Needs Plan can receive home-delivered meals and nutritional counseling as part of their covered benefits under certain circumstances. The ACA has created new care delivery structures in Medicare called Accountable Care Organizations (ACOs). ACOs are incentivized to incorporate services that reduce the cost of care while improving health outcomes, making them excellent potential partners for MTFNPs.

Medicare: An Overview

Medicare is the federal health insurance program that covers most people over the age of 65 as well as disabled individuals regardless of age (disabled individuals must have been disabled for more than twenty-four months or have end-stage renal disease). Medicare offers four types of coverage: hospital insurance (Part A), medical insurance (Part B), Medicare Advantage (Part C) and prescription drug coverage (Part D). People enrolled in Part A and/or B receive coverage directly from Medicare, while people enrolled in Part C receive all Part A and B services through a private MCO.[71] Unlike Medicaid, which is a state and federal partnership, Medicare is entirely a federal program, and benefits and eligibility are more consistent across states for Part A and B services.

[71] *Medicare*, SOCIAL SECURITY, http://www.socialsecurity.gov/pubs/EN-05-10043.pdf (last visited Dec. 1, 2013).

Medicare Coverage of Nutritional Counseling

Medicare covers medical nutrition therapy under its Part B services for people with non-dialysis kidney disease, diabetes, or who suffer from obesity, and those who have had a kidney transplant. All must first receive a referral from a doctor or health care provider.[72] Medicare defines medical nutrition therapy as "nutritional assessment, one-on-one counseling, and therapy through an interactive telecommunications system provided by a registered dietitian or Medicare-approved nutrition professional."[73] Registered dietitians may enroll directly as Medicare providers by obtaining a National Provider Identifier and completing the Medicare enrollment process.[74] The registered dietitian can then bill Medicare directly for nutritional counseling services.

Medicare Coverage of Home-Delivered Meals

In general, while Medicare Parts A and B cover some limited home health and long-term care services, they do not cover home-delivered meals.[75] However, under Medicare Part C (Medicare Advantage), individuals may choose to receive Medicare benefits through private MCOs, called Medicare Advantage (MA) plans. The federal government gives each MA plan a per-member per-month (PMPM) payment (similar to Medicaid MCOs) to provide standard Medicare services, and, like other MCOs, the plan assumes the risk if services cost more than the capitated amount.[76] Unlike general Medicare Part A and B services, MA plans can offer nutritional counseling to a broader array of beneficiaries by offering these services as a supplemental benefit.[77] MA plans may similarly provide coverage of home-delivered meals as a supplemental benefit under specific circumstances. In particular, MA plans may cover home-delivered meals "if the service is: 1) needed due to an illness; 2) consistent with established medical treatment of the illness; and 3) offered for a short duration."[78] There are two specific circumstances under which MA plans can cover meals if the above criteria are met. First, meals may be offered to individuals immediately following surgery or an inpatient hospital stay, as long as the meals are only provided for a temporary period, and are ordered by a physician or non-physician practitioner. Second, meals may be covered for individuals with chronic

---

[72] *Nutrition therapy services (medical)*, MEDICARE, http://www.medicare.gov/coverage/nutrition-therapy-services.html (last visited Dec. 1, 2013).
[73] *Id.*
[74] *The National Provider Identifier*, MEDICARE, http://www.cms.gov/Regulations-and-Guidance/HIPAA-Administrative-Simplification/NationalProvIdentStand/downloads/npi_fs_geninfo_010906.pdf (last visited Dec. 3, 2013); *Medicare Enrollment for Physicians, Non-Physician Practitioners and Other Health Care Suppliers* 3 (2009), MEDICARE, *available at* http://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/MedicareProviderSupEnroll/downloads/Suppliers.pdf.
[75] *Home health services*, MEDICARE, http://www.medicare.gov/coverage/home-health-services.html (last visited Dec. 1, 2013).
[76] KAISER FAM. FOUND., MEDICARE ADVANTAGE FACTSHEET, (Nov. 25, 2013), *available at* http://kff.org/medicare/fact-sheet/medicare-advantage-fact-sheet/.
[77] *Medicare Managed Care Manual* 35-37, MEDICARE, http://cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/mc86c04.pdf (last visited Dec. 1, 2013).
[78] *Id.*

conditions like hypertension or diabetes, if such meals are ordered by a physician or non-physician practitioner, are provided for short period of time, and are part of a program intended to "transition the enrollee to lifestyle modifications."[79]

There are also specific kinds of MA plans, called Special Needs Plans (SNPs), that limit eligibility to certain targeted groups of individuals and that may offer benefits beyond those of regular MA plans. There are three kinds of SNPs: SNPs for different groups of individuals with certain specified chronic illnesses (C-SNPs);[80] institutional SNPs for individuals living in nursing homes or who require nursing care at home (I-SNPs), and dual eligible SNPs (D-SNPs).[81] D-SNPs that participate in a particular Benefits Flexibility Initiative can choose to offer home-delivered meals at no additional cost to enrollees, and without the restrictions imposed on regular MA plans.[82] SNPs are not available in every area, and states vary with regard to the types of SNPs that may be available.

In addition to home-delivered meal services specifically authorized by Medicare, some MA plans independently choose to offer coverage of home-delivered meals by partnering with nutrition service organizations such as Meals On Wheels, or by offering home-delivered meals as part of an expanded plan that recipients can obtain by paying extra money.[83] In both these instances, the meals are not considered an actual Medicare benefit.

Accountable Care Organizations (ACOs) in Medicare

Accountable Care Organizations (ACOs) are a new method of organizing care delivery and payment.[84] An ACO is a partnership of health care providers whose reimbursement is partially contingent on meeting quality metrics and reducing care costs. A group of providers, including but not limited to hospitals, managed care organizations, surgery centers, and physician practices, may apply to become an ACO under Medicare. There are several initiatives underway in which ACOs are working to provide better care coordination among Medicare Part A and B services to ensure better health outcomes and lower costs. For the first phase of these projects, the ACO providers will continue to receive fee-for-service reimbursement from Medicare for

---

[79] *Id.*

[80] For a list of the chronic conditions that make an individual eligible for C-SNPs, see *Guide to Medicare Special Needs Plans,* CTRS. FOR MEDICARE & MEDICAID SERVS.(Nov. 2011) http://www.medicare.gov/Pubs/pdf/11302.pdf (last visited Dec. 1, 2013).

[81] *Frequently Asked Questions About Special Needs Plans*, MEDICARE, http://www.medicare.gov/sign-up-change-plans/medicare-health-plans/medicare-advantage-plans/special-needs-plans-faq.html#collapse-3318 (last visited Dec. 1, 2013).

[82] *Note to All Medicare Advantage Organizations, Prescription Drug Plan Sponsors, and Other Interested Parties,* MEDICARE 105-109 (2012), *available at* http://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/downloads/Announcement2013.pdf.

[83] *Medicare Managed Care Manual* 37, MEDICARE, http://cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/mc86c04.pdf (last visited Dec. 1, 2013).

[84] *Accountable Care Organizations,* CTRS. FOR MEDICARE & MEDICAID SERVS. http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/ACO/index.html?redirect=/ACO/ (last visited Dec. 1, 2013).

services provided under Medicare Part A and B. If the ACO meets Medicare-defined quality metrics, such as low readmission rates for patients with certain conditions who are treated by ACO providers, and the overall care costs for patients treated by the ACO are lower than predicted, Medicare will pay the ACO part of the cost savings it helped generate.[85] The ACO payment structure encourages providers to coordinate services and to pay close attention to patients' health outside of appointments, both to meet the quality requirements and to reduce overall costs.

Currently, most ACOs are in the early stages of development and bill Medicare on a fee-for-service basis for Part A and B services, which includes nutritional counseling only for certain individuals and does not cover home-delivered meals. Over time, ACOs that meet certain milestones for quality and cost-savings will move towards a capitated per-member per-month rate (PMPM, similar to the payment method for MCOs), which will allow them to have more flexibility in providing services that Medicare might not ordinarily cover.[86] This flexibility will create an opportunity for MTFNPs to contract with ACOs to provide non-traditional benefits that improve health outcomes and lower costs, like home-delivered meals.

Pursuing Medicare Reimbursement

As with Medicaid, Medicare offers opportunities for MTFNPs to receive reimbursement for nutritional counseling and/or home-delivered meals. For reimbursement of home-delivered meals, MTFNPs could partner with the Medicare Advantage (MA) plans in their state that offer home-delivered meals either as part of the plan's existing supplemental services or as part of a D-SNP, as well as with MA plans that offer additional home-delivered meal benefits outside of Medicare. MTFNPs could also reach out to MA plans that do not currently offer home-delivered meals to urge them to provide these services as a way to improve the health of their enrollees and cut down on costs. As with Medicaid HCBS, some MA plans may already have contracts for food services. MTFNPs should be prepared to make the case for why their services are unique and more likely to result in cost savings and improved health outcomes among the plans' enrollees.

ACOs' emphasis on delivering coordinated "whole-person" care in order to yield better outcomes aligns with the mission of MTFNPs, who have long recognized the critical role of nutrition services in achieving maximum health. To the extent that MTFNPs can demonstrate their expertise in providing nutrition services and show that these services play a huge role in

---

[85] *Accountable Care Organization 2013 Program Analysis,* CTRS. FOR MEDICARE & MEDICAID SERVS. 11, (Dec. 21, 2012), *available at* http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/Downloads/ACO-NarrativeMeasures-Specs.pdf.

[86] *See Accountable Care Organizations,* CTRS. FOR MEDICARE & MEDICAID SERVS.http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/ACO/index.html?redirect=/ACO/ (last visited Dec. 1, 2013); *Pioneer Accountable Care Organization (AC) Model Program Frequently Asked Questions 3,* CTRS. FOR MEDICARE & MEDICAID SERVS.*http://innovation.cms.gov/Files/x/Pioneer-ACO-Model-Frequently-Asked-Questions-doc.pdf (last visited Dec. 1, 2013).*

reducing medical costs and improving the efficacy of medical treatment, they will be in a strong position to seek reimbursement for their services from an ACO.

C. Dual Eligible Programs: PACE and Integrated Care Organizations (ICOs)

Dual eligible programs provide care for low-income elderly or disabled people that are eligible for both Medicare and Medicaid. The populations that these programs serve are likely to have high medical needs, including the need for nutritional services. While there are many different dual eligible initiatives, this section examines the Program of All-Inclusive Care for the Elderly (PACE) as a potential partner for MTFNPs and discusses other dual eligible demonstration projects.

Overview and Opportunities: The Program of All-Inclusive Care for the Elderly (PACE)

The Program of All-Inclusive Care for the Elderly (PACE) is a joint Medicare-Medicaid program (based on a capitation model) that states can implement to help keep elderly people in their homes and communities instead of in institutionalized care.[87] PACE Elder Service Plans (ESPs) provide all benefits authorized by Medicare and can also include a range of additional medical and social services, including nutritional counseling and home-delivered meals.[88] PACE programs are operated by non-profit agencies. Clients who enroll in a PACE ESP agree to receive health services only from their PACE ESP organization.[89] Thirty-one states currently have PACE programs, but services may not be available in every town. To qualify for PACE services, an individual must be age 55 or older, require a nursing facility level of care, and live within a PACE's service area.[90] In addition to dual-eligibles, PACE also serves individuals who meet these criteria who have only Medicare or Medicaid.[91]

As with HCBS waivers and Medicare, MTFNPs can partner with a PACE organization and receive reimbursement for providing MNT and home-delivered meals to the PACE's critically ill clients. MTFNPs should research whether their state currently offers PACE, and if so, which nonprofit entity administers the program.

---

[87] *PACE*, MEDICARE, http://www.medicare.gov/your-medicare-costs/help-paying-costs/pace/pace.html (last visited Dec. 1, 2013).
[88] *Id.*
[89] For a list of PACE programs in each state, *see* NATIONAL PACE ASSOCIATION, *PACE IN THE STATES, (Jan. 1, 2013) available at* http://www.npaonline.org/website/download.asp?id=1741&title=PACE_in_the_States.
[90] *Quick Facts about Programs of All-inclusive Care for the Elderly (PACE)*, CTRS. MEDICARE & MEDICAID SERV., http://www.npaonline.org/website/download.asp?id=2378&title=Quick_Facts_about_PACE_(CMS_Publication) (last visited Dec. 3, 2013).
[91] *Id.*

The ACA and Dual Eligible Demonstration Projects

Dual-eligibles demonstration projects experiment with new models of care delivery that aim to improve care for individuals who are dually eligible for both Medicaid and Medicare. These groups often require more health care services and incur more health-related costs than the general population. Because MTFNPs often serve individuals with complex health care needs, there may be significant overlap between the dual-eligible enrollees being targeted in these projects and clients in need of MTFNP services. Currently, for dual-eligible individuals, Medicare provides the bulk of primary care services, while Medicaid covers particular Medicare cost-sharing and premium requirements, and often provides direct coverage of long-term care services.[92] Because each program covers different services and may involve different reimbursement methodologies, the provision of care can be inefficient. The new dual-eligibles demonstration projects aim to encourage new systems that provide better quality care for this population while lowering health costs. The ACA created the Medicare-Medicaid Coordination Office (MMCO) to assist states in integrating care for dual-eligibles as well as the Center for Medicare and Medicaid Innovation (CMMI), which is charged with testing, evaluating, and replicating innovative models of care.[93]

For instance, Massachusetts began implementing a dual-eligibles demonstration project, "OneCare," in spring 2013 whereby certain managed care groups, called Integrated Care Organizations (ICOs), receive a streamlined, capitated PMPM rate comprised of blended MassHealth (Medicaid) and Medicare funding.[94] The ICOs provide coordinated medical and behavioral health services, long-term care, and prescription drugs to dual-eligible individuals aged 21 to 64. Like MCOs, ICOs have discretion to provide additional benefits and community-based support as needed or requested by the client. They can also subcontract with other providers to offer these services. The overarching goal of Massachusetts' ICO demonstration project is to provide coordinated services that result in better patient health outcomes and lower health costs.

---

[92] For more information on Medicare and Medicaid dual eligibles generally, see KAISER FAMILY FOUNDATION, MEDICARE'S ROLE FOR DUAL ELIGIBLE BENEFICIARIES (2012), *available at* http://www.kff.org/medicaid/upload/7846-03.pdf.

[93] *State Demonstrations to Integrate Care for Dual Eligible Individuals*, CTR. MEDICARE & MEDICAID SERV., http://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/StateDemonstrationstoIntegrateCareforDualEligibleIndividuals.html (last visited Dec. 1, 2013); *see also* FAMILIES USA, DUAL ELIGIBLE DEMONSTRATION PROJECTS: TOP TEN PRIORITIES FOR CONSUMERS ADVOCATES, www.Communitycatalyst.org, http://www.communitycatalyst.org/doc_store/publications/Top_Ten_Duals_Projects_Guide_Advocates.pdf.

[94] For a general overview of the Massachusetts Dual Eligibles Demonstration Project, see KAISER FAM. FOUND., MASSACHUSETTS' DEMONSTRATION TO INTEGRATE CARE AND ALIGN FINANCING FOR DUAL ELIGIBLE BENEFICIARIES (2012), *available at* http://www.kff.org/medicaid/upload/8291-02.pdf. For more detailed information on the Massachusetts project as well as current updates, see *Integrating Medicare and Medicaid for Dual Eligible Individuals*, MASSACHUSETTS EXECUTIVE OFFICE OF HEALTH AND HUMAN SERVICES, http://www.mass.gov/eohhs/provider/guidelines-resources/services-planning/national-health-care-reform-plan/federal-health-care-reform-initiatives/integrating-medicare-and-medicaid (last visited Dec. 1, 2013); and *ONE CARE: Masshealth Plus Medicare*, MASSACHUSETTS EXECUTIVE OFFICE OF HEALTH AND HUMAN SERVICES, http://www.mass.gov/eohhs/consumer/insurance/onecare/ (last visited Dec. 1, 2013).

Many other states are undertaking similar dual-eligibles demonstration projects. These may present opportunities for MTFNPs to partner with ICOs or other provider entities to offer nutrition services as a means of improving health and lowering costs for a high-needs population.

Dual Eligible Programs: Opportunities for Advocacy

Both PACE and the new dual eligible demonstration projects initiated by the ACA may provide partnership or integration opportunities for MTFNPs to provide nutritional counseling and home-delivered meal services. Because dual eligible programs target enrollees with chronic conditions and significant health care needs, there may already be significant overlap between enrollees in a particular dual eligible program and a MTFNP's existing (or potential) client base. MTFNPs' contributions to holistic, preventive, and community-based care make them ideal partners to advance the goals of each of these models. In addition, partnerships with dual eligible demonstration programs can provide a key opportunity for MTFNPs to collect information to demonstrate their program efficacy, as MCOs/ICO may have the tools, infrastructure and incentive to collect detailed data on health and cost outcomes for participants.

D. Opportunities for MTFNPs Through Future Medicare and Medicaid Innovation Initiatives

Along with expanding eligibility and benefits, as well as creating new care delivery models described above, the ACA places a large emphasis on the development of new and innovative models of care and payment. In particular, the ACA established the Center for Medicare and Medicaid Innovation, which periodically issues Requests for Proposals for innovative care models. These grants present additional opportunities for MTFNPs to partner with health care providers and/or payors to evaluate the effect of providing nutrition services. Evaluating the effect of nutrition services could be the overarching goal of the proposal, or a tangential component (e.g., offering nutrition services to a target population as part of a larger project to evaluate alternative payment models). For example, CMMI recently released a request for proposals under its Health Care Innovation Awards Program to evaluate new payment models, and several different MTFNPs applied in partnership with health care providers and/or payors.[95] Partnerships with health care entities such as hospitals and/or MCOs are critical in pursuing opportunities with CMMI, because these entities will have experience with and capacity for more complex health care project planning, data collection, and evaluation that these grants often require and that MTFNPs may not have.

---

[95] The original Request for Proposal may be reviewed at: *Health Care Innovation Awards, CTRS. FOR MEDICARE & MEDICAID SERVS.*, http://innovation.cms.gov/initiatives/Health-Care-Innovation-Awards/Round-2.html (last visited Dec. 7, 2013).

Many state Medicaid programs are also looking for innovative ideas for improving care and reducing costs. For example, the New York Medicaid program recently created a new initiative to use state Medicaid funds to provide housing for some of its most medically vulnerable recipients.[96]

As well, many hospitals that serve Medicare patients are searching for similar interventions due to new requirements in the ACA mandating that CMS reduce payments to hospitals with high numbers of patients who are readmitted to the hospital within 30 days of discharge. In particular, the Hospital Readmissions Reduction Program requires hospitals that provide acute inpatient services to meet these standards with respect to their Medicare patients age 65 and older who suffer from heart attacks, heart failure, and/or pneumonia.[97]

As a result, many hospitals are now looking for new ideas to reduce readmissions for their Medicare patients, including the use of home-delivered meals. For example, Steward Health Care System in Massachusetts, which was penalized by this new Medicare law, recently initiated an experimental, time-limited program to provide home-delivered meals for 55 of their heart-failure patients in 3 of their hospitals.[98] In addition, Newton-Wellesley Hospital's Vernon Cancer Center recently began to provide home-delivered meals to some of their more vulnerable patients. These examples illustrate the willingness of some hospitals to think outside the box and look to home-delivered meals programs for solutions.[99]

Again, the key to MTFNP success for integration into these initiatives will be in their ability to collect and use data to demonstrate the impact of nutrition services on health improvement and cost savings. The more that data demonstrates a positive impact on the specific quality metrics used to measure the performance of payors and/or providers in these new models, the more successful MTFNPs will be in forming future partnerships.

---

[96] *See* Matt Chaban, *Housing for the Homeless-Built With Medicaid Money,* NY DAILY NEWS, (Oct, 8, 2013) http://www.nydailynews.com/new-york/bronx/housing-homeless-medicaid-money-article-1.1479796; SUPPORTIVE HOUSING NETWORK OF NY, MEDICAID REDESIGN, http://shnny.org/budget-policy/state/medicaid-redesign/ (last visited Dec. 7, 2013); *New York State Medicaid Redesign Team (MRT) Waiver Amendment,* NY STATE DEPT. OF HEALTH 57 (Aug. 6, 2012) *available at http*://www.health.ny.gov/health_care/medicaid/redesign/docs/2012-08-06_waiver_amendment_request.pdf.

[97] *Readmissions Reduction Program, CTRS. FOR MEDICARE & MEDICAID SERVS.,* http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Readmissions-Reduction-Program.html (last visited Dec. 7, 2013); *see also* HEALTH AFFAIRS, HEALTH POLICY BRIEF, MEDICARE HOSPITAL READMISSIONS REDUCTION PROGRAM, (Nov. 12, 2013) *available at http://healthaffairs.org/healthpolicybriefs/brief_pdfs/healthpolicybrief_102.pdf.*

[98] Liz Kowalczyk, *Healing Meals, Hospitals Hope That Sending Healthful Food to Patients' Homes Will Keep Them From Coming Back,* THE BOSTON GLOBE (June 10, 2013) http://www.bostonglobe.com/lifestyle/health-wellness/2013/06/09/hospitals-reach-into-patients-homes-deliver-healthy-smoked-tofu-but-also-bbq-shrimp-scampi/QSqNQiycZUNxa9qbRWzs8I/story.html.

[99] *Id.*

E. Private Insurance

Like public health insurance programs, private insurers also have a powerful incentive to adopt care innovations that reduce the cost of care for their neediest enrollees. Because MTFNPs provide a service that is proven to both reduce health care costs for high-need patients and improve outcomes, they are well-positioned to contract with private insurers for reimbursement of their services. In addition to contracting with individual private plans, MTFNPs can also advocate for strong federal and state-level requirements for the Qualified Health Plans (private insurance plans) sold in each state's online health insurance marketplace.

Private Insurance and the ACA: An Overview[100]

Prior to the ACA, private insurers might have refused coverage to someone living with HIV/AIDS or other complex health conditions. Now, they can no longer refuse to cover any individual based on a pre-existing health condition, nor can they discriminate against medically-needy clients in administering coverage. Private health insurers can no longer charge a higher premium to women than to men. The ACA also prohibits private plans from containing annual or lifetime limits on coverage. This means that MTFNP clients are more likely to enroll in private insurance, and that private insurers will be motivated to find ways to reduce costs for clients they would have previously excluded.

In addition to making private health insurance more accessible for medically-needy individuals, the ACA will improve the ability of low-income individuals to afford private health insurance by providing premium tax credits and copayment subsidies. In every state (regardless of whether that state chooses to participate in the Medicaid expansion), people with incomes between 100 and 400% of FPL (between $11,490 and $45,960/year for an individual) who are not eligible for Medicaid will be able to receive tax subsidies to help them with private health insurance plans' premiums. In addition, people with incomes between 100 and 250% of FPL (between $ 11,490 and $28,725/year for an individual) will be eligible for subsidies to meet private health insurance plans' patient copayment obligations. These insurance plans, called Qualified Health Plans (QHPs) are available in every state through new, online marketplaces (also referred to as "exchanges"). In some states, these marketplaces are operated by the federal government, while in other states, marketplaces are run by the states themselves. Regardless of how the marketplace operates, individuals in every state are able to assess eligibility for tax credits and subsidies, compare health plans in terms of costs and covered services, and purchase QHPs through a single, streamlined application.

As with Medicaid, all QHPs (and most other private plans outside of the marketplace) will now have to provide coverage of all ten categories of Essential Health Benefits (EHBs) as well as coverage without cost-sharing of preventive services that receive an "A" or "B" rating from the

---

[100] For a comprehensive summary of the Affordable Care Act, *see* KAISER. FAM. FOUND., FOCUS ON HEALTH REFORM: SUMMARY OF THE AFFORDABLE CARE ACT, P.L. 111-148, (April 23, 2013) *available at* http://kaiserfamilyfoundation.files.wordpress.com/2011/04/8061-021.pdf.

USPSTF, including nutritional counseling for certain populations.[101] The USPSTF gives a "B" rating to nutritional counseling "for adult patients with hyperlipidemia and other known risk factors for cardiovascular and diet-related chronic disease."[102] Similar to Medicaid, EHB services will be defined in reference to a private health plan chosen by the state as a benchmark.[103] To the extent that a state benchmark covers MTFNI as part of an EHB category, all other private plans must match that coverage. Even if MTFNIs are not specifically included in the benchmark plan, EHB requirements represent the floor, not the ceiling, for private plans.

As more clients obtain private coverage, it will be important for MTFNPs to assess QHPs to determine the degree to which medical nutrition therapy or additional services such as home-delivered meals are covered. For example, the Georgia Coventry*One* POS Plan, one of the QHPs offered in Georgia's marketplace, includes coverage for education and nutritional counseling in connection with morbid obesity, pre-diabetes, diabetes, coronary artery disease, pregnancy, renal disease, hypertension, childhood obesity, eating disorders or hyperlipidemia, as long as these services are provided by a registered dietitian or provider.[104]

Private Insurance Coverage of Medically-Tailored Food and Nutrition Intervention Services: Opportunities for Advocacy

Beyond covering USPSTF-recommended nutritional counseling services, there are no federal requirements for covering nutrition services such as home-delivered meals within any of the EHB categories. Because all states have already selected their private plan benchmarks, there is little room for state-based advocacy around private EHB requirements at this time. Nationally, however, advocates continue to urge the federal government to issue more comprehensive, federal EHB standards, and some groups continue to actively push for the inclusion of MNT and home-delivered meals, particularly for individuals with chronic health conditions.[105] Moreover, the federal standards for state EHBs will be reviewed and potentially revised in 2016, at which time states may consider whether to add additional services. To the extent MTFNPs may demonstrate improved health outcomes and reduced costs resulting from medical nutrition therapy and home-delivered meals, they may be in a better position to advocate for inclusion

---

[101] 45 C.F.R. §156.100, et seq.; see also *Essential Health Benefits Bulletin,* (DEC. 16, 2011) CTRS. FOR CONSUMER INFORMATION AND INSURANCE OVERSIGHT, *available at* http://www.cms.gov/CCIIO/Resources/Files/Downloads/essential_health_benefits_bulletin.pdf.

[102] *USPSTF A and B Recommendations*, UNITED STATES PREVENTIVE SERVICES TASK FORCE, http://www.uspreventiveservicestaskforce.org/uspstf/uspsabrecs.htm (last visited Dec. 1, 2013).

[103] For more information on state benchmark plans, see *Additional Information on Proposed State Essential Health Benefits Benchmark Plans,* CTRS. FOR CONSUMER INFORMATION AND INSURANCE OVERSIGHT, http://www.cms.gov/CCIIO/Resources/Data-Resources/ehb.html (last visited Dec. 9, 2013).

[104] COVENTRY HEALTH CARE OF GEORGIA, INC., COVENTRYONE POINT OF SERVICE ("POS") INDIVIDUAL MEMBER CONTRACT, 25 (2014), *available at* http://coventryone.com/web/groups/public/@cvty_individual_c1/documents/document/c074200.pdf.

[105] For more information on federal health reform advocacy on behalf of individuals living with HIV/AIDS, see HIV HEALTH REFORM, http://www.hivhealthreform.org/ (last visited Dec. 1, 2013) as well as comments submitted by the Association of Nutrition Services Agencies (ANSA) in response to the EHB Bulletin of January 2012.

of nutrition services and home-delivered meals by 2016, either as their own category or as part of the required preventive services or chronic disease management categories.

As with Medicaid and Medicare, the ACA offers opportunities for MTFNI providers to build relationships with insurers to advocate for coverage of their services as critical interventions that reduce costs and improve quality. The most persuasive argument for MTFNI integration into private insurance is the intervention's potential for cost reduction, and MTFNPs should be prepared to explain the economic value of their services and project cost-savings for the insurer.

	Home and Community-Based Services (HCBS) 1915(c) Medicaid Waiver	1915(i) State Plan Amendment	1115 Research and Demonstration Waivers	Medicare Advantage
Funding Source	Medicaid	Medicaid	Medicaid	Medicare (Part C), and/or the plan via Supplemental Benefits
Target Client Population	Disabled or elderly (60+) people in need of a nursing facility level of care or higher	Individuals who need community based services but may or may not yet be at the point of requiring institutionalization	Broad flexibility to target groups and/or expand eligibility	Medicare-eligible individuals (those ages 65+ and disabled individuals)
Services Offered	Community-based medical and non-medical services (can include home-delivered meals)	Community-based medical and non-medical services (can include home-delivered meals)	Broad flexibility to offer expanded and/or non-traditional services like meals	Medical services (emphasis on physician and hospital services); can include home-delivered meals only in particular circumstances and for a short duration
Basic Structure	Most states have some kind of HCBS 1915(c) waiver that allows them to provide non-traditional Medicaid services to disabled or elderly people to help those people live in the community instead of an institutionalized setting. States may select non-profit organizations to administer the HCBS 1915(c) waivers. The organizations evaluate people for eligibility and direct them to services for	This amendment allows states to provide expanded HCBS specific services to targeted groups as part of a state plan rather than requiring a waiver.	Can be flexible-e.g., MA uses an 1115 waiver to provide Medicaid to all individuals with HIV up to 200% FPL; 1115 services could just be part of traditional Medicaid, create a separate program, address delivery reform, etc.	Medicare Advantage Plans are MCOs for individuals in Medicare. In general, an MCO is paid a capitated rate to fund services for individuals, and bears the risk if overall services cost more than the capitation. An MCO has two parts: an insurer and a network. The insurer charges a set periodic fee and covers all client health services, as long as the client obtains services within the MCO's network. The network is a

	which they are eligible. Some states also use MCOs to deliver HCBS waiver services, and the evaluating organizations may also connect people with an MCO. The organizations may provide some waiver services directly and/or contract out for services.			group of care providers who have agreed to care for the MCO's clients in return for payment from the MCO.
Operational Tenets	• Community-based living • Cost savings		• Improving Medicaid services • Improving costs/budget neutrality requirement	

	Accountable Care Organizations (ACO) Working with Medicare (new)	Program of All-Inclusive Care for the Elderly (PACE)	Dual Eligibles Projects, and/or Integrated Care Organizations (ICOs)
Funding Source	Medicaid, Medicare Parts A and B (Medicare fee-for-service), private coverage	Medicare (primary), Medicaid, individuals	Medicaid and Medicare jointly
Target Client Population	Medicare recipients, with a focus on people with high care needs	People 55+, in need of a nursing facility level of care or higher and within PACE organization's service area	People eligible for both Medicaid and Medicare, often targeting individuals with more complex health care and/or behavioral health needs
Services Offered	Medical services, with emphasis on coordination and community based supports	Medical services (includes range of community-based services, can include home-delivered meals, with an emphasis on preventive care)	Medical services (also can include range of community-based services)
Basic Structure	An ACO is a tightly integrated provider-led network with a focus on improving quality and efficiency. An ACO shares in the funding source's savings if it reduces costs while maintaining quality, and may share in the funding source's losses if it raises costs. The ACO generally charges the funding source on a fee-for-service basis. The network of care providers works closely together and with the insurer to design care improvements that improve quality and reduce costs.	PACE is designed to keep elderly people in the community as long as possible. Medicare pays part of the set periodic payment to the PACE organization; Medicaid (if the client is a Medicaid member) and/or the client pay the remainder. The PACE organization's care providers (directly employed by the PACE organization) work closely to deliver services attuned to each individual. PACE clients must receive all medical services through the PACE organization.	An ICO is a specialized MCO for people dually eligible for Medicaid and Medicare participating in the new dual eligibles projects. The ICO receives one periodic payment from Medicaid and Medicare and covers all client health services. Using the patient-centered medical home (PCMH) model, the network of interdisciplinary care providers works closely together and with the insurer to deliver comprehensive, individualized care to a vulnerable population. The ICO has significant flexibility to design care programs that improve outcomes and keep clients in the community.

Operational Tenets		• Community-based living • Cost savings	• Payment efficiency/cost savings • Quality improvements in dual-eligible care
Making the Case for Partnership	Every health organization listed above will want to know the same thing before partnering with an MTFNP: do home-delivered, medically-tailored meals improve long-term health outcomes for critically ill people and generate cost savings? MCOs, ACOs, ICOs and PACE organizations will need to know if partnership will benefit the organization in the long-term. PACE and waiver organizations need to know if partnership fits their goal of keeping critically ill people living in the community instead of in an institutional setting. The more research MTFNPs can produce that proves a link between home-delivered meals and better long-term health outcomes for chronically and critically ill people, the more willing the above health organizations will be to partner.		

III. *Conclusion: Recommendations for Medically-Tailored Food and Nutrition Providers*

In a post-Affordable Care Act world, the health care landscape is rapidly evolving, favoring cost-effective innovations in care delivery that view the patient as a whole person with a set of varied and complex interrelated health needs. This period of dynamic change in health care access and delivery represents a unique opportunity for medically-tailored food and nutrition intervention services to become a widely-recognized core component of quality health care. Every health insurance program and private insurer is seeking to improve health outcomes while at the same time reducing the cost of care. The provision of nutritional counseling and medically-tailored, home-delivered meals to those with acute or chronic illnesses is a cost-effective intervention that produces measurable positive results for patients. It can shorten the length of a hospital stay, reduce the need for hospital admission, and increase the likelihood that a patient will be able to return to his or her home and community after a hospitalization.[106] Medically-tailored food and nutrition intervention providers (MTFNPs) are well-positioned to integrate their services into current and emerging health care delivery systems. This paper examined several opportunities for MTFNPs to expand both their client base and the ability to support their operations through reimbursement for meal-delivery and nutritional counseling services. We conclude by setting forth the following recommendations for MTFNPs as they move forward with efforts to integrate into new and existing health care programs and delivery models. Regardless of which program-specific opportunities individual MTFNPs choose to pursue, the implementation of these recommendations will create an environment that is conducive to integration of medically-tailored food and nutrition intervention services into health care delivery for people with chronic and acute debilitating illness.

1. **Become familiar with the administrative structure of your state's Medicaid program.** MTFNPs will need to understand how the Medicaid program operates and who or what entity has the ability to change its requirements, request waivers to expand coverage, move for amendments to the state plan, or design innovative demonstration projects.
2. **Advocate for expanding your state's Medicaid program in accordance with the ACA, and push for comprehensive Alternative Benefits Packages (ABPs) that include medically-tailored food and nutrition intervention services for newly eligible Medicaid beneficiaries.** Some states have declined to expand the Medicaid program to cover individuals up to 133% of the FPL. MTFNPs should continue to push for expansion, as many of their current clients will likely become eligible for coverage.

---

[106] Jill Gurvey, Kelly Rand, Susan Daugherty, Cyndi Dinger, Joan Schmeling, and Nicole Laverty, *Examining Health Care Costs Among MANNA Clients and a Comparison Group,* Journal of Primary Care & Community Health (June 2013), 4-5.

In states that are expanding Medicaid, MTFNPs should advocate for inclusion of their services in all ABPs and/or for the creation of special ABP packages that include medically-tailored food and nutrition intervention services for people with certain chronic and serious conditions.

3. **Become familiar with the new coordinated care delivery models in your state.** New care delivery models created by the ACA emphasize outcome-driven coordinated patient care. States may choose to implement an Integrated Care Organization for dually eligible Medicaid-Medicare beneficiaries, Medicaid Health Homes for individuals with certain chronic conditions, or Accountable Care Organizations in Medicare. Innovation in care delivery is incentivized for these health care models, and MTFNPs are well-positioned to contract with them for client referrals and/or reimbursement of medically-tailored food and nutrition intervention services.

4. **Evaluate MTFNI coverage and build relationships with private insurers who are offering new QHPs in your state's marketplace.** New tax credits and subsidies will expand access to the private health insurance market for low-income and medically vulnerable individuals for whom private insurance was previously unavailable. Private insurers looking to reduce health care costs for medically needy individuals are ideal partners for MTFNPs.

5. **Advocate for inclusion of medically-tailored food and nutrition intervention services in Essential Health Benefits in 2016.** There is an opportunity to review and revise the federal requirements for the Essential Health Benefits (EHBs) package for both Medicaid and the private market in 2016. EHBs set the floor for coverage of different services in private insurance plans offered through the ACA marketplaces and for Medicaid coverage packages for people who become newly eligible through the Medicaid expansion. The inclusion of medically-tailored food and nutrition intervention services as a specific component of EHBs would dramatically increase the opportunities for MTFNPs to contract with Medicaid and private insurers, and for vulnerable MTFNP clients to receive the meals and nutritional support they need to heal and thrive.

6. **Be prepared to make the case for why medically-tailored, home-delivered meals are different from other meal delivery programs.** Regardless of whether MTFNPs are proposing to contract with public or private health insurers, they will need to demonstrate that their services are uniquely appropriate for integration into preventive and acute medical care. MTFNPs will need to clearly articulate why their services will result in better health outcomes and lower costs for patients and insurers.

7. **Form an ongoing data collection plan.** MTFNPs should be able to demonstrate the psychosocial and economic value of their program services by collecting and analyzing relevant client data.

Finally, we recognize that providing medically-tailored, home-delivered meals to people with chronic or acute illness is just one piece of a broader food as medicine revolution. Maintaining and regaining health begins with paying close attention to the quality of the food available to fuel our bodies every day. With diet-related chronic diseases on the rise, we cannot afford to ignore the role that food plays in preventing or exacerbating serious health conditions. Across the board, advocates should push for wider recognition of the strong link between food and health and support measures that help all people obtain the healthy, high-quality food they need to thrive. The services provided by MTFNPs are critical because they address the nutritional needs of those whose health is most vulnerable. In the broader movement to recognize food as a core component of health and health care, ensuring that health insurance translates into access to nutritious meals for the critically ill is an excellent place to start.

Appendix: Overview of Food Support Programs

This Appendix provides an overview of four federal food benefit programs which may offer additional funding opportunities for MTFNPs. Even when there are no current opportunities for MTFNPs to seek reimbursement through these programs, the program overviews may be helpful as MTFNPs think about how their services might evolve in the future and what programs exist to help fill existing nutritional gaps for their clients. The programs described here include: (i) the Supplemental Nutrition Assistance Program (SNAP), (ii) nutrition services funded by Title III of the Older Americans Act, (iii) the Child and Adult Care Food Program (CACFP), and (iv) the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). These programs exist to supplement the food needs of low-income and elderly individuals, and encompass a variety of distribution models, such as individual retail food benefits, home delivery through subsidized programs, and nutrition programs in child and adult care centers or communal living facilities.

i. SNAP: An Overview

The Supplemental Nutrition Assistance Program (SNAP) is a federally-funded and state-administered program that promotes access to nutritious food for low-income households.[107] SNAP benefits may be used toward "any food or food product intended for human consumption," including frozen foods and meals,[108] but in general may not be used to purchase hot food or take-out food.[109] Beneficiaries use Electronic Benefits Transfer (EBT) debit cards automatically loaded with SNAP credits to purchase food at authorized retailers.[110] Nationally, SNAP beneficiaries tend to underutilize the program: only 72% of SNAP-eligible persons and 41% of food insecure households are enrolled.[111]

A household is eligible for SNAP benefits if its members meet certain income guidelines and it has $2,000 or less in countable resources ($3,000 in the case where at least one member is 60

[107] 7 C.F.R. § 271.1.
[108] 7 C.F.R. § 271.2.
[109] The Food Stamp Act of 1977 creates an exception to the hot foods restriction, authorizing states to create discretionary Restaurant Meals Programs expanding SNAP retailer eligibility to restaurants serving hot meals, although EBT payment at such locations is limited to elderly, disabled, or homeless beneficiaries. 7 C.F.R. § 278.1.
[110] 7 C.F.R. § 274.7.
[111] Sheri Weiser, et al., *Food Insecurity is Associated with Greater Acute Care Utilization among HIV-Infected Homeless and Marginally Housed Individuals in San Francisco*, J. OF GEN. INTERNAL MED. (2012). The United States Department of Agriculture (USDA) defines food security as "access by all members at all times to enough food for an active, healthy life. Food security includes at a minimum: (1) the ready availability of nutritionally adequate and safe foods; and (2) assured ability to acquire acceptable foods in socially acceptable ways (that is, without resorting to emergency food supplies, scavenging, stealing, or other coping strategies)." *See Food Security,* U.S. DEPT. OF AGRIC., http://www.fns.usda.gov/fsec/ (last visited Dec. 7, 2013). By contrast, "food insecurity" is limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways. For more information on food insecurity and how it is measured, *see Food Insecurity,* ECONOMIC RESEARCH CENTER, U.S. DEPT. OF AGRIC., http://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement.aspx#insecurity (last visited Dec. 7, 2013).

years of age or older, or disabled).[112] As discussed below, there are a number of different ways that an MTFNMTFNP could become authorized to accept SNAP benefits from clients. Three main options include being authorized as a retail food store, as a meal-delivery program, or as a communal dining facility or group living arrangement.

Authorization as a Retail Food Store[113]

A store can become an eligible food retailer under SNAP if it meets one of criteria: (1) it sells on a continuous basis at least three foods from each of four staple categories (breads/cereals, fruit/vegetables, meat/fish/poultry, and dairy products) and at least two of the categories sold include perishable foods; or (2) over fifty percent of the store's gross sales consists of staple foods.[114] Frozen meals are included in the staple food category of the main ingredient (as determined by the USDA Food and Nutrition Service (FNS)) and count as one staple variety.[115] Staple foods do not include coffee, tea, cocoa, soda, candy, condiments, spices, and prepared, ready-to-eat foods.[116] Vendors interested in becoming authorized to receive SNAP payments can contact a local FNS field office to file an application.[117] Amendments to the 2014 Farm Bill directed the USDA to issue regulations that add "governmental or private nonprofit food purchasing and delivery services" to the definition of "Retail Food Store" if the service met three requirements. First, the service must purchase food for and deliver food to individuals who are unable to shop for food and are either older than 60 or physically or mentally handicapped. Second, the service must notify the purchasing households of any delivery fee associated with the transaction (SNAP recipients may not use SNAP benefits to pay the delivery fee). Third, the service must sell meals at the price the service has paid for the food without any additional cost markup.[118] The future regulations based on these amendments may offer additional opportunities for MTFNMTFNPs to receive SNAP benefits beyond becoming authorized as a meal delivery service (addressed below).

Authorization as a Meal Delivery Service

In addition to retail food stores, organizations that provide meal delivery services to certain categories of eligible SNAP beneficiaries can also become authorized to accept SNAP.[119] To

---

[112] 7 C.F.R. § 273.8(b); General information on SNAP eligibility may be found at *Supplemental Nutrition Assistance Program Eligibility*, U.S. DEPT. OF AGRIC., http://www.fns.usda.gov/snap/eligibility (last visited Dec. 7, 2013); 7 C.F.R. § 273.9 (2012).

[113] See generally, *Retail Store Eligibility USDA Supplemental Nutrition Assistance Program,* U.S. DEPT. OF AGRIC., http://www.fns.usda.gov/snap/retail-store-eligibility-usda-supplemental-nutrition-assistance-program (last visited Dec. 7, 2013).

[114] 7 C.F.R. § 278.1 (b).

[115] 7 C.F.R. § 278.1 (b)(1)(ii)(C).

[116] 7 C.F.R. § 278.1 (b) (eligible retailers include organizations with stationary stores which make home deliveries to SNAP households). Note that "perishable" can include staple foods that are frozen.

[117] *Store Owner's Guide to SNAP Food Stamps*, MASSRESOURCES.ORG, http://www.massresources.org/snap-store-owners-guide.html#apply (last visited Dec. 7, 2013).

[118] 7 U.S.C. § 4003 (b).

[119] 7 C.F.R. § 278.1 (d).

qualify under the meal delivery category, a program must generally be a nonprofit organization that contracts with the state or local agency to prepare and provide lower-cost meals to elderly individuals (60 years of age or older) and to individuals who are physically or mentally disabled to the extent that they are "unable to adequately prepare all of their meals."[120] Spouses of these eligible individuals can also receive meals.[121] There are similar restrictions on the categories of individuals who are allowed to use their benefits to pay for home-delivered meals. Only SNAP-eligible individuals 60 years of age or over, or SNAP-eligible individuals who are housebound and disabled to the extent that they are unable to adequately prepare all their meals and their spouses, may use SNAP benefits to purchase home-delivered meals from an authorized provider.[122]

Meal delivery services authorized under this category may operate as one of two models. They may either sell meals to beneficiaries or accept voluntary donations from beneficiaries. Under the first model, a retailer or other service charges all of its clients for its services. For example, Somerville-Cambridge Elder Services of Massachusetts currently provides home-delivered hot meals via its Meals-on-Wheels Program and accepts SNAP as payment from enrollees.[123] In this model, the vendor may also allow individuals to purchase meals with funds other than SNAP benefits. Under the donation model, a retailer or other program provides its services for free, but accepts voluntary payments from clients who wish to contribute. In this model, enrolled SNAP beneficiaries may make voluntary donations of their benefits in an amount of their choosing. Northwest Senior & Disability Services of Oregon, for instance, accepts donations of SNAP benefits for its Meals-on-Wheels programs.[124]

Authorization as a Communal Dining Facility or Group Living Arrangement

Finally, certain communal dining facilities and group homes can also collect SNAP payments from their residents for meals served in those facilities.[125] To be authorized as a communal dining facility, an entity must be a public or private establishment that prepares and serves meals to individuals over age 60 or to persons receiving Social Security Income (SSI). [126] To be eligible as a group living arrangement, an entity must be a state-certified public or private nonprofit residential setting serving no more than sixteen residents.[127] An entity authorized as a group living arrangement can only receive SNAP payment from residents of the home who are blind or disabled.[128]

---

[120] 7 C.F.R. § 271.2.
[121] *Id.*
[122] 7 C.F.R. § 274.7(2)(g).
[123] *Nutrition Services*, SOMERVILLE-CAMBRIDGE ELDER SERVICES, http://www.eldercare.org/Services_Nutrition/Nutrition_MainPage.shtm (last visited Dec. 7, 2013).
[124] *Food Stamp Donation*, NORTHWEST SENIOR & DISABILITY SERVICES, http://www.nwsds.org/meals-on-wheels/donations/food-stamp-donation/ (last visited Dec. 7, 2013).
[125] 7 C.F.R. § 278.1 (f).
[126] 7 C.F.R. § 271.2.
[127] *Id.*
[128] *Id.*

SNAP: The Take-Away

MTFNPs that deliver staple foods to elderly or disabled people who are unable to prepare their own meals are most likely to be able to qualify as vendors under the home-delivered meals programs category. However, there are several issues for an MTFNP to consider before deciding to seek authorization as a SNAP vendor. First, no vendor of any type can treat SNAP beneficiaries any differently than other clients, meaning that if the vendor allows some individuals (who do not have SNAP benefits, for example) to receive meals for free, it cannot require other individuals to use their SNAP benefits, but can only request or suggest a voluntary SNAP donation.[129] Therefore, unless a MTFNP began charging all of its clients, the MTFNP could not require SNAP payment from anyone, but instead could only accept donations. If an MTFNP's clients are largely eligible for SNAP but do not exhaust their benefits every month, the MTFNP could consider charging a low fee for meals to all clients, and allowing SNAP beneficiaries to use their SNAP benefits as payment. For MTFNPs who would like to retain their original ability to offer services free of charge to those who need it, and/or whose clients either do not qualify for SNAP or use all of their SNAP dollars every month, the donation model may be more appropriate.

Second, as with health coverage options, in assessing the possibilities of accepting SNAP payments, an MTFNP would also need to weigh the administrative costs of accepting payment against the likely benefits. Administrative costs include the cost of adopting the technology required to accept SNAP benefits, such as electronic Point-of-Sale terminals capable of processing EBT cards. A wireless POS terminal can cost up to $1000 to install and program, plus monthly charges or fees on transactions.[130] However, if an MTFNP averages $100 per month in SNAP transactions, it may borrow a POS terminal from the government for free. In the alternative, if a vendor averages less than $100 per month, or lacks electricity or a phone line, vendors may fill out paper vouchers for each transaction.[131]

Third, to gain an accurate assessment of the potential financial benefits, an MTFNP would need to know the percentage of its clients eligible for SNAP and the amount of SNAP benefits those clients have left at the end of the month, if any. If many of the MTFNP's clients are SNAP-eligible but do not use all of their benefits, developing a strategy whereby the MTFNP incorporated donated SNAP benefits into its program could be framed as a way to allow clients to give back to the MTFNP and support the provision of meals to themselves and others.

---

[129] 7 C.F.R. § 278.2(b).

[130] AMANDA BAESLER, MINN. DEP'T OF AGRIC., HOW TO IMPLEMENT SNAP AND EBT INTO YOUR FARMERS' MARKET 16-17 (2010), *available at* http://www.mda.state.mn.us/food/business/~/media/Files/food/business/implementsnapebt.ashx.

[131] *How to Accept SNAP Benefits at Your Store*, U.S. DEPT. OF AGRIC., http://www.fns.usda.gov/snap/retailers/accepting-benefits.htm (last visited Dec. 7, 2013).

ii. Title III of the Older Americans Act: An Overview

Title III of the Older Americans Act authorizes the Nutrition Services Program for the elderly. This program provides grants to state agencies on aging to support congregate and home-delivered meals to individuals over the age of 60.[132] One of the program's core missions is "to promote the health and well-being of older individuals by assisting such individuals to gain access to nutrition and other disease prevention and health promotion services to delay the onset of adverse health conditions resulting from poor nutritional health or sedentary behavior."[133] States route Title III funding to Area Agencies on Aging (AAAs), which in turn support nutrition services, including home-delivered meal programs.[134] In Massachusetts, for example, eligible individuals receive services through AAAs and/or Massachusetts' Elderly Nutrition Program sites.[135] These sites provide services directly or contract with other providers. Such home-delivered meal programs must provide meal recipients with at least one meal per day at least five days per week (unless a lesser frequency is approved by the state agency), and frozen meals are explicitly authorized by the statute.[136] Funded programs must also provide "nutrition education, nutrition counseling, and other nutrition services . . . based on the needs of the meal recipients."[137] There is no income test for these services, but recipients must be aged 60 or older, and homebound.[138] The spouse of the recipient is also eligible. Services may also be available to individuals under age 60 with disabilities or who are handicapped, if they reside in a housing facility occupied primarily by the elderly.[139]

Title III: The Take-Away

Similar to the partnerships described in the health section, an MTFNP could consider contracting with an AAA to support its home-delivered meals program.[140] The main concern with such a contract is the low meal reimbursement rate. The primary goal of the OAA Nutrition Services program is to prevent hunger, rather than treat or prevent illness. By contrast, MTFNPs may produce a wide variety of medically-tailored meals to serve people with a variety of critical illnesses, and in doing so run higher operational costs than hunger-focused programs. Therefore, while an MTFNP may be eligible to partner with an AAA and receive funds through

---

[132] KRISTEN J. COLELLO, CONG. RESEARCH SERV.,RS21202, OLDER AMERICANS ACT: TITLE III NUTRITION SERVICES PROGRAM, 1 (2010).

[133] 42 U.S.C. § 3030d-21.

[134] *Area Agency on Aging*, CITY OF BOSTON.GOV, http://www.cityofboston.gov/elderly/agency.asp (last visited Dec. 6, 2012); *Area Agency on Aging*, MASS.GOV, http://www.mass.gov/elders/area-agency-on-aging.html (last visited Dec. 7, 2013).

[135] For a list of program sites, see *Massachusetts Elderly Nutrition Program Sites*, MASS. EXEC. OFF. ELDER AFF., http://www.mass.gov/elders/meals-nutrition/mass-elderly-nutrition-program-sites.html (last visited Dec. 7, 2013).

[136] 42 U.S.C. § 3030f(1).

[137] 42 U.S.C. § 3030f(2).

[138] *Home-delivered Meals Who Qualifies?*, MASS. EXEC. OFF. ELDER AFF., http://www.mass.gov/elders/meals-nutrition/home-delivered-meals.html (last visited Dec. 7, 2013).

[139] *Id.*

[140] Currently, three AAAs in Boston provide home-delivered meals to the elderly. *Area Agency on Aging*, CITY OF BOSTON.GOV, http://www.cityofboston.gov/elderly/agency.asp (last visited Dec. 7, 2013).

the OAA for serving home-bound seniors, the OAA will likely pay the MTFNP far less than it costs the MTFNP to produce and distribute the meals to those seniors. In order to determine whether funding under this program may be a viable option, MTFNPs should contact their local Area Agencies on Aging to learn more about reimbursement levels and contracting requirements. As with other programs, MTFNPs should also assess eligibility among their existing clients, decide whether to take on additional clients, and weigh participation costs against the likely reimbursement amount.

iii. The Child and Adult Care Food Program: An Overview

The Child and Adult Care Food Program (CACFP) is a federally funded and state administered program that enables nonresidential child and adult care institutions to integrate provision of nutrition services and meals with day care services.[141] The program reimburses child and adult day care programs for meals they provide to their clients as long as the meals meet specific nutrition requirements.[142] Reimbursement rates vary depending on the income of the individuals and/or families served by the program. [143] Unlike SNAP, program benefits are distributed to care centers rather than to individuals or households. A care center may contract with a food service company.[144]

Federal regulations pertaining to CACFP define "adult day care center" as a government-approved organization that provides nonresidential adult day care services to functionally impaired or elderly adults (adults over age 60) in a group setting outside their homes, or in a group living arrangement on a less than 24-hour basis.[145] A person is "functionally impaired" if she is physically or mentally impaired to the extent that her ability to live independently or carry out activities of daily living is "markedly limited."[146] Adult day care centers must provide enrollees with a structured, community-based group program that includes a variety of health and social support services, and is based on an individual plan of care.[147] Government-approved child care centers (non-residential), settlement houses, neighborhood centers, and Head Start programs, among other organizations, are also eligible for CACFP reimbursement.[148]

---

[141] 7 C.F.R. § 226.1; For general information about the Child And Adult Care Food Program, see *Child And Adult Care Food Program*, U.S. DEPT. OF AGRIC., http://www.fns.usda.gov/cacfp/child-and-adult-care-food-program (last visited Dec. 7, 2013).

[142] Specific nutrition and meal requirements can be found at: 7 C.F.R. § 226.20.

[143] 7 C.F.R. § 226.9.

[144] 7 C.F.R. § 226.21; 7 C.F.R. § 226.19a(b)(2).

[145] 7 C.F.R. § 226.2.

[146] *Id.* Activities of daily living include "cleaning, shopping, cooking, taking public transportation, maintaining a residence, caring appropriately for one's grooming or hygiene, using telephones and directories, [and] using a post office." Note that "marked limitations refer to the severity of impairment, and not the number of limited activities, and occur when the degree of limitation is such as to seriously interfere with the ability to function independently."

[147] 7 C.F.R. § 226.19a(b)(2).

[148] 7 C.F.R. § 226.17(b)(1), 226.2.

CACFP: The Take-Away

To the extent that MTFNPs provide hot congregate meals at adult day care centers, CACFP reimbursement may be a way to defray the cost of these services.

iv. WIC: An Overview

The Special Supplemental Nutrition Program for Women, Infants and Children (WIC) is a federally funded and state administered program that provides supplemental foods, health care referrals and nutrition education to low-income pregnant, postpartum and breastfeeding women, and infants and children up to age five who are at risk of poor nutrition.[149] A food retailer is eligible to receive WIC benefits as payment for its goods if it meets state-determined inventory requirements.[150] In Massachusetts, for example, vendors must "operate a permanent, fixed, retail establishment" and accept SNAP benefits, among other requirements.[151] The WIC program has more stringent inventory requirements than SNAP. In Massachusetts, WIC-authorized businesses must provide juice, cheese, cereal, dairy and soy milk, eggs, iron-fortified infant cereal, infant formula and baby food, peanut butter, beans and peas, tuna, fruits, vegetables, whole grain bread, tortillas, tofu, salmon and sardines.[152] Prepared meals, frozen or hot, are not on the list of covered items.

Although WIC has more stringent requirements for inventory, there is flexibility in the kinds of operational models that may become WIC vendors.[153] In particular, states can authorize retailers, home delivery or direct distributors.[154] For example, WIC in Vermont is primarily administered through home delivery.[155] Each state WIC program is different however, and not every state may allow home-delivery vendors. Entities wishing to become authorized as WIC vendors must apply through their state or local WIC agency.

WIC: The Take-Away

---

[149] 7 C.F.R. § 246.1.

[150] *Massachusetts Women, Infants and Children Program Vendor Application Packet*, MASS. EXEC. OFF. HEALTH AND HUM. SERVS., http://www.mass.gov/eohhs/docs/dph/wic/vendor-app-packet.pdf (last visited Dec. 7, 2013).

[151] 7 C.F.R. § 246.12; see also *Massachusetts Women, Infants and Children Program Vendor Application Packet*, MASS. EXEC. OFF. HEALTH AND HUM. SERV., http://www.mass.gov/eohhs/docs/dph/wic/vendor-app-packet.pdf (last visited Dec. 7, 2013).

[152] *Massachusetts Women, Infants and Children Program Vendor Application Packet*, MASSACHUSETTS EXECUTIVE OFFICE OF HEALTH AND HUMAN SERVICES, http://www.mass.gov/eohhs/docs/dph/wic/vendor-app-packet.pdf (last visited Dec. 7, 2013).

[153] 7 C.F.R. § 246.12 (b).

[154] *Id.*

[155] *Better Food, Better Health*, VERMONT.GOV, http://healthvermont.gov/wic/food-feeding/wic-foods/Food_list.aspx (last visited Dec. 7, 2013).

MTFNPs may already provide many of the staple foods that are provided to WIC participants. Some MTFNPs deliver bags of staple foods instead of prepared meals to clients who cannot shop for themselves but are able to cook. In states that allow home delivery of WIC foods, these MTFNPs could seek to become WIC vendors. However, each delivered food package must comply with WIC's strict requirements.

This paper was made possible with generous support from the M·A·C AIDS Fund.

"Let Food Be Thy Medicine"

October 17th, 2011

Hippocrates is considered the father of modern medicine. One of his most famous quotes is "Let food be thy medicine, and medicine be thy food". These words are often utilized for the eloquence with which they express the importance of our daily food choices. The relevance this phrase has is stronger than ever. Nutrition is an underlying theme for just about every health concern we may experience today. To address the underlying causes, we must consider the influence our diet has on our wellbeing. Today we will begin this journey by exploring blood sugar imbalances and the misconceptions that still prevail in our society regarding fats in foods.

When considering our food choices and the impact on our health, the first step relevant for today's health concerns is to address blood sugar imbalances. Blood sugar imbalances are rampant in our culture. We tend to overly consume highly processed foods and grains, and simple sugars which contribute to an immediate jump in blood sugar levels due to their high glycemic index. The body responds by pumping out insulin from our pancreas to lower the level of sugar in our blood. Elevated blood sugars always cause an elevation in insulin levels. Insulin in our body conveys two primary messages. The first is that the blood sugar should be stored for later use in the form of fat depositions. Let me repeat this first point, elevated blood sugars and hence elevated insulin levels signal our body to store foods consumed as fat. The second is that insulin increases the levels of systemic inflammation in our body.

Day in and day out after the insulin assault on the unnecessarily high blood sugars, the blood sugar levels

NEWS SECTIONS

Homeopathic Medicine

Naturopathic Medicine

Nutritional and Lifestyle Support/Modification

Uncategorized

NEWS

crash. This hypoglycemic state creates a sympathetic, or stress, response from the body. The adrenal glands release cortisol to help mobilize sugar from stores in the body. At this point the individual typically feels jittery, irritable, and quickly reaches for that sugary snack to get through to the next meal. This pattern causes the sugars to jump up again, insulin is released, and the entire process repeats itself. For most people eating the standard American diet (SAD) this happens every single day. Eventually the pancreas fatigues and can no longer release enough insulin to control the blood sugars and the patient is diagnosed as a diabetic. Simultaneously, the adrenals are exhausted and can no longer function in their full capacity. Our body's hormone systems are affected by this constant stress and their functions are interrelated. Years of poor dietary choices often require an extensive amount of intervention to restore proper body function and balance.

Fats generally confound us more than any other aspect of nutrition. My 9 year old daughter helped me understand why when she said, "Dad, it's a homonym. You know, a word that sounds the same but has different meanings." She couldn't be more correct. We use the word "fat" to describe lipids in foods and when referencing individuals that are overweight. Even though the low-fat dietary craze of the 80's would have us believe that they are directly related, they most certainly are not. But the mis-information remains and people still worry that fats in foods will lead to becoming an overweight individual. The result for our lifestyle from this distorted view is that fats have been consistently removed from foods and replaced with sugars. The end product now has a higher glycemic index than the original food and the increased insulin levels to control the elevated blood sugar causes the body to store the food as fat. As we have pulled fat from foods, individuals have become more overweight and the incidence of diabetes and heart disease has continued to climb; yet we somehow continue to believe that fats in foods are detrimental to our health. They aren't, with one exception.

Trans-fats, or hydrogenated oils, are pointless from a dietary standpoint. There is no need for us to consume them. Processed food manufactures continue to use them because they add stability and shelf life to their end products. They do this at the expense of our health. Trans-fat consumption is related to poor cholesterol levels and increased inflammation in the body, among

other things. The only way to be certain that trans-fats are not in our food products is to read the full label. The imprudent business that continues to create these products have created a marketing ploy that will allow them to write largely on the front of a package that it contains "no trans-fats… per serving" as long as there is less that 0.5 grams of trans-fats per serving. The product itself certainly still has trans-fats in it, and so will we if we don't read the ingredient list searching for the key words: hydrogenated, partially hydrogenated, or fully hydrogenated.

In general, foods are neither good nor bad for us. As we begin to change our relationship with foods and nutrition, it is vital to remember that the benefit or detriment to our health is primarily from the quantity and frequency with which we consume any particular food, not a quality inherent to the food itself. For example, we could consume too much water and actually die from an electrolyte imbalance. Our objective should be to strive for variation in our food regimen, focusing mostly on veggies and fruits coupled with protein sources to balance blood sugars. When ever possible and affordable, we should buy local and organic. By reducing our consumption of processed, high glycemic foods and avoiding trans-fats we will improve our daily energy with balanced blood sugars, decrease our systemic inflammation, and better help protect ourselves from the chronic lifestyle diseases that plague our culture.

Posted in Nutritional and Lifestyle Support/Modification |

LATEST NEWS VIEW ALL

JUNE 9TH, 2015

Summer time is here. Families all over are taking vacations. Some families are getting away for weekend excursions. Others are traveling for a week or two at a time. Last year our family is less than a mile from Universal Studios in Orlando, Florida spending a week with my dad. We know keeping everyone fed [...]

Keep Reading

812-716-HEAL (4325)

Get Directions

3012 Eastpoint Pkwy

Louisville, KY 40223

Store

FOOD IS MEDICINE

Food is Love. Food Is Medicine.

At Project Open Hand, our medically-tailored food helps clients recover from illness, get stronger and lead healthier lives. Project Open Hand services assist those with AIDS/HIV as well as critical illnesses such as breast cancer and diabetes. We also provide daily warm, nutritious meals for seniors and adults with disabilities fighting hunger. Project Open Hand's vision is that no one who is sick or elderly in our community will go without nutritious meals with love.

Food Is Medicine Coalition

Project Open Hand is a proud founding partner of the Food Is Medicine Coalition (FIMC). The FIMC is a volunteer association of nonprofit, medically-tailored and nutrition services (FNS) providers from across the country, which includes our sister organizations God's Love We Deliver (https://www.glwd.org/) in New York City, Community Servings in Boston and Project Angel Heart (https://www.projectangelheart.org/) in Denver, among others. The FIMC's

purpose is to advance public policy that supports access to food and nutrition services for people with severe and/or chronic illnesses. The FIMC promotes research on the efficacy of food and nutrition services on health outcomes and cost of care and sharing best practices in the provision of medically-tailored meals of nutrition education and counseling.

Food = Medicine Pilot Study

Seeking a greater voice in the public health conversation, Project Open Hand partnered with UCSF on scientific studies tracking data of health benefits associated with Food as Medicine. Our scientific collaboration with physicians and researchers from UC San Francisco (https://www.ucsf.edu/news/2017/01/405651/food-medicine-hiv-positive-and-type-2-diabetes-patients) demonstrates with data how the healing power of nutritious food is crucial for serving the critically ill.

The study, published in January of 2017 in the peer-reviewed Journal of Urban Health (http://link.springer.com/article/10.1007/s11524-016-0129-7), involved more than 50 **San Francisco** and **Alameda County** residents living with Diabetes, HIV/AIDS or dual diagnosis. The study showed increases in the number of people with diabetes who achieved optimal blood sugar control and decreases in hospitalizations or emergency department visits. Participants with diabetes also consumed less sugar and lost weight through Project Open Hand's nutritious and medically tailored meals. HIV-positive clients who received healthy food and snacks for six months from Project Open Hand were more likely to adhere to their medication regiments, and they, along with clients with Type 2 Diabetes, were less depressed and less likely to make trade-offs between food and healthcare, according to researchers at UCSF.

Zuckerberg San Francisco General Hospital – Project Open Hand Partnership

Confronting the growing problem of food insecurity and its relation to chronic disease, Project Open Hand and Zuckerberg San Francisco General Hospital have

partnered to create a fully integrated program of primary care, medically tailored and 100% nutritious meals as well as related services among the medically underserved adults of the Bay Area. The partnership, which launched in January

of 2016, involves select SFGH patients experiencing a high volume of hospitalization and readmission rates due to chronic congestive heart failure, will be referred to Project Open Hand. Discharged patients receive a bag of healthy groceries from Project Open Hand and are offered opportunities to participate in the study conducted by Project Open Hand nutritionists. Project Open Hand and ZSGH have partnered to implement this pioneering program within the public healthcare system in recognition of the impact and value of Food as Medicine as well as the nation's alarming trend of congestive heart failure. According to the Centers for Disease Control and Prevention, upwards of 5 million Americans suffer from congestive heart failure, leading to an estimated $35 billion in U.S. healthcare costs each year.

Adults With Disabilities Meal Program at 730 Polk Street

In December of 2016, Project Open Hand opened a unique dining site at 730 Polk Street for our Adults with Disabilities population. In that beautiful corner space on Willow and Polk, we began serving a hot lunch for upwards of 50 clients/day. This is the first Adults with Disabilities site in the San Francisco to exclusively serve this population. It addresses a significant challenge of food insecurity among adults with disabilities. The SF Department of Aging and Adult Services ("DAAS") requested that Project Open Hand launch this unique service, hoping to close a gap in services and create a model for other agencies and community centers throughout San Francisco. The program is completely funded by DAAS.

Getting To Zero Initiative

Launching in 2017, Project Open Hand will be offering a new form of delivery service. We're taking our services to our clients' neighborhoods. With funding support from the City of San Francisco and the Getting To Zero Coalition, Project Open Hand is set to embark on a new mobile service delivery. We've added to our delivery fleet and we'll be outfitting two vehicles to provide all of the services we provide at 730 Polk Street (groceries, hot and frozen meals, nutrition and client services). Our first two colocation sites will be in the most vulnerable and underserved areas of the city: the Mission and Bayview neighborhoods. We'll co-locate at Mission Neighborhood Health Center and Southeast Health Center during peak client times and bring our services directly to the neighborhood.

Oakland

1921 San Pablo Avenue
Oakland, CA 94612
(510) 622-0221
Email Us

San Francisco

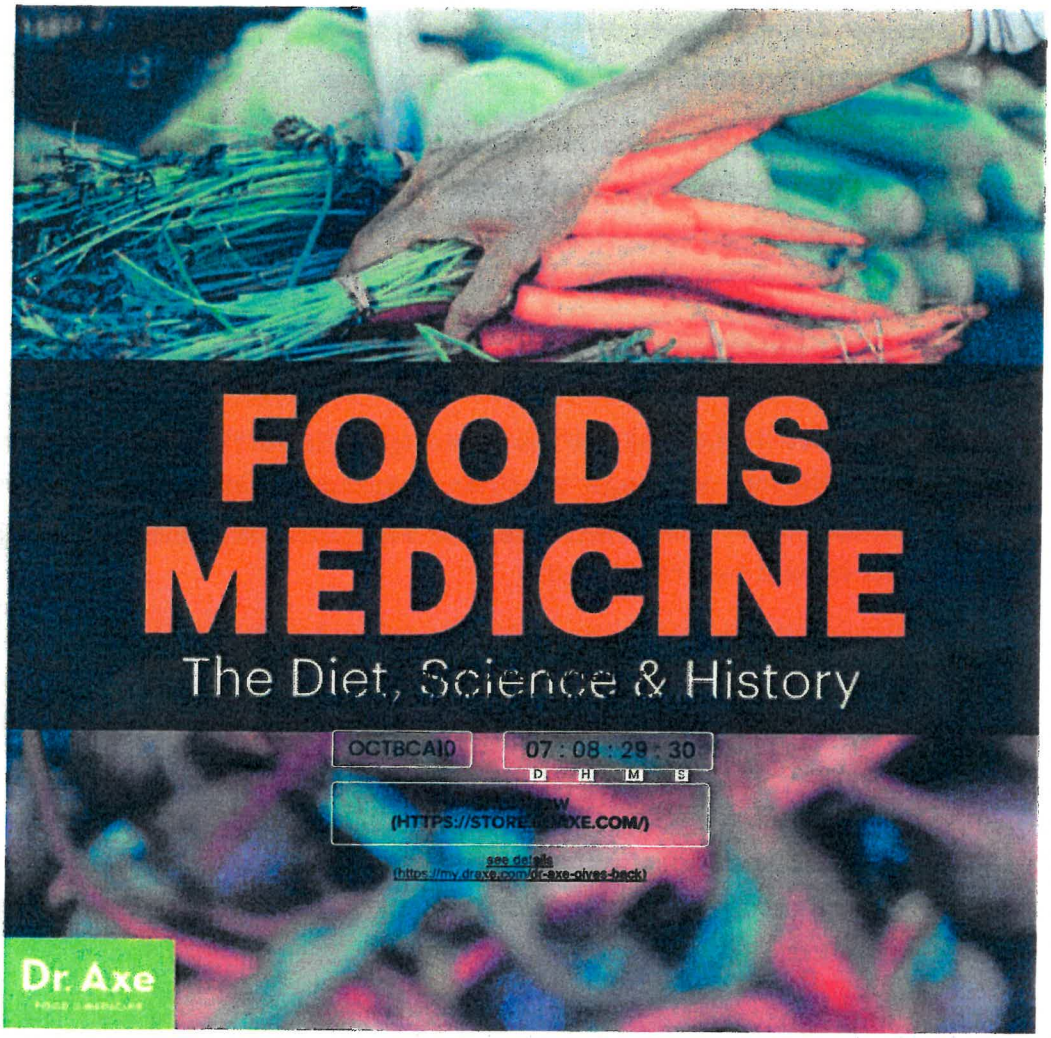
730 Polk Street
San Francisco, CA 94109
(415) 447-2300
Email Us

Get Involved

Donate
Volunteer
Get Meals
Job Opportunities

Privacy Policy

Food Is Medicine: The Diet of Medicinal Foods, Science & History



Hippocrates was to thank for the famous quote, "Let food be thy medicine and medicine be thy food" — which we translated to "food is medicine" and use as our motto. Still to this day medical doctors and historians consider Hippocrates to be the founder of medicine as a "rational science." (http://www.greekmedicine.net/whos_who/Hippocrates.html)

Considered to be one of the most influential figures in the history of medicine and healing, Hippocrates was ahead of his time when, around the year 400 B.C, he advised people to prevent and treat diseases first and foremost by eating a nutrient-dense diet.

Why is a calorie *not* just a calorie when it comes to your health, and how come it matters so much which types of foods you get your calories from?Foods provide us with energy (calories), but they do much more than that.

The foods you include in your diet also play a critical role in controlling inflammation levels, balancing blood sugar, regulating cardiovascular health (including blood pressure and cholesterol levels), helping the digestive organs to process and eliminate waste, and much, much more. Did you know that certain **anti-inflammatory foods** (https://draxe.com/anti-inflammatory-foods/) even contain powerful active ingredients that help control how your genes are expressed?

Hippocrates and the Ancient Greeks weren't the only ones onto something when they studied the many medicinal properties of foods. Many traditional systems of healing which have been practiced throughout history — including **Ayurvedic Medicine** (https://draxe.com/ayurvedic-medicine/) and Traditional Chinese Medicine, for example — have taught for thousands of years that food is medicine and a healthy diet is a powerful tool for protecting one's health.

Below you'll learn which medicinal foods we now know make the biggest impact in someone's health overall, which foods you should avoid most, and how to get started today eating a **healing diet** (https://draxe.com/healing-diet/).

How Food Works Like Medicine

Perhaps more than anything else in our lives, the foods we regularly eat help determine whether or not we will become ill, or remain healthy into older age. Whether vegetables, fruit, meat, oils or grains, foods contain influential substances including antioxidants, **phytonutrients** (https://draxe.com/phytonutrients/), vitamins, minerals, fatty acids, fiber and much more.

Nutrient deficiencies and toxicity from a poor diet are linked to nearly all modern health conditions. John Hopkins University reports that some 80 percent of cancer patients are believed to be malnourished, and that treatments used to battle cancer (like chemotherapy) only increase the body's need for nutrients and very high-quality foods even more. (1 (http://www.hopkinsmedicine.org/hmn/w10/feature2.cfm)) You probably already know that diabetes and **heart disease** (https://draxe.com/coronary-heart-disease/) (currently the No. 1 killer in the U.S. and most industrialized nations) are also illnesses that are highly influenced by one's diet — and the same can be said for allergies, autoimmune disorders like arthritis, thyroid disorders and many more.

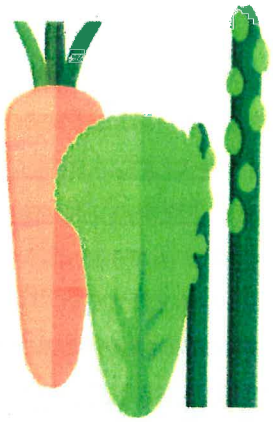
The expanding field of Nutrigenomics (https://en.wikipedia.org/wiki/Nutrigenomics) (also called Nutritional Genomics) is devoted to studying how food influences gene expressions and contributes to either health and longevity or to disease and earlier death. The principles behind nutrigenomics can be summarized in several key points: genes play a role in disease development and prevention; a poor diet can be a serious risk factor for many diseases; nutrient deficiencies and toxic chemicals in low-quality foods have an effect on human gene expressions; each person is different in terms of how much their genes/health are impacted by their diet; and a healthy but also **personalized diet** (https://draxe.com/personalized-diet/) can be used to prevent, mitigate or cure chronic diseases. (2 (http://nutrigenomics.ucdavis.edu/?page=information))

Some of the ways that medicinal foods specifically act like natural protectors against disease and help to slow the effects of aging, include:

- **Decreasing & Controlling Inflammation** – **Inflammation is the root of most diseases** (https://draxe.com/inflammation-at-the-root-of-most-diseases/) and a major contributor to the effects of aging. Inflammation is a response from the immune system when the body perceives it's being threatened, and it can affect nearly every tissue, hormone and cell in the body. Research also shows that "obesity has a strong inflammatory component," a problem that now affects nearly two-thirds of all adults in the U.S. (3 (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2952901/))
- **Balancing Hormones (https://draxe.com/10-ways-balance-hormones-naturally/)** - Hormones affect every part of health, from your energy and cognitive abilities to your body weight and sex drive. Abnormal hormonal changes contribute to accelerated aging, diabetes, obesity, fatigue, depression, low mental capacity, reproductive problems and an array of autoimmune diseases. (4 (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1970554/))
- **Alkalizing the Body** – The human body keeps a tight grip on its internal pH level, working hard to keep it around a pH of 7.36. Studies show that when it comes to the pH and net acid load in the human diet, "there has been considerable change from the hunter-gather civilization to the present." (5 (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3195546/)) Processed, low-quality foods make the body more acidic and allow diseases to thrive more easily. An **alkaline diet** (https://draxe.com/leptin-and-alkaline-foods/) (high in plant foods that are detoxifying) helps with cellular renewal and might promote longevity.
- **Balancing Blood Glucose (Sugar)** – Diabetes and weight gain are tied to poor insulin response and other hormonal changes. Poorly managed blood sugar levels due to consuming high amounts of sugar and processed carbohydrates can lead to cravings, fatigue, neurological damage, mood disorders, hormonal balances and more. To sustain **normal blood sugar** (https://draxe.com/normal-blood-sugar/), experts recommend that low-glycemic and non-processed carbohydrates take the place of refined, empty calories and added sugar. (6 (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3977406/))
- **Detoxifying (https://draxe.com/detox-drinks/) & Eliminating Toxins** – Toxicity is tied to poor digestive health, hormonal changes and decreasing liver functioning. In modern society, we are bombarded by chemicals from our diet and environment that contribute to inflammation, autoimmune diseases, infertility, hypothyroidism, fibromyalgia, and so on.
- **Improving Absorption of Nutrients** – Many of today's illnesses are due to nutritional deficiencies and high rates of free radical damage. The majority of processed convenience foods are stripped of their natural nutrients or at least partly manmade, packed with synthetic ingredients and preservatives but very low in vitamins, minerals, antioxidants, fiber and enzymes.

GUIDE TO FOOD IS MEDICINE

Dr. Axe
FOOD IS MEDICINE



"Let medicine be thy food and let food be thy medicine."
— **Hippocrates, 400 B.C.**

He advised people to prevent and treat diseases first and foremost by eating a nutrient-dense diet.

Ayurveda and Traditional Chinese Medicine have also taught for thousands of years that food is medicine and a healthy diet is a powerful tool for protecting one's health.

FACTS ABOUT FOOD BEING MEDICINE

Perhaps more than anything else in our lives, the foods we regularly eat help determine whether or not we will become ill, or remain healthy into older age.

Nutrient deficiencies and toxicity from a poor diet are linked to nearly all modern health conditions. E.g., John Hopkins University reports that some 80 percent of cancer patients are believed to be malnourished.

The expanding field of Nutrigenomics (also called Nutritional Genomics) is devoted to studying how food influences gene expressions and contributes to either health and longevity, or to disease and earlier death.

HOW FOOD WORKS LIKE MEDICINE

decreases and control inflammation

balances hormones

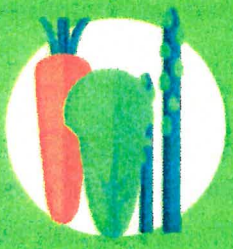
alkalizes the body

balances blood sugar

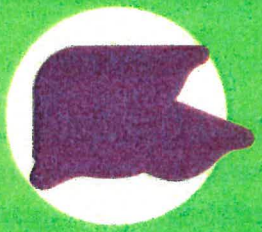
detoxifies and eliminates toxins

improves absorption of toxins

BEST EXAMPLES OF MEDICINAL FOODS

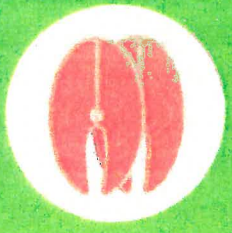


fresh/raw vegetables

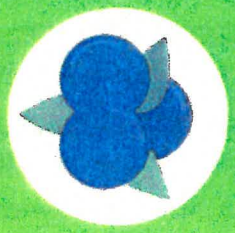


organ meats and bone broth

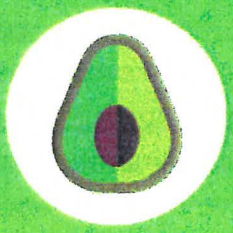
probiotic foods



omega-3 foods and healthy fats



high-antioxidant foods



high-fiber foods

7 of the Best Medicinal Foods

As we get older and our appetite starts to decline, we tend to consume less calories overall and, therefore, our food choices matter more than ever. Research shows that as caloric intake and absorption of nutrients drops among the elderly, rates of diseases including cancer and heart disease steadily increase.

To help prevent deficiencies and lower your risk for illness, it's crucial to make every calorie count. Here are six food groups that help protect you most:

1. Fresh/Raw Vegetables

Green vegetables (like kale, wheat grass and spinach, for example), sea vegetables and fresh vegetable juices are considered some of the healthiest foods on earth, known to dramatically **help slow aging** (https://draxe.com/how-to-naturally-slow-aging/). They help restore the body's proper pH, prevent nutrient deficiencies, curb hunger and detoxify the blood. They are also super low in calories, yet beaming with antioxidants, phytonutrients and vitamin C, vitamin K, magnesium, potassium, iodine and fiber.

Antioxidants found in vegetables are an amazing thing: They develop within plants to protect the plant from its damaging environment including ultraviolet radiation, predator pests, toxins and pollution. Phytonutrients have the purpose of shielding plants from predators (and also provide their color, flavor and smell), and we obtain the same benefits when we eat them.

Nearly all diseases including infections, osteoporosis and even cancer thrive in an acidic environment, but by alkalizing your body naturally through eating more plant foods (especially fresh veggies), you help prevent cellular damage. Veggies of all kinds help lower **free radical damage** (https://draxe.com/fighting-free-radical-damage/) and control inflammation, plus many provide prebiotics and a high dose of fiber.

2. Organ Meats & Bone Broth

Organ meats, including beef or **chicken liver** (https://draxe.com/chicken-liver-pate/), are some of the most nutrient-concentrated foods available to us. Liver is a true superfood and exceptionally high in zinc, iron, vitamin A, vitamin B12 and more. It might not seem appealing to you at first, but consider that a "nose to tail" approach of eating animals has been practiced for thousands of years — and for good reason!

Consuming nutrient-packed organ meats (http://www.mensfitness.com/nutrition/what-to-eat/7-nutrient-packed-animal-organs) and all edible parts of an animal, plus making **bone broth** (https://draxe.com/the-healing-power-of-bone-broth-for-digestion-arthritis-and-cellulite/) with the remaining parts that are normally discarded (like bones, skin and ligaments), provides us with hard-to-find nutrients like **collagen** (https://draxe.com/what-is-collagen/), glucosamine and an abundance of electrolytes and trace minerals. These nutrients help ward off and treat illnesses like irritable bowel disorders (IBD), arthritis and joint pains, chronic fatigue, leaky gut syndrome, anemia and allergies.

3. Probiotic Foods

Probiotics are not only critical for optimal digestion, but also for overall immune function and health. The **digestive system** (https://draxe.com/how-your-digestive-system-works/) is the second largest p of our neurological system and holds 80 percent of your entire immune system! A huge array of illnesses actually stem from poor gut health, including thyroid imbalances, chronic fatigue, joint pain, psoriasis, autism and food allergies.

The microbes that make up our gut flora are involved in weight control, appetite, inflammatory processes, cognitive functioning and neurotransmitter production. (7 (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC207122/)) This means that everything from your mood and energy levels to your ability to prevent common colds is tied to your gut.

Beneficial bacteria and other microbes living in the digestive tract thrive when we regularly replenish them by consuming both **probiotic-rich foods (https://draxe.com/probiotics-benefits-foods-supplements/)** (like yogurt, kombucha, kefir and cultured veggies) and also those with **prebiotics** (https://draxe.com/prebiotics/) (like chicory, asparagus and articohokes).

4. Omega-3 Foods

A diet high in "good fats" is essential for controlling inflammation, cognitive health, hormone production, cancer prevention, weight loss and cellular healing. Omega-3 fats are natural anti-inflammatories and help counteract the effects of pro-inflammatory omega-6 fats, which are very high in modern-day diets. (8 (http://www.ncbi.nlm.nih.gov/pubmed/12480795))

The best **sources of omega-3s** (https://draxe.com/omega-3-foods/)include wild-caught fish like salmon, sardines, halibut, tuna and mackerel. Other plant sources include walnuts, flaxseeds and chia seeds. Try to avoid hydrogenated and partially hydrogenated oils, trans fats, soybean oil, canola oil and other vegetable oils which are very high in omega-6s.

5. Healthy Fats

Not all fats are created equal (see directly above), but the certain good ones pack a lot of medicinal punch. From lowering bad cholesterol and helping shed excess weight to giving you shiny hair and healthy nails, your body will reap the benefits of healthy fats like avocado, grass-fed butter, ghee, coconut oil, MCT oil, extra virgin olive oil and yes, omega-3 fats (such as found in wild-caught salmon.)

It's been been proved there is no evidence that dietary saturated fat increases a person's risk for coronary heart disease or cardiovascular disease. (9 (http://ajcn.nutrition.org/content/early/2010/01/13/ajcn.2009.27725.abstract))

Additionally, a seven-year study of more than 48,000 women showed that low-fat diets don't lead to more weight loss or less disease. (10 (http://www.ncbi.nlm.nih.gov/pubmed/16391215)) And yet another study found that, when subjects ate either a **Mediterranean diet (https://draxe.com/mediterranean-diet/)** (which is loaded with healthy fats), low-fat diet or low-carb diet, those following a high-fat, low-carb meal plan not only lost the most weight, but also drastically reduced their bad cholesterol levels. (11 (http://www.nejm.org/doi/full/10.1056/NEJMoa0708681))

6. High-Antioxidant Foods

Antioxidants slow the effects of aging by decreasing free radical damage. A good indication that a food has a high amount of antioxidants? If it's naturally brightly colored (red, orange, yellow, green, etc.) chances are it's supplying nutrients like beta carotene, resveratrol, flavanoids and more. Some of the best **foods for obtaining antioxidants** (https://draxe.com/top-10-high-antioxidant-foods/) include: berries, red wine, raw cocoa, acai, spirulina, leafy greens, fresh herbs and spices, cruciferous veggies and bright root veggies.

7. High Fiber Foods

Here's a scary finding: it's estimated that less than 5 percent of Americans get the recommended amount of dietary fiber they need each day! You might already know that dietary fiber helps keep you "regular" in the bathroom, but did you know it's also very important for heart health, your entire digestive system and gut, and even your immune system?

Fiber helps to reduce cholesterol and triglycerides, strengthens the colon walls, plays a role in regulating blood sugar levels, helps prevent insulin resistance, and promotes the growth of beneficial probiotic bacteria in your gut that influence immunity.

It's recommended that adults get at least 25–30 grams of fiber daily. (12 (https://www.ucsfhealth.org/education/increasing_fiber_intake/)) High-fiber diets are associated with better protection against obesity, cancer, cardiovascular diseases, digestive disorders and menstrual problems (just to name a few). **High-fiber foods** (https://draxe.com/high-fiber-foods/) include leafy greens, cruciferous veggies, avocado, coconut, starchy veggies, berries, nuts, seeds, sprouted legumes and ancient grains.

The "Food Is Medicine Diet": What It Looks Like In Action

Eating a **healing diet** (https://draxe.com/healing-diet/), filled with medicinal foods that help prevent and treat diseases naturally, is easier than you might think. My Healing Foods Diet consists of eating roughly equal amounts (33 percent each) of clean protein sources, healthy fats, and low glycemic carbohydrates in the forms of fruits and vegetables. Each person's needs are a bit different, but balance and eating a variety of real foods is key.

Here's what a "medicinal diet" looks like when use nutritional foods to your benefit:

- **Organic Vegetables** (all kinds, raw and cooked): especially those that are high in fiber and low-glycemic including leafy greens, mushrooms, asparagus, artichokes, squash, sea vegetables, fresh herbs and so on
- **Fresh Fruits**: especially berries, citrus and melon, which are great sources of antioxidants
- **Grass-Fed/Pasture-Raised Meats**: **grass-fed and free-range meats** (https://draxe.com/cancer-fighting-cla-higher-in-grass-fed-beef/) offer not just protein, but also many fatty acids missing in the Standard American Diet (SAD) such as aracodonic acid, congegated linoleic acid, and omega 3 fatty acids. Turkey, beef, cage-free eggs, lamb, venison, fish and organ meats, and also raw dairy products are all good choices
- **Low-Glycemic Carbohydrates**: in addition to fruits and veggies, this includes sprouted ancient grains (gluten-free is best), soaked legumes and beans, nuts and seeds
- **Healthy Fats**: good sources include wild seafood, coconut oil/cream, real olive oil, avocado, nuts and seeds
- **Other Superfoods** (https://draxe.com/top-10-superfoods-what%E2%80%99s-in-your-diet%E2%80%A8/) **& Condiments**: these include other ingredients that highly nutritious, low in calories, and capable of adding major flavor to food naturally. Sources include apple cider vinegar, garlic, raw honey, spices like turmeric and cinnamon, cocoa, sea salt, and stevia
- **Healthy Drinks**: the beverages you consume should be free from added sugar, hydrating, high in antioxidants and low in sugar. Good choices include plain water or seltzer, herbal teas, fresh veggies juices, bone broth, and coffee and red wine in moderation

---

Precautions When Following a "Food Is Medicine" Lifestyle

While a nutritional foods certainly help to promote overall health, it's still best to seek medical care from a professional and not to discontinue any medications without being monitored or told to do so. As you've seen, the majority of diseases can at least be partially prevented through a healthy diet and lifestyle, but there are some instances when a diet filled with medicinal foods might not be enough.

Each individual is different in terms of how their genes react to certain foods, so for some people even if they eat a perfect diet they might still develop an illness. Genetics certainly play a role in the development of diseases like cancer, heart disease, autoimmune disorders, and more. Regardless of whether or not someone's disease or illness could have been prevented through a healthier lifestyle, eating a nutrient-dense diet is still one of the best ways to help manage symptoms and increase odds of recovery.

Final Thoughts On Food Being Medicine

- Because foods have an effect on inflammation levels, blood sugar, energy, hormones, brain and heart health, they truly do act like medicine once consumed
- A healthy diet plays a role in how genes are expressed and can tip the scale in favor of preventing disease, even if one runs in your family
- Some of the most medicinal foods there are include vegetables and fruits, organ meats, grass-fed meats, healthy fats like coconut and seeds, sea vegetables and superfoods like cocoa and red wine

Read Next: Top 15 Anti-Inflammatory Foods (https://draxe.com/anti-inflammatory-foods/)

Previous Story - (https://draxe.com/mythbusters-exercise-for-weight-loss/) Mythbusters: Exercise Is Key for Weight Loss

Next Story - (https://draxe.com/danger-foods/) 5 Danger Foods You're Consuming on a Regular Basis

UCSF

Food is Medicine for HIV-Positive and Type 2 Diabetes Patients

Study Finds Good Nutrition Improves Medication Adherence and Mental Health

By Laura Kurtzman (https://www.ucsf.edu/bio/laura-kurtzman) on January 25, 2017

HIV-positive people who received healthy food and snacks for six months were more likely to adhere to their medication regimens, and they, as well as people with type 2 diabetes, were less depressed and less likely to make trade-offs between food and healthcare, according to a new study led by researchers at UC San Francisco.

The study was done jointly by researchers from UCSF and from Project Open Hand, a San Francisco Bay Area nonprofit agency that has provided nutritious meals to low-income people with HIV since 1985, and more recently to elderly people and those with other medical conditions, such as type 2 diabetes.

Evaluating Nutrition for Health

The study, which appeared online on Jan.17, 2017, in the *Journal of Urban Health* (http://link.springer.com/article/10.1007/s11524-016-0129-7) , was designed to evaluate whether helping people get medically appropriate, comprehensive nutrition would improve their health. Such food assistance as an approach to improve medication adherence and health has been shown to be effective in low-resource countries, but it has not been well studied in the developed world.

The study showed increases in the number of people with diabetes who achieved optimal blood sugar control, and decreases in hospitalizations or emergency department visits, but because of the small size, these changes did not reach statistical significance. Participants with diabetes also consumed less sugar and lost weight.

"We saw significant improvements in food security and in outcomes related to all three mechanisms through which we posited food insecurity may affect HIV and diabetes health – nutritional, mental

health, and behavioral," said Kartika Palar (http://ucsf.us13.list-manage.com/track/click?u=eeb057768c79924cab3237922&id=12950d4a9c&e=9ff52a4793) , PhD, an assistant professor of medicine at UCSF and co-first author of the study. "For example, we saw dramatic improvements in depression, the distress of having diabetes, diabetes self-management, trading-off between food and health care, and HIV medication adherence."

Fewer Fats, More Fruits and Vegetables

Researchers followed the participants for six months and found they consumed fewer fats, while increasing their consumption of fruits and vegetables. Overall, those in the study had fewer symptoms of depression and were less likely to binge drink. For those with HIV, adherence to antiretroviral therapy increased from 47 percent to 70 percent.

The meals and snacks, which participants picked up twice a week, were based on the Mediterranean diet and featured fresh fruits and vegetables, lean proteins, healthy fats like olive oil, and whole grains. They were also low in refined sugars and saturated fats, based on current recommendations from the American Diabetes Association and American Heart Association.

The meals and snacks fulfilled 100 percent of daily caloric requirements. Average energy requirements used to design daily meals were 1,800 to 2,000 kcal for people living with HIV and 1,800 kcal for people with type 2 diabetes. This threshold evolved to account for the varied energy requirements of individuals of different sizes and metabolic needs.

"This study highlights the vital role that community-based food support organizations can play in supporting health and well-being of chronically ill populations who struggle to afford basic needs," said Sheri Weiser (http://ucsf.us13.list-manage.com/track/click?u=eeb057768c79924cab3237922&id=df66ff307f&e=9ff52a4793) , MD, associate professor of medicine at UCSF and senior author of the study.

May Be a Cost-Saving Measure

Providing healthy food may also be a cost-saving measure. The cost to feed each participant was $6.58 a day, or $1,184 for the six-month intervention, which is less than half the $2,774 cost per inpatient day in a California hospital. Yet, Weiser said, "safety-net programs must be complemented by efforts to address the drivers of food insecurity such as economic inequality and the high cost of housing."

About two-thirds of those in the study were male and just over 70 percent were between 50 and 64 years old. About 80 percent were non-white and only about 17 percent were employed. Most were receiving federal disability payments – SSI and/or SSDI – and about 20 percent were receiving food stamps. Compared to participants living with HIV, those with type 2 diabetes were more likely to be older, female, African-American, employed, and receiving food stamps.

The team plans to follow up with another six-month study of 200 HIV-positive clients in San Francisco and Alameda counties. "Feeding people who are too sick to take care of themselves is at the core of our mission," said Project Open Hand CEO Mark Ryle.

Other authors include Tessa Napoles (co-first author), Hilary Seligman (http://ucsf.us13.list-manage.com/track/click?u=eeb057768c79924cab3237922&id=d7e48e6f68&e=9ff52a4793) , and Fredrick M. Hecht (http://ucsf.us13.list-manage.com/track/click?u=eeb057768c79924cab3237922&id=cd83cd2aea&e=9ff52a4793) , MD, of UCSF; Kimberly Madsen and Mark Ryle, of Project Open Hand; Lee L. Hufstedler, of the UCSF-UC Berkeley Joint Medical Program; Simon Pitchford, of Homebridge, Inc.; and Edward A. Frongillo, of the University of South Carolina.

UC San Francisco (UCSF) is a leading university dedicated to promoting health worldwide through advanced biomedical research, graduate-level education in the life sciences and health professions, and excellence in patient care. It includes top-ranked graduate schools of dentistry, medicine, nursing and pharmacy; a graduate division with nationally renowned programs in basic, biomedical, translational and population sciences; and a preeminent biomedical research enterprise. It also includes UCSF Health, which comprises top-ranked hospitals, UCSF Medical Center (https://www.ucsfhealth.org/) and UCSF Benioff Children's Hospitals in San Francisco (https://www.ucsfbenioffchildrens.org/) and Oakland (http://www.childrenshospitaloakland.org/main/home.aspx) – and other partner and affiliated hospitals and healthcare providers throughout the Bay Area.

Comprehensive and Medically Appropriate Food Support Is Associated with Improved HIV and Diabetes Health

Journal of Urban Health

February 2017, Volume 94, Issue 1, pp 87–99 | Cite as

- Kartika Palar (1) Email author (Kartika.Palar@ucsf.edu)
- Tessa Napoles (1)
- Lee L. Hufstedler (1) (7)
- Hilary Seligman (2)
- Fredrick M. Hecht (1)
- Kimberly Madsen (3)
- Mark Ryle (3)
- Simon Pitchford (4)
- Edward A. Frongillo (5)
- Sheri D. Weiser (1) (6)

1. Division of HIV, Infectious Diseases and Global Medicine, San Francisco General Hospital, Department of Medicine, University of California San Francisco (UCSF), San Francisco, USA
2. Division of General Internal Medicine, San Francisco General Hospital, Department of Medicine, UCSF, San Francisco, USA
3. Project Open Hand, San Francisco, USA
4. Homebridge, Inc., San Francisco, USA
5. Department of Health Promotion, Education, and Behavior, University of South Carolina, Columbia, USA
6. Center for AIDS Prevention Studies, UCSF, San Francisco, USA
7. University of California Berkeley-University of California at San Francisco Joint Medical Program School of Public Health, University of California Berkeley, Berkeley, USA

Article
First Online: 17 January 2017

Abstract

Food insecurity is associated with negative chronic health outcomes, yet few studies have examined how providing medically appropriate food assistance to food-insecure individuals may improve health outcomes in resource-rich settings. We evaluated a community-based food support intervention in the San Francisco Bay Area for people living with HIV and/or type 2 diabetes mellitus (T2DM) to determine the feasibility, acceptability, and potential impact of the intervention on nutritional, mental health, disease management, healthcare utilization, and physical health outcomes. The 6-month intervention provided meals and snacks designed to comprise 100% of daily energy requirements and meet nutritional guidelines for a healthy diet. We assessed paired outcomes at baseline and 6 months using validated measures. Paired *t* tests and McNemar exact tests were used with continuous and dichotomous outcomes, respectively, to compare pre-post changes. Fifty-two participants (out of 72 initiators) had both baseline and follow-up assessments, including 23 with HIV, 24 with T2DM, and 7 with both HIV and T2DM. Median food pick-up adherence was 93%. Comparing baseline to follow-up, very low food security decreased from 59.6% to 11.5% ($p < 0.0001$). Frequency of consumption of fats ($p = 0.003$) decreased, while frequency increased for fruits and vegetables ($p = 0.011$). Among people with diabetes, frequency of sugar consumption decreased ($p = 0.006$). We also observed decreased depressive symptoms ($p = 0.028$) and binge drinking ($p = 0.008$). At follow-up, fewer participants sacrificed food for healthcare ($p = 0.007$) or prescriptions ($p = 0.046$), or sacrificed healthcare for food ($p = 0.029$). Among people with HIV, 95% adherence to antiretroviral therapy increased from 47 to 70% ($p = 0.046$). Among people with T2DM, diabetes distress ($p < 0.001$), and perceived diabetes self-management ($p = 0.007$) improved. Comprehensive, medically appropriate food support is feasible and may improve multiple health outcomes for food-insecure individuals living with chronic health conditions. Future studies should formally test the impact of medically appropriate food support interventions for food-insecure populations through rigorous, randomized controlled designs.

Keywords

Food Nutrition HIV Diabetes Community-based Food security Food support Food assistance Intervention Medically tailored

Abbreviations

ARV

Antiretroviral

ED

Emergency department

GED

General Educational Development

HbA1c

Glycated hemoglobin

HFSSM

Household Food Security Survey Module

PDSMS

Perceived Diabetes Self-Management Scale

POH

Project Open Hand

SNAP

Supplemental Nutrition Assistance Program

SSDI

Social Security Disability Income

SRO

Single room occupancy

SSI

Supplemental Security Income

T2DM

Type 2 diabetes mellitus

UCSF

University of California, San Francisco

Kartika Palar and Tessa Napoles share co-first authorship.

References

1. Ivers LC, ed. *Food Insecurity and Public Health*. Boca Raton, FL: CRC Press, Taylor & Francis Group; 2015.

Google Scholar (https://scholar.google.com/scholar?q=Ivers%20LC%2C%20ed.%20Food%20Insecurity%20and%20Public%20Health.%20Boca%20Raton%2C%20FL%3A%20CRC%20Press%2C%20Taylor%20%26%20Francis%20Group%3B%202015.)

2. Seligman HK, Schillinger D. Hunger and socioeconomic disparities in chronic disease. *N Engl J Med.* 2010; 363(1): 6–9.
CrossRef (https://doi.org/10.1056/NEJMp1000072)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=20592297)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Hunger%20and%20socioeconomic%20disparities%20in%20chronic%20disease&author=HK.%20Seligman&author=D.%20Schillinger&journal=N%20Engl%20J%20Med&volume=363&issue=1&pages=6-9&publication_year=2010)

3. Coleman-Jensen A, Rabbitt M, Gregory C, Singh A. *Household food security in the United States in 2015. ERR-215*: United States Department of Agriculture, Economic Research Service 2016.
Google Scholar (https://scholar.google.com/scholar?q=Coleman-Jensen%20A%2C%20Rabbitt%20M%2C%20Gregory%20C%2C%20Singh%20A.%20Household%20food%20security%20in%20the%20United%20States%20in%202015.%20ERR-215%3A%20United%20States%20Department%20of%20Agriculture%2C%20Economic%20Research%20Service%202016.)

4. Seligman HK, Bindman AB, Vittinghoff E, et al. Food insecurity is associated with diabetes mellitus: results from the National Health Examination and Nutrition Examination Survey (NHANES) 1999–2002. *J Gen Intern Med.* 2007; 22(7): 1018–1023.
CrossRef (https://doi.org/10.1007/s11606-007-0192-6)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=17436030)
PubMedCentral (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2583797)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Food%20insecurity%20is%20associated%20with%20diabetes%20mellitus%3A%20results%20from%20the%20National%20Health%20Examination%20and%20Nutrition%20Examination%20Survey%20%28NHANES%29%201999%E2%80%932002&author=HK.%20Seligman&author=AB.%20Bindman&author=E.%20Vittinghoff&journal=J%20Gen%20Intern%20Med&volume=22&issue=7&pages=1018-1023&publication_year=2007)

5. Seligman HK, Laraia BA, Kushel MB. Food insecurity is associated with chronic disease among low-income NHANES participants. *J Nutr.* 2010; 140(2): 304–310.
CrossRef (https://doi.org/10.3945/jn.109.112573)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=20032485)
PubMedCentral (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2806885)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Food%20insecurity%20is%20associated%20with%20chronic%20disease%20among%20low-income%20NHANES%20participants&author=HK.%20Seligman&author=BA.%2

oLaraia&author=MB.%20Kushel&journal=J%20Nutr&volume=140&issue=2&pages=304-310&publication_year=2010)

6. Palar K, Laraia B, Tsai AC, Johnson M, Weiser SD. Food insecurity is associated with HIV, sexually transmitted infections and drug use among men in the United States. *AIDS*. 2016; 30(9):1457–1465.
Google Scholar (https://scholar.google.com/scholar?q=Palar%20K%2C%20Laraia%20B%2C%20Tsai%20AC%2C%20Johnson%20M%2C%20Weiser%20SD.%20Food%20insecurity%20is%20associated%20with%20HIV%2C%20sexually%20transmitted%20infections%20and%20drug%20use%20among%20men%20in%20the%20United%20States.%20AIDS.%202016%3B%2030%289%29%3A1457%E2%80%931465.)

7. Vogenthaler NS, Kushel MB, Hadley C, et al. Food Insecurity and Risky Sexual Behaviors Among Homeless and Marginally Housed HIV-Infected Individuals in San Francisco. *AIDS and Behavior*. 2012:1–6.
Google Scholar (https://scholar.google.com/scholar?q=Vogenthaler%20NS%2C%20Kushel%20MB%2C%20Hadley%20C%2C%20et%20al.%20Food%20Insecurity%20and%20Risky%20Sexual%20Behaviors%20Among%20Homeless%20and%20Marginally%20Housed%20HIV-Infected%20Individuals%20in%20San%20Francisco.%20AIDS%20and%20Behavior.%202012%3A1%E2%80%936.)

8. Shannon K, Kerr T, Milloy M-J, et al. Severe food insecurity is associated with elevated unprotected sex among HIV-seropositive injection drug users independent of HAART use. *AIDS*. 2011; 25(16): 2037–2042.
CrossRef (https://doi.org/10.1097/QAD.0b013e32834b35c9)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=21811140)
PubMedCentral (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3956106)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Severe%20food%20insecurity%20is%20associated%20with%20elevated%20unprotected%20sex%20among%20HIV-seropositive%20injection%20drug%20users%20independent%20of%20HAART%20use&author=K.%20Shannon&author=T.%20Kerr&author=M-J.%20Milloy&journal=AIDS&volume=25&issue=16&pages=2037-2042&publication_year=2011)

9. Kalichman S, Cherry C, Amaral C, et al. Health and treatment implications of food insufficiency among people living with HIV/AIDS, Atlanta. *Georgia J Urban Health*. 2010; 87(4): 1–11.
Google Scholar (http://scholar.google.com/scholar_lookup?title=Health%20and%20treatment%20implications%20of%20food%20insufficiency%20among%20people%20living%20with%20HIV%2FAIDS%2C%20Atlanta&author=S.%20Kalichman&author=C.%20Cherry&author=C.%20Amaral&journal=Georgia.%20J%20Urban%20Health.&volume=87&issue=4&pages=1-11&publication_year=2010)

10. Weiser SD, Yuan C, Guzman D, et al. Food insecurity and HIV clinical outcomes in a longitudinal study of homeless and marginally housed HIV-infected individuals in San Francisco. *AIDS*. 2013; 27(18): 2953–2958.
CrossRef (https://doi.org/10.1097/01.aids.0000432538.70088.a3)

PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=23921612)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Food%20insecurity%20and%20HIV%20clinical%20outcomes%20in%20a%20longitudinal%20study%20of%20homeless%20and%20marginally%20housed%20HIV-infected%20individuals%20in%20San%20Francisco&author=SD.%20Weiser&author=C.%20Yuan&author=D.%20Guzman&journal=AIDS&volume=27&issue=18&pages=2953-2958&publication_year=2013)

11. McMahon JH, Wanke CA, Elliott JH, et al. Repeated assessments of food security predict CD4 change in the setting of antiretroviral therapy. *JAIDS J Acquir Immune Defic Syndromes*. 2011; 58(1): 60–63.
CrossRef (https://doi.org/10.1097/QAI.0b013e318227f8dd)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Repeated%20assessments%20of%20food%20security%20predict%20CD4%20change%20in%20the%20setting%20of%20antiretroviral%20therapy&author=JH.%20McMahon&author=CA.%20Wanke&author=JH.%20Elliott&journal=JAIDS%20J%20Acquir%20Immune%20Defic%20Syndromes&volume=58&issue=1&pages=60-63&publication_year=2011)

12. Weiser S, Frongillo EA, Ragland K, et al. Food insecurity is associated with incomplete HIV RNA suppression among homeless and marginally housed HIV-infected individuals in San Francisco. *J Gen Intern Med*. 2009; 24(1): 14–20.
CrossRef (https://doi.org/10.1007/s11606-008-0824-5)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=18953617)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Food%20insecurity%20is%20associated%20with%20incomplete%20HIV%20RNA%20suppression%20among%20homeless%20and%20marginally%20housed%20HIV-infected%20individuals%20in%20San%20Francisco&author=S.%20Weiser&author=EA.%20Frongillo&author=K.%20Ragland&journal=J%20Gen%20Intern%20Med&volume=24&issue=1&pages=14-20&publication_year=2009)

13. Wang EA, McGinnis KA, Fiellin DA, et al. Food Insecurity is associated with poor virologic response among HIV-infected patients receiving antiretroviral medications. *J Gen Intern Med*. 2011; 26(9): 1012–1018.
CrossRef (https://doi.org/10.1007/s11606-011-1723-8)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=21573882)
PubMedCentral (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3157515)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Food%20Insecurity%20is%20associated%20with%20poor%20virologic%20response%20among%20HIV-infected%20patients%20receiving%20antiretroviral%20medications&author=EA.%20Wang&author=KA.%20McGinnis&author=DA.%20Fiellin&journal=J%20Gen%20Intern%20Med&volume=26&issue=9&pages=1012-1018&publication_year=2011)

14. Weiser S, Tsai AC, Gupta R, et al. Food insecurity is associated with morbidity and patterns of healthcare utilization among HIV-infected individuals in rural Uganda.

AIDS. 2012; 26(1): 67–75.
CrossRef (https://doi.org/10.1097/QAD.0b013e32834cad37)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=21904186)
PubMedCentral (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3606954)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Food%20insecurity%20is%20associated%20with%20morbidity%20and%20patterns%20of%20healthcare%20utilization%20among%20HIV-infected%20individuals%20in%20rural%20Uganda&author=S.%20Weiser&author=AC.%20Tsai&author=R.%20Gupta&journal=AIDS&volume=26&issue=1&pages=67-75&publication_year=2012)

15. Weiser S, Fernandes K, Brandson E, et al. The association between food insecurity and mortality among HIV-infected individuals on HAART. *J Acquir Immune Defic Syndr*. 2009; 52(3): 342–349.
CrossRef (https://doi.org/10.1097/QAI.0b013e3181b627c2)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=19675463)
PubMedCentral (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3740738)
Google Scholar (http://scholar.google.com/scholar_lookup?title=The%20association%20between%20food%20insecurity%20and%20mortality%20among%20HIV-infected%20individuals%20on%20HAART&author=S.%20Weiser&author=K.%20Fernandes&author=E.%20Brandson&journal=J%20Acquir%20Immune%20Defic%20Syndr&volume=52&issue=3&pages=342-349&publication_year=2009)

16. Seligman HK, Davis TC, Schillinger D, et al. Food insecurity is associated with hypoglycemia and poor diabetes self-management in a low-income sample with diabetes. *J Health Care Poor Underserved*. 2010; 21(4): 1227.
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=21099074)
PubMedCentral (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3004431)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Food%20insecurity%20is%20associated%20with%20hypoglycemia%20and%20poor%20diabetes%20self-management%20in%20a%20low-income%20sample%20with%20diabetes&author=HK.%20Seligman&author=TC.%20Davis&author=D.%20Schillinger&journal=J%20Health%20Care%20Poor%20Underserved&volume=21&issue=4&pages=1227&publication_year=2010)

17. Seligman HK, Jacobs EA, López A, et al. Food insecurity and glycemic control among low-income patients with type 2 diabetes. *Diabetes Care*. 2012; 35(2): 233–238.
CrossRef (https://doi.org/10.2337/dc11-1627)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=22210570)
PubMedCentral (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3263865)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Food%20insecurity%20and%20glycemic%20control%20among%20low-income%20patients%20with%20type%202%20diabetes&author=HK.%20Seligman&author=EA.%20Jacobs&author=A.%20L%C3%B3pez&journal=Diabetes%20Care&volume=35&issue=2&pages=233-238&publication_year=2012)

18. Nelson K, Brown ME, Lurie N. Hunger in an adult patient population. *JAMA*. 1998; 279(15): 1211–1214.
CrossRef (https://doi.org/10.1001/jama.279.15.1211)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=9555762)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Hunger%20in%20an%20adult%20patient%20population&author=K.%20Nelson&author=ME.%20Brown&author=N.%20Lurie&journal=JAMA&volume=279&issue=15&pages=1211-1214&publication_year=1998)

19. Weiser SD, Young SL, Cohen CR, et al. Conceptual framework for understanding the bidirectional links between food insecurity and HIV/AIDS. *Am J Clin Nutr*. 2011; 94(suppl): 1729S–1739S.
CrossRef (https://doi.org/10.3945/ajcn.111.012070)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=22089434)
PubMedCentral (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3226026)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Conceptual%20framework%20for%20understanding%20the%20bidirectional%20links%20between%20food%20insecurity%20and%20HIV%2FAIDS&author=SD.%20Weiser&author=SL.%20Young&author=CR.%20Cohen&journal=Am%20J%20Clin%20Nutr&volume=94&issue=suppl&pages=1729S-1739S&publication_year=2011)

20. Weiser SD, Palar K, Hatcher A, Young S, Frongillo EA, Laraia B. Food Insecurity and Health: A Conceptual Framework. In: Ivers LC, ed. *Food Insecurity and Public Health*: CRC Press; 2015:23–50.
Google Scholar (https://scholar.google.com/scholar?q=Weiser%20SD%2C%20Palar%20K%2C%20Hatcher%20A%2C%20Young%20S%2C%20Frongillo%20EA%2C%20Laraia%20B.%20Food%20Insecurity%20and%20Health%3A%20A%20Conceptual%20Framework.%20In%3A%20Ivers%20LC%2C%20ed.%20Food%20Insecurity%20and%20Public%20Health%3A%20CRC%20Press%3B%202015%3A23%E2%80%9350.)

21. Smith R, Rossetto K, Peterson B. A meta-analysis of disclosure of one's HIV-positive status, stigma and social support. *AIDS Care*. 2008; 20(10): 1266–1275.
CrossRef (https://doi.org/10.1080/09540120801926977)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=18608080)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20meta-analysis%20of%20disclosure%20of%20one%E2%80%99s%20HIV-positive%20status%2C%20stigma%20and%20social%20support&author=R.%20Smith&author=K.%20Rossetto&author=B.%20Peterson&journal=AIDS%20Care&volume=20&issue=10&pages=1266-1275&publication_year=2008)

22. Darmon N, Drewnowski A. Contribution of food prices and diet cost to socioeconomic disparities in diet quality and health: a systematic review and analysis. *Nutr Rev*. 2015; 73(10): 643–660.
CrossRef (https://doi.org/10.1093/nutrit/nuv027)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=26307238)
PubMedCentral (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4586446)

Google Scholar (http://scholar.google.com/scholar_lookup?title=Contribution%20of%20food%20prices%20and%20diet%20cost%20to%20socioeconomic%20disparities%20in%20diet%20quality%20and%20health%3A%20a%20systematic%20review%20and%20analysis&author=N.%20Darmon&author=A.%20Drewnowski&journal=Nutr%20Rev&volume=73&issue=10&pages=643-660&publication_year=2015)

23. DiSantis KI, Grier SA, Odoms-Young A, et al. What "price" means when buying food: insights from a multisite qualitative study with Black Americans. *Am J Public Health*. 2013; 103(3): 516–522.
CrossRef (https://doi.org/10.2105/AJPH.2012.301149)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=23327261)
PubMedCentral (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3673516)
Google Scholar (http://scholar.google.com/scholar_lookup?title=What%20%E2%80%9Cprice%E2%80%9D%20means%20when%20buying%20food%3A%20insights%20from%20a%20multisite%20qualitative%20study%20with%20Black%20Americans&author=KI.%20DiSantis&author=SA.%20Grier&author=A.%20Odoms-Young&journal=Am%20J%20Public%20Health&volume=103&issue=3&pages=516-522&publication_year=2013)

24. Drewnowski A, Aggarwal A, Hurvitz PM, et al. Obesity and supermarket access: proximity or price? *Am J Public Health*. 2012; 102(8): e74–80.
CrossRef (https://doi.org/10.2105/AJPH.2012.300660)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=22698052)
PubMedCentral (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3464835)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Obesity%20and%20supermarket%20access%3A%20proximity%20or%20price%3F&author=A.%20Drewnowski&author=A.%20Aggarwal&author=PM.%20Hurvitz&journal=Am%20J%20Public%20Health&volume=102&issue=8&pages=e74-80&publication_year=2012)

25. Weinfield NS, Mills G, Borger C, et al. *Hunger in America 2014: National Report Prepared for Feeding America*. Westat and the Urban Institute for Feeding America 2014.
Google Scholar (https://scholar.google.com/scholar?q=Weinfield%20NS%2C%20Mills%20G%2C%20Borger%20C%2C%20et%20al.%20Hunger%20in%20America%202014%3A%20National%20Report%20Prepared%20for%20Feeding%20America.%20Westat%20and%20the%20Urban%20Institute%20for%20Feeding%20America%202014.)

26. *California – 2015 State Health Profile: HIV/AIDS Epidemic*: CDC National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention; 2015.
Google Scholar (https://scholar.google.com/scholar?q=%0A%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20California%20%E2%80%93%202015%20State%20Health%20Profile%3A%20HIV%2FAIDS%20Epidemic%3A%20CDC%20National%20Center%20for%20HIV%2FAIDS%2C%20Viral%20Hepatitis%2C%20STD%2C%20and%20TB%20Prevention%3B%202015.)

27. Trenkamp B, Wiseman M. *The Food Stamp Program and Supplemental Security Income, Social Security Bulletin, Vol. 67, No. 4*. Office of Disability and Income Assistance Policy, Office of Retirement and Disability Policy, Social Security Administration 2007.
Google Scholar (https://scholar.google.com/scholar?q=Trenkamp%20B%2C%20Wiseman%20M.%20The%20Food%20Stamp%20Program%20and%20Supplemental%20Security%20Income%2C%20Social%20Security%20Bulletin%2C%20Vol.%2067%2C%20No.%204.%20Office%20of%20Disability%20and%20Income%20Assistance%20Policy%2C%20Office%20of%20Retirement%20and%20Disability%20Policy%2C%20Social%20Security%20Administration%202007.)

28. Ellwood M, Downer S, Broad Leib E, et al. Food Is Medicine: Opportunities in Public and Private Health Care for Supporting Nutritional Counseling and Medically-Tailored. *Home-Delivered Meals, Harvard Law School, Center For Health Law & Policy Innovation*. 2014.
Google Scholar (https://scholar.google.com/scholar?q=Ellwood%20M%2C%20Downer%20S%2C%20Broad%20Leib%20E%2C%20et%20al.%20Food%20Is%20Medicine%3A%20Opportunities%20in%20Public%20and%20Private%20Health%20Care%20for%20Supporting%20Nutritional%20Counseling%20and%20Medically-Tailored.%20Home-Delivered%20Meals%2C%20Harvard%20Law%20School%2C%20Center%20For%20Health%20Law%20%26%20Policy%20Innovation.%202014.)

29. Seligman HK, Lyles C, Marshall MB, et al. A pilot food bank intervention featuring diabetes-appropriate food improved glycemic control among clients in three states. *Health Aff (Millwood)*. 2015; 34(11): 1956–1963.
CrossRef (https://doi.org/10.1377/hlthaff.2015.0641)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20pilot%20food%20bank%20intervention%20featuring%20diabetes-appropriate%20food%20improved%20glycemic%20control%20among%20clients%20in%20three%20states&author=HK.%20Seligman&author=C.%20Lyles&author=MB.%20Marshall&journal=Health%20Aff%20%28Millwood%29&volume=34&issue=11&pages=1956-1963&publication_year=2015)

30. Martin KS, Wu R, Wolff M, et al. A novel food pantry program: food security, self-sufficiency, and diet-quality outcomes. *Am J Prev Med*. 2013; 45(5): 569–575.
CrossRef (https://doi.org/10.1016/j.amepre.2013.06.012)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=24139769)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20novel%20food%20pantry%20program%3A%20food%20security%2C%20self-sufficiency%2C%20and%20diet-quality%20outcomes&author=KS.%20Martin&author=R.%20Wu&author=M.%20Wolff&journal=Am%20J%20Prev%20Med&volume=45&issue=5&pages=569-575&publication_year=2013)

31. Habicht JP, Victora CG, Vaughan JP. Evaluation designs for adequacy, plausibility and probability of public health programme performance and impact. *Int J Epidemiol*. 1999; 28(1): 10–18.
CrossRef (https://doi.org/10.1093/ije/28.1.10)

PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=10195658)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Evaluation%20designs%20for%20adequacy%2C%20plausibility%20and%20probability%20of%20public%20health%20programme%20performance%20and%20impact&author=JP.%20Habicht&author=CG.%20Victora&author=JP.%20Vaughan&journal=Int%20J%20Epidemiol&volume=28&issue=1&pages=10-18&publication_year=1999)

32. Bickel G, Nord M, Price C, Hamilton W, Cook J. *Guide to Measuring Household Food Security, Revised 2000*. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service; 2000.
Google Scholar (https://scholar.google.com/scholar?q=Bickel%20G%2C%20Nord%20M%2C%20Price%20C%2C%20Hamilton%20W%2C%20Cook%20J.%20Guide%20to%20Measuring%20Household%20Food%20Security%2C%20Revised%202000.%20Alexandria%2C%20VA%3A%20U.S.%20Department%20of%20Agriculture%2C%20Food%20and%20Nutrition%20Service%3B%202000.)

33. Thompson FE, Midthune D, Subar AF, et al. Performance of a short tool to assess dietary intakes of fruits and vegetables, percentage energy from fat and fibre. *Public Health Nutr*. 2004; 7(8): 1097–1105.
CrossRef (https://doi.org/10.1079/PHN2004642)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=15548349)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Performance%20of%20a%20short%20tool%20to%20assess%20dietary%20intakes%20of%20fruits%20and%20vegetables%2C%20percentage%20energy%20from%20fat%20and%20fibre&author=FE.%20Thompson&author=D.%20Midthune&author=AF.%20Subar&journal=Public%20Health%20Nutr&volume=7&issue=8&pages=1097-1105&publication_year=2004)

34. Kroenke K, Spitzer RL, Williams JBW. The PHQ-9: validity of a brief depression severity measure. *J Gen Intern Med*. 2001; 16(9): 606–613.
CrossRef (https://doi.org/10.1046/j.1525-1497.2001.016009606.x)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=11556941)
PubMedCentral (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1495268)
Google Scholar (http://scholar.google.com/scholar_lookup?title=The%20PHQ-9%3A%20validity%20of%20a%20brief%20depression%20severity%20measure&author=K.%20Kroenke&author=RL.%20Spitzer&author=JBW.%20Williams&journal=J%20Gen%20Intern%20Med&volume=16&issue=9&pages=606-613&publication_year=2001)

35. Bradley KA, DeBenedetti AF, Volk RJ, et al. AUDIT-C as a brief screen for alcohol misuse in primary care. *Alcohol Clin Exp Res*. 2007; 31(7): 1208–1217.
CrossRef (https://doi.org/10.1111/j.1530-0277.2007.00403.x)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=17451397)
Google Scholar (http://scholar.google.com/scholar_lookup?title=AUDIT-C%20as%20a%20brief%20screen%20for%20alcohol%20misuse%20in%20primary%20care&author=KA.%20Bradley&author=AF.%20DeBenedetti&author=RJ.%

20Volk&journal=Alcohol%20Clin%20Exp%20Res&volume=31&issue=7&pages=1208-1217&publication_year=2007)

36. Bunn JY, Solomon SE, Miller C, et al. Measurement of stigma in people with HIV: a reexamination of the HIV Stigma Scale. *AIDS Educ Prev*. 2007; 19(3): 198–208.
CrossRef (https://doi.org/10.1521/aeap.2007.19.3.198)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=17563274)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Measurement%20of%20stigma%20in%20people%20with%20HIV%3A%20a%20reexamination%20of%20the%20HIV%20Stigma%20Scale&author=JY.%20Bunn&author=SE.%20Solomon&author=C.%20Miller&journal=AIDS%20Educ%20Prev&volume=19&issue=3&pages=198-208&publication_year=2007)

37. Berger BE, Ferrans CE, Lashley FR. Measuring stigma in people with HIV: psychometric assessment of the HIV stigma scale. *Res Nurs Health*. 2001; 24(6): 518–529.
CrossRef (https://doi.org/10.1002/nur.10011)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=11746080)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Measuring%20stigma%20in%20people%20with%20HIV%3A%20psychometric%20assessment%20of%20the%20HIV%20stigma%20scale&author=BE.%20Berger&author=CE.%20Ferrans&author=FR.%20Lashley&journal=Res%20Nurs%20Health&volume=24&issue=6&pages=518-529&publication_year=2001)

38. Garcia de Olalla P, Knobel H, Carmona A, et al. Impact of adherence and highly active antiretroviral therapy on survival in HIV-infected patients. *J Acquir Immune Defic Syndr*. 2002; 30(1): 105–110.
CrossRef (https://doi.org/10.1097/00042560-200205010-00014)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=12048370)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Impact%20of%20adherence%20and%20highly%20active%20antiretroviral%20therapy%20on%20survival%20in%20HIV-infected%20patients&author=P.%20Garcia%20de%20Olalla&author=H.%20Knobel&author=A.%20Carmona&journal=J%20Acquir%20Immune%20Defic%20Syndr&volume=30&issue=1&pages=105-110&publication_year=2002)

39. Bangsberg DR, Perry S, Charlebois ED, et al. Non-adherence to highly active antiretroviral therapy predicts progression to AIDS. *AIDS*. 2001; 15(9): 1181–1183.
CrossRef (https://doi.org/10.1097/00002030-200106150-00015)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=11416722)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Non-adherence%20to%20highly%20active%20antiretroviral%20therapy%20predicts%20progression%20to%20AIDS&author=DR.%20Bangsberg&author=S.%20Perry&author=ED.%20Charlebois&journal=AIDS&volume=15&issue=9&pages=1181-1183&publication_year=2001)

40. Polonsky WH, Fisher L, Earles J, et al. Assessing psychosocial distress in diabetes: development of the diabetes distress scale. *Diabetes Care*. 2005; 28(3): 626–631.
CrossRef (https://doi.org/10.2337/diacare.28.3.626)

PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=15735199)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Assessing%20psychosocial%20distress%20in%20diabetes%3A%20development%20of%20the%20diabetes%20distress%20scale&author=WH.%20Polonsky&author=L.%20Fisher&author=J.%20Earles&journal=Diabetes%20Care&volume=28&issue=3&pages=626-631&publication_year=2005)

41. Wallston KA, Rothman RL, Cherrington A. Psychometric properties of the perceived diabetes self-management scale (PDSMS). *J Behav Med*. 2007; 30(5): 395–401.
CrossRef (https://doi.org/10.1007/s10865-007-9110-y)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=17522972)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Psychometric%20properties%20of%20the%20perceived%20diabetes%20self-management%20scale%20%28PDSMS%29&author=KA.%20Wallston&author=RL.%20Rothman&author=A.%20Cherrington&journal=J%20Behav%20Med&volume=30&issue=5&pages=395-401&publication_year=2007)

42. Center of Excellence for Transgender Health. Recommendations for Inclusive Data Collection of Trans People in HIV Prevention, Care & Services. *University of California, San Francisco*. Available at: http://transhealth.ucsf.edu/trans?page=lib-data-collection (http://transhealth.ucsf.edu/trans?page=lib-data-collection). Accessed July 22, 2016.

43. Food is Medicine: Achieving the Triple Aim through Medically Tailored Nutrition Congressional Briefing. *The Food is Medicine Coalition*. Washington, DC; March 16, 2016.
Google Scholar (https://scholar.google.com/scholar?q=Food%20is%20Medicine%3A%20Achieving%20the%20Triple%20Aim%20through%20Medically%20Tailored%20Nutrition%20Congressional%20Briefing.%20The%20Food%20is%20Medicine%20Coalition.%20Washington%2C%20DC%3B%20March%2016%2C%202016.)

44. Martinez H, Palar K, Linnemayr S, et al. Tailored nutrition education and food assistance improve adherence to HIV antiretroviral therapy: evidence from Honduras. *AIDS Behav*. 2014; 18(5S): 566–577.
CrossRef (https://doi.org/10.1007/s10461-014-0786-z)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Tailored%20nutrition%20education%20and%20food%20assistance%20improve%20adherence%20to%20HIV%20antiretroviral%20therapy%3A%20evidence%20from%20Honduras&author=H.%20Martinez&author=K.%20Palar&author=S.%20Linnemayr&journal=AIDS%20Behav&volume=18&issue=5S&pages=566-577&publication_year=2014)

45. Cantrell R, Sinkala M, Megazinni K, et al. A pilot study of food supplementation to improve adherence to antiretroviral therapy among food-insecure adults in Lusaka, Zambia. *JAIDS J Acquir Immune Defic Syndr*. 2008; 49(2): 190–195.
CrossRef (https://doi.org/10.1097/QAI.0b013e31818455d2)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=18769349)

Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20pilot%20study%20of%20food%20supplementation%20to%20improve%20adherence%20to%20antiretroviral%20therapy%20among%20food-insecure%20adults%20in%20Lusaka%2C%20Zambia&author=R.%20Cantrell&author=M.%20Sinkala&author=K.%20Megazinni&journal=JAIDS%20J%20Acquir%20Immune%20Defic%20Syndr&volume=49&issue=2&pages=190-195&publication_year=2008)

46. Aidala A, Yomogida M, Vardy Y. *Food and Nutrition Services, HIV Medical Care, and Health Outcomes*: Community Health Advisory & Information Network (CHAIN), Mailman School of Public Health, Columbia University.
Google Scholar (https://scholar.google.com/scholar?q=Aidala%20A%2C%20Yomogida%20M%2C%20Vardy%20Y.%20Food%20and%20Nutrition%20Services%2C%20HIV%20Medical%20Care%2C%20and%20Health%20Outcomes%3A%20Community%20Health%20Advisory%20%26%20Information%20Network%20%28CHAIN%29%2C%20Mailman%20School%20of%20Public%20Health%2C%20Columbia%20University.)

47. Gurvey J, Rand K, Daugherty S, et al. Examining health care costs among MANNA clients and a comparison group. *J Prim Care Community Health*. 2013; 4(4): 311–317.
CrossRef (https://doi.org/10.1177/2150131913490737)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=23799677)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Examining%20health%20care%20costs%20among%20MANNA%20clients%20and%20a%20comparison%20group&author=J.%20Gurvey&author=K.%20Rand&author=S.%20Daugherty&journal=J%20Prim%20Care%20Community%20Health&volume=4&issue=4&pages=311-317&publication_year=2013)

48. Amorosa V, Synnestvedt M, Gross R, et al. A tale of 2 epidemics: the intersection between obesity and HIV infection in Philadelphia. *JAIDS J Acquir Immune DeficSyndr*. 2005; 39(5): 557.
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20tale%20of%202%20epidemics%3A%20the%20intersection%20between%20obesity%20and%20HIV%20infection%20in%20Philadelphia&author=V.%20Amorosa&author=M.%20Synnestvedt&author=R.%20Gross&journal=JAIDS%20J%20Acquir%20Immune%20DeficSyndr&volume=39&issue=5&pages=557&publication_year=2005)

49. Crum-Cianflone N, Roediger MP, Eberly L, et al. Increasing rates of obesity among HIV-infected persons during the HIV epidemic. *PLoS One*. 2010; 5(4): e10106.
CrossRef (https://doi.org/10.1371/journal.pone.0010106)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=20419086)
PubMedCentral (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2856157)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Increasing%20rates%20of%20obesity%20among%20HIV-infected%20persons%20during%20the%20HIV%20epidemic&author=N.%20Crum-Cianflone&author=MP.%20Roediger&author=L.%20Eberly&journal=PLoS%20One&volume=5&issue=4&pages=e10106&publication_year=2010)

50. Palar K, Derose K, Linnemayr S, et al. Impact of food support on food security and body weight among HIV antiretroviral recipients in Honduras: a pilot intervention trial *AIDS Care*. 2015; 27(4): 409–415.
Google Scholar (https://scholar.google.com/scholar?q=Palar%20K%2C%20Derose%20K%2C%20Linnemayr%20S%2C%20et%20al.%20Impact%20of%20food%20support%20on%20food%20security%20and%20body%20weight%20among%20HIV%20antiretroviral%20recipients%20in%20Honduras%3A%20a%20pilot%20intervention%20trial%20AIDS%20Care.%202015%3B%2027%284%29%3A%20409%E2%80%93415.)

51. Li R, Bilik D, Brown MB, et al. Medical costs associated with type 2 diabetes complications and comorbidities. *Am J Manag Care*. 2013; 19(5): 421–430.
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=23781894)
PubMedCentral (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4337403)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Medical%20costs%20associated%20with%20type%202%20diabetes%20complications%20and%20comorbidities&author=R.%20Li&author=D.%20Bilik&author=MB.%20Brown&journal=Am%20J%20Manag%20Care&volume=19&issue=5&pages=421-430&publication_year=2013)

52. Weiser SD, Hatcher A, Frongillo EA, et al. Food insecurity is associated with greater acute care utilization among HIV-infected homeless and marginally housed individuals in San Francisco. *J Gen Intern Med*. 2013; 28(1): 91–98.
CrossRef (https://doi.org/10.1007/s11606-012-2176-4)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=22903407)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Food%20insecurity%20is%20associated%20with%20greater%20acute%20care%20utilization%20among%20HIV-infected%20homeless%20and%20marginally%20housed%20individuals%20in%20San%20Francisco&author=SD.%20Weiser&author=A.%20Hatcher&author=EA.%20Frongillo&journal=J%20Gen%20Intern%20Med&volume=28&issue=1&pages=91-98&publication_year=2013)

53. Kaiser Family Foundation. 2014 Hospital Adjusted Expenses per Inpatient Day by Ownership. Available at: http://kff.org/other/state-indicator/expenses-per-inpatient-day-by-ownership/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%: (http://kff.org/other/state-indicator/expenses-per-inpatient-day-by-ownership/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D). Accessed Sept. 14, 2016.

54. Whittle HJ, Palar K, Hufstedler LL, et al. Food insecurity, chronic illness, and gentrification in the San Francisco Bay Area: an example of structural violence in United States public policy. *Soc Sci Med*. 2015; 143: 154–161.
CrossRef (https://doi.org/10.1016/j.socscimed.2015.08.027)
PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=26356827)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Food%20insecurity%2C%20chronic%20illness%2C%20and%20gentrificatio

n%20in%20the%20San%20Francisco%20Bay%20Area%3A%20an%20example%20of%20structural%20violence%20in%20United%20States%20public%20policy&author=HJ.%20Whittle&author=K.%20Palar&author=LL.%20Hufstedler&journal=Soc%20Sci%20Med&volume=143&pages=154-161&publication_year=2015)

Copyright information

About this article

Cite this article as:

Palar, K., Napoles, T., Hufstedler, L.L. et al. J Urban Health (2017) 94: 87. https://doi.org/10.1007/s11524-016-0129-7

- DOI (Digital Object Identifier) https://doi.org/10.1007/s11524-016-0129-7
- Publisher Name Springer US
- Print ISSN 1099-3460
- Online ISSN 1468-2869

- About this journal
- Reprints and Permissions

Personalised recommendations

What if You Could Talk to Your Doctor About Cooking?

Tulane's medical school recently hired a chef to teach its medical students how to cook. (Jeff Kubina (https://www.flickr.com/photos/kubina/6122735488))

By Christina Farr (https://ww2.kqed.org/futureofyou/author/cfarr/)
DECEMBER 21, 2015

SHARE

Is your doctor your go-to for nutrition advice? Neither is mine. And why would I expect that?

According to recent polls (https://www.washingtonpost.com/news/to-your-health/wp/2014/06/23/your-doctor-says-he-doesnt-know-enough-about-nutrition-or-exercise/), fewer than a quarter of doctors say they've had sufficient training to provide nutritional advice to their patients. We all know about the Hippocratic Oath, but how about that other thing Hippocrates said: "Let Food Be Thy Medicine."

For the American medical profession to live up to that, there'd have to be more than one doctor (http://www.drweil.com/) in the country widely known for prescribing broccoli (http://www.drweil.com/drw/u/RCP00235/broccoli-pancakes.html#_ga=1.123472264.20458383.1450482611). Most medical schools aren't particularly dedicated to teaching their students about food.

Th[illegible] beginning to change (http://qz.com/545110/the-future-of-medicine-is-food/), though, as schools like Tulane University School of M[illegible]ne (http://tulane.edu/som/)in New Orleans, Louisiana, start thinking differently.

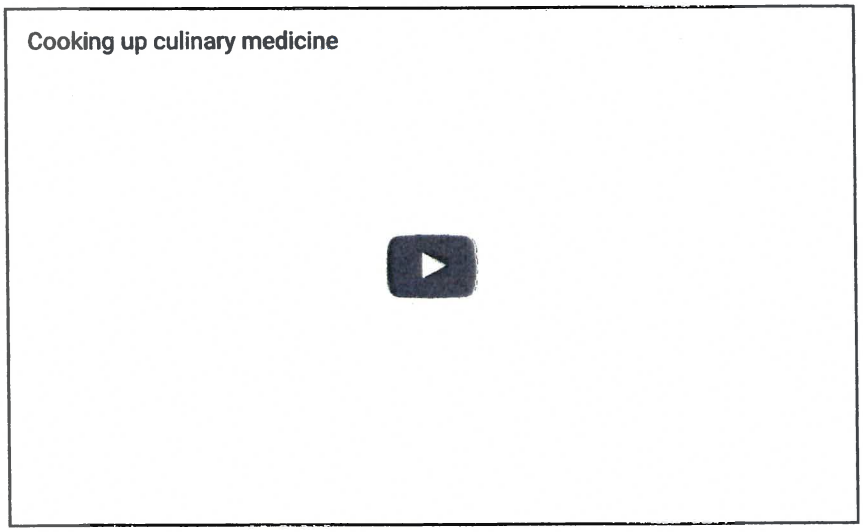
(http://ww2.kqed.org/futureofyou/wp-content/uploads/sites/13/2015/12/FOY-cooking.gif)

Would-be doctors at Tulane aren't just learning about nutrition. They're learning how to cook.

Dr. Timothy Harlan, known in the food media world as Dr. Gourmet (http://www.drgourmet.com/pr/index.shtml#.VnSmYvkrJpg), is also executive director at The Goldring Center for Culinary Medicine (http://tmedweb.tulane.edu/mu/teachingkitchen/) at Tulane. Harlan says the program isn't just about helping students understand nutrition. The focus is on practical talk about food. Harlan wants Tulane-educated doctors to be able to teach their patients everyday skills in how to cook, what to cook and why.

"Physicians talk about nutrition and diet all the time, but they don't talk about it in a way that communicates change to their patients," Harlan says, in a video (https://www.youtube.com/watch?v=LovWLnolUsk&feature=youtu.be)produced by the school.

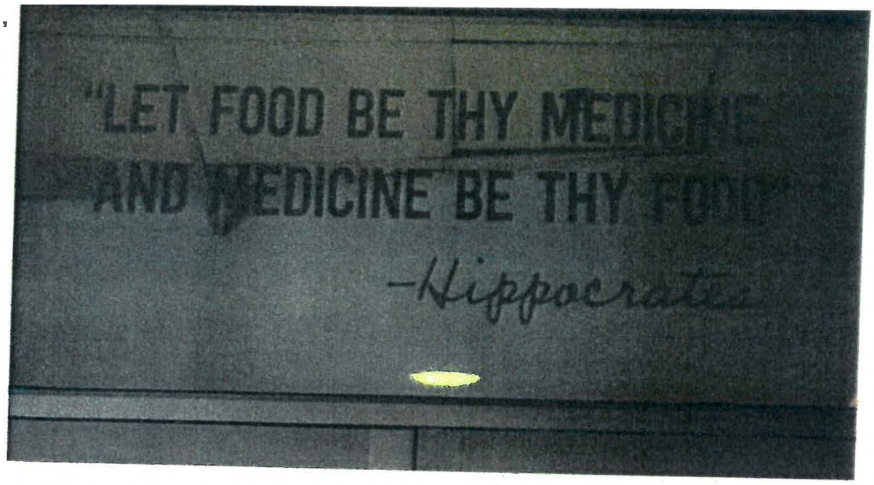
The students learn to make the most of low-cost ingredients, so they can cater to low-income communities. And Harlan says the school also provides cooking classes to practicing doctors and the public.



These skills are sorely needed in New Orleans. In 2010, 64 percent of adults were classified as obese or overweight (https://www.nola.gov/nola/media/Health-Department/Publications/Healthy-Lifestyles-in-New-Orleans-Community-Health-Data-Profile-final.pdf). That results in higher rates of diabetes, heart disease and high blood pressure.

"We know from the literature that when people go home and start cooking from real ingredients for themselves that their health improves," Harlan says. "We also know that they don't really know how to do that."

Cheryl Spann took part in the community cooking class, and says she's learned what good carbs are and how to cut back on sugar.



The writing on the wall at Tulane's center for Culinary Medicine. *(Tulane University)*

"My health is getting so much better now," Spann says in the school's video. "And I do believe that when I see my primary care physician in the next month, I will no longer be taking hypertensive medicine and I will no longer be taking diabetes medicine."

Tulane's medical school was among the first to take on a licensed chef as an instructor. Its curriculum, developed in partnership (http://qz.com/545110/the-future-of-medicine-is-food/) with the College of Culinary Arts at Johnson & Wales University (https://experience.jwu.edu/), has been sold to sixteen other medical schools.

If you're thinking this is the wrong time of year to talk about healthy food, Dr. Gourmet has a luscious menu (http://tulane.edu/news/newwave/121715_christmas-recipe_shitaki-cranberry-pork-loin.cfm) for you. And you can tell your guests, when they're licking their fingers, that your holiday meal was recommended by a doctor. When's the last time you got to say that in a sentence?

EXPLORE: DIY HEALTH (HTTPS://WW2.KQED.ORG/FUTUREOFYOU/CATEGORY/DIY-HEALTH/), FOOD (HTTPS://WW2.KQED.ORG/FUTUREOFYOU/TAG/FOOD/), DSCIENCE (HTTPS://WW2.KQED.ORG/FUTUREOFYOU/TAG/KQEDSCIENCE/), MEDICAL SCHOOL (HTTPS://WW2.KQED.ORG/FUTUREOFYOU/TAG/MEDICAL-COOL/)

(https://ww2.kqed.org/futureofyou/2015/12/21/will-your-doctor-one-day-prescribe-food-as-medicine/?share=google-plus-1&nb=1)

(https://ww2.kqed.org/futureofyou/2015/12/21/will-your-doctor-one-day-prescribe-food-as-medicine/?share=email&nb=1)

0 Comments (https://ww2.kqed.org/futureofyou/2015/12/21/will-your-doctor-one-day-prescribe-food-as-medicine/#disqus_thread)

Related

How One Doctor Used Mobile Tech to Aid Diabetes Patients
(http://ww2.kqed.org/futur[illegible]how-one-doctor-used-mobile-tech-to-aid-diabetes-patients/)

Commentary: Medical Journals' Proposal 'Could Change Medical Science Forever'
(http://ww2.kqed.org/futur[illegible]proposal-by-medical-journals-could-change-medical-science-forever/)

With Millions of Deaths at Stake, Drug Companies Band Together to Fight Superbugs
(http://ww2.kqed.org/futur[illegible]you/2016/01/21/superbugs/)

Why Patients Can't Get 2 Breakthrough Cholesterol Drugs
(http://ww2.kqed.org/futur[illegible]patients-cant-get-prescriptions-for-breakthrough-cholesterol-drugs/)

Plant Extracts May Slow Aging Process, Study Says
(http://ww2.kqed.org/futur[illegible]extracts-may-slow-aging-process-study-says/)

San Francisco-Based Metabiota Bungled Ebola Response, AP Finds
(http://ww2.kqed.org/futureofy[illegible]francisco-based-metabiota-bur[illegible]response-ap-finds/)

Powered by (https://contextly.com)

AUTHOR

CHRISTINA FARR

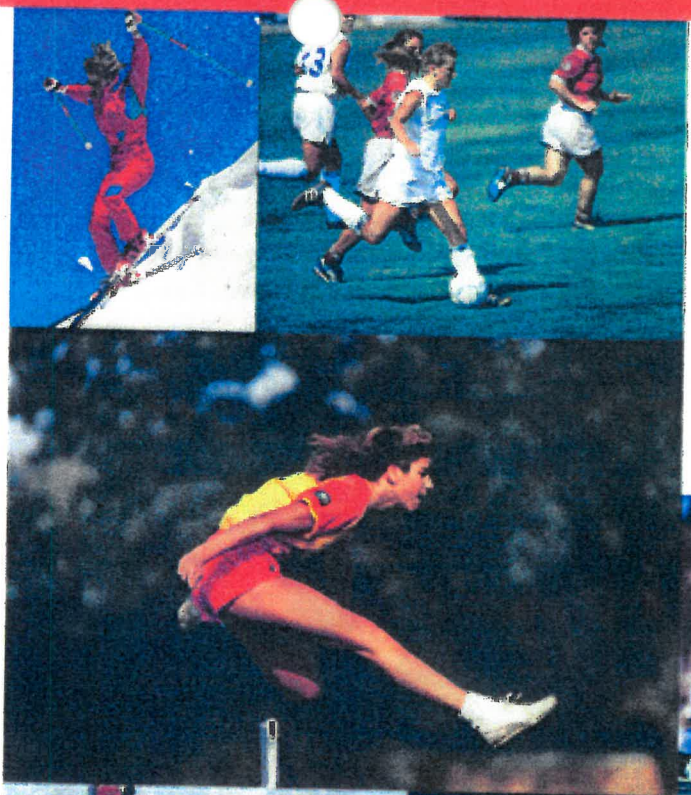
Christina Farr (@chrissyfarr (https://twitter.com/chrissyfarr)) is the former editor and host of Future of You. She was previously with Reuters, covering digital health and Apple and before that, she reported for Venture Beat. Christina was born and raised in London and has graduate degrees from University of London and the Stanford School of Journalism. Farr's work has appeared in a variety of publications, including the New York Times, the Daily Telegraph, the Bay Citizen and SFGate.com. She has appeared as a featured expert on NBC, ABC and Reuters TV, among others, and frequently speaks at health and technology conferences. She is also co-founder of Ladies Who Vino, a networking group for women in technology and business.

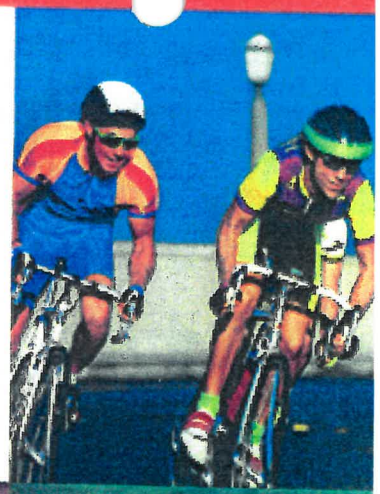
VIEW ALL POSTS BY THIS AUTHOR

Do Sports Medicine Physicians only treat competitive athletes?

- No, Sports Medicine Physicians are ideal physicians for the non-athlete as well, and are excellent resources for the individual who wishes to become active or begin an exercise program. For the "weekend warrior" or "industrial athlete" who experiences an injury, the same expertise used for the competitive athlete can be applied to return the individual as quickly as possible to full function.
- Physicians in the AMSSM are dedicated to providing comprehensive and quality care to the active individual.
- To find a Sports Medicine Physician in your area, more information, and/or a copy of the Mission Statement call the AMSSM at 913-327-1415 or visit the web site at www.amssm.org.

E-mail:office@amssm.org





AMERICAN MEDICAL SOCIETY FOR SPORTS MEDICINE

11639 Earnshaw
Overland Park, KS 66210
Tel.: 913-327-1415
Fax: 913-327-1491
E-mail: office@amssm.org
Web site: www.amssm.org

AMERICAN MEDICAL SOCIETY FOR SPORTS MEDICINE

What is a Sports Medicine Physician?

The American Medical Society for Sports Medicine (AMSSM)

was organized in 1991 by a group of physicians who recognized the need for an organization within the field of sports medicine that approached athletes, exercising individuals, and teams comprehensively with consultative and continuous care of their orthopedic, medical, nutritional, and psychosocial issues. Although sports medicine concepts are often thought of in conjunction with professional and elite athletes, these concepts apply to athletes of all levels including grade school, high school, college and recreational athletes ("weekend athletes"). AMSSM is comprised of Sports Medicine Physicians whose goal is to provide a link between the rapidly expanding core of knowledge related to sports medicine and its application to patients in a clinical setting.

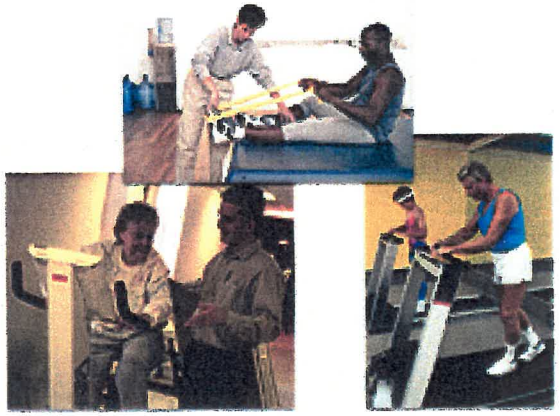
What is a Sports Medicine Physician?

- A physician with specialized training who promotes lifelong fitness and wellness, and encourages prevention of illness and injury. This physician helps the patient maximize function and minimize disability and time away from sports, work, or school.
- He or she is a leader of the sports medicine team, which also includes specialty physicians and surgeons, athletic trainers, physical therapists, coaches, other personnel, and, of course, the athlete.
- They are experienced sports medicine physicians with a primary specialty in Family Practice, Internal Medicine, Emergency Medicine, Pediatrics, or Physical Medicine and Rehabilitation, most of whom obtain 1-2 years of additional training in sports medicine through accredited fellowship (subspecialty) programs in Sports Medicine. Physicians, who are board certified in Family Practice, Internal Medicine, Emergency Medicine, or Pediatrics, are then eligible to take a subspecialty qualification examination in Sports Medicine. Additional forums, which add to the expertise of a Sports Medicine Physician, include continuing education in sports medicine, and membership and participation in sports medicine societies.

What is the difference between a Sports Medicine Physician and an Orthopedic Surgeon?

Both are well trained in musculoskeletal medicine. Sports Medicine Physicians specialize in the non-operative medical treatment of musculoskeletal sports conditions. Orthopedic surgeons are also trained in the operative treatment of these conditions. Approximately 90% of all sports injuries are non-surgical, and Sports Medicine Physicians can expedite referral to an orthopedic/sports surgeon when indicated, and can help guide referrals to appropriate rehabilitative care and ancillary services as needed. Common examples of musculoskeletal problems include:

- Acute injuries (such as ankle sprains, muscle strains, knee & shoulder injuries, and fractures)
- Overuse injuries (such as tendonitis, stress fractures)

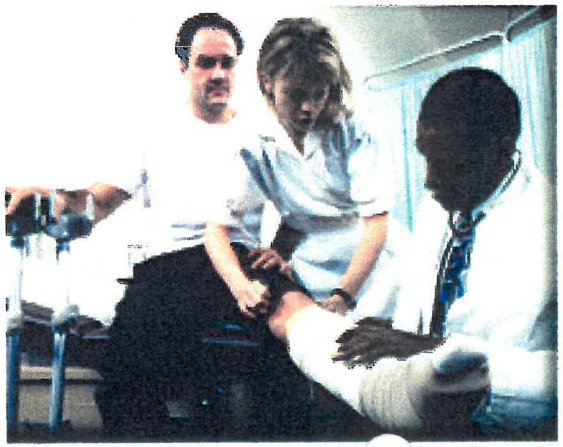


Sports Medicine Physicians have received additional training in the non-musculoskeletal aspects of sports medicine. Common examples of these include:

- Mild traumatic brain injury and other head injuries
- Athletes with chronic or acute illness (such as infectious mononucleosis, asthma or diabetes)
- Nutrition, supplements, ergogenic aids and performance issues
- Exercise prescription for patients who want to increase their fitness
- Injury prevention
- "Return to play" decisions in the sick or injured athlete
- Strength training and conditioning
- Healthy lifestyle promotion

Most Sports Medicine Physicians also serve as Team Physicians for local and/or National teams and clubs. These physicians must fulfill published qualifications with the following responsibilities:

- Pre-participation physical examination
- Injury assessment and management
- Care of sports-related and general medical needs of athletes
- Special populations (elderly, disabled, women, youth, etc)
- Sports psychology issues
- Addressing substance use
- Education and counseling on illness & injury prevention
- Coordinating care with other members of the sports medicine team to include athletic trainers, physical therapists, personal physicians, other medical and surgical specialties, and other ancillary personnel of specialty care and rehabilitation
- Communication with athletic trainers, coaches, school administration, as well as athletes and their families



Exercise is Medicine

From Wikipedia, the free encyclopedia

Exercise is Medicine is a nonprofit initiative launched by the American College of Sports Medicine (ACSM) and the American Medical Association (AMA).[1]

Contents

Overview

The initiative calls for physical activity and exercise to be standard parts of disease prevention and medical treatment, urging healthcare providers to assess and review patients' physical activity programs at every visit, with office visits that conclude exercise clearance and a prescription or referral to a qualified health/fitness professional. In addition, patients are encouraged to begin a conversation with their doctor about physical activity, and to learn how to best continue or improve upon their exercise regimens.

Exercise is Medicine was co-launched in 2007 by the American College of Sports Medicine, the American Medical Association, and "founding corporate partner" the Coca-Cola Company.[2]

The initiative also includes "May-Kit Happen," a commemorative program that launched in May 2008, asking people to incorporate a little more physical activity into their lives and to talk to their physicians during the month of May about what types of exercises are best suited to their circumstances.

State involvement

Many states, including Alabama, California, Connecticut, Florida, Illinois, Indiana, Iowa, Nevada, New Jersey, New Mexico, Pennsylvania, South Dakota, Tennessee, Texas and Virginia proclaimed May as Exercise is Medicine month. Several cities also have pledged support by creating events featuring the "May-Kit Happen" principles, including Indianapolis, IN,[3] Tallahassee, FL, Eugene, OR and several cities in Texas.[4]

Supporters

Numerous organizations have signed on in support of the Exercise is Medicine program, well known supporters include the American Academy of Family Physicians,the American College of Sports Medicine,[5] the American Academy of Physical Medicine and Rehabilitation,the American College of Preventive Medicine, the American Council on Exercise, the American Heart Association, the American Optometric Association, the American Osteopathic Association, the American Physical Therapy Association, Bastyr University, the Center for Science in

the Public Interest, the National Athletic Trainers' Association, President's Council on Physical Fitness and Sports, Project ACES, the Sporting Goods Manufacturers Association, the USA Triathlon, the University of Florence and various branches of the YMCA, including that of the United States as a whole, and last but certainly not least, Coca-Cola.[6]

Other countries

Similar organizations are Exercise Is Medicine Australia (http://exerciseismedicine.com.au/) (supported by Exercise & Sports Science Australia), Exercise is Medicine Canada (EIMC) (http://www.csep.ca/view.asp?ccid=525), Exercise is Medicine Europe (http://exerciseismedicine.eu/) and Exercise is Medicine South Africa (http://exerciseismedicine.org.za/). In New Zealand it is known as a green prescription.

See also

- Exercise prescription
- Physical therapy
- Yoga as exercise or alternative medicine

References

1. Rauworth, Amy. "F.I.T.T.: The Wonder Drug: Exercise is Medicine". National Center on Health, Physical Activity, and Disability. Retrieved 20 September 2013.
2. "The Coca-Cola Company Sponsors Exercise Is Medicine Program". *The Coca-Cola Company*. Retrieved 2016-01-15.
3. "Public Urged to Get Active And "May-Kit Happen" This Month". American College of Sports Medicine. Retrieved 20 September 2013.
4. "THE FLORIDA DEPARTMENT OF HEALTH RECOGNIZES MAY AS 'EXERCISE IS MEDICINE' MONTH". Florida Health, Miami-Dade County. Retrieved 20 September 2013.
5. "The "Exercise is Medicine" Credential". American College of Sports Medicine. Retrieved 20 September 2013.
6. "Exercise is Medicine: Supporters". EIM. Retrieved 20 September 2013.

External links

- http://www.exerciseismedicine.org official site

Categories: Physical exercise

Exercise prescription

From Wikipedia, the free encyclopedia

Exercise prescription commonly refers to the specific plan of fitness-related activities that are designed for a specified purpose, which is often developed by a fitness or rehabilitation specialist for the client or patient. Due to the specific and unique needs and interests of the client/patient, the goal of exercise prescription should be focused on motivation and customization, thus making achieving goals more likely to become successful.[1]

Contents

Patient referral

In the United Kingdom there is a scheme called "Exercise on prescription" in which doctors are able to prescribe exercise to those with conditions that benefit from it, such as asthma, depression or obesity. The initiative particularly aimed to lower the rate of heart disease. National standards for such initiatives from doctors were established by the Department of Health in 2001. Exercise on prescription aims to prevent deterioration of conditions, and views exercise as a preventative health measure. Fitness classes or a course at the local gym are available on prescription at a reduced rate to people who might benefit from them. It aims to make it easier for people to follow their doctors' advice about taking more exercise or losing weight.[2] Such preventative measures hope to lead to savings for the National Health Service.[3]

Researchers in New Zealand have also discussed the benefits of exercise referral by medical practitioners there.[4] In New Zealand it is known as a green prescription, while in the United States a similar initiative is known as Exercise is Medicine.

Research in Australia has suggested that an exercise prescription program would be very beneficial and many ICU physiotherapists are already performing this practice, however there is no national standards to govern how this practice is administered so there is great variety in the ways this is administered therefore more research is needed.[5][6]

For specific diseases

Osteoarthritis

Studies show that exercise prescription aids in both preventing and minimizing the effects of joint disorders such as osteoarthritis. Evidence shows that in addition to the general physiological, psychological and functional benefits gained from exercise, greater quadriceps strength has a mitigating effect on knee joint pain.[7]

Depression

A large body of research indicates that exercise prescription has beneficial effects for patients suffering depression. One study shows a significant improvement for a randomized group of women with major depressive disorder engaging in a twice-weekly resistance training program compared to a control group. The reasons for this marked change is thought to have biochemical, physiological and psychosocial aspects.[8]

Peripheral arterial disease (PAD)

Blockage or closing of the arteries of the lower limbs impairs blood flow to the legs and results in significant reduction in physical capacity. Alternate exercise prescriptions to walking are considered. Aerobic exercises such as arm-cranking or cycling are recommended. Risk factors for disease progression should also be taken into account when aiming to improve waling ability. Functional capacity should be determined prior to commencement of prescribe exercise programs.[9]

Diabetes mellitus

The number of individuals diagnosed with diabetes mellitus are rapidly increasing and a lot of evidence suggests this is due to an insufficiently active lifestyle.[10] Benefits of exercise include stress reduction, reduced risk of heart disease, lowers blood pressure, helps control weight and aids insulin in improving management of diabetes. Exercise that is not too strenuous is recommended. Such activities may include walking, swimming, gardening, cycling or golfing.[11] Incidental activities are encouraged, such as using the stairs instead of an escalator/lift or walking short distances instead of driving. Dr Gebel, who works at James Cook University's Centre for Chronic Disease Prevention conducted a study reporting increased health benefits through incorporation of more vigorous exercise. He stated that this could include 'vigorous gardening', not necessarily meaning going to the gym.[12] Diabetes Australia suggest 30 minutes of exercise daily as a suitable target, which can be divided into three 10-minute sessions throughout the day.[13] Exercise programs however should be tailored and delivered by individuals with appropriate qualifications.

Exercise recommendations

According to Exercise and Sport Science Australia, a minimum amount of 210 minutes of moderate intensity exercise or 125 minutes of vigorous intensity exercise should be performed per week. Exercise should include both aerobic and resistance training. For greater health benefits, exercise should be performed regularly with no more than a two-day gap between training sessions.[10]

Elderly

Research has found that having a well planned exercise routine can greatly benefit the elderly. It an reduce the risks of coronary heart disease, diabetes mellitus and insulin resilience, hypertension and obesity as well as vast improvements in bone density and muscle mass.[14]

Exercise program development

Exercise prescription is designed to modulate acute exercise programming variables to create the adaptations desired by the individual or sport. With aerobic exercise prescription, the type of exercise, duration of exercise, frequency, and duration is adjusted. For resistance exercise prescription, the type of exercise, total session volume, rest period, frequency, and intensity are determined.[15] Prescription of stretching and other activities is also commonly seen. Exercise prescription can be divided into 5 components:[1]

- Type of exercise or activity (eg, walking, swimming, cycling)
- Specific workloads (eg, watts, walking speed)[16]
- Duration and frequency of the activity or exercise session
- Intensity guidelines – Target heart rate (THR) range and estimated rate of perceived exertion (RPE)[17]
- Precautions regarding certain orthopedic (or other) concerns or related comments

See also

- Exercise prescription software

References

1. *Exercise Prescription (http://emedicine.medscape.com/article/88648-overview)* at eMedicine
2. "Exercise on prescription". BBC News. April 5, 2001.
3. [1] (http://www.nhs.uk/Conditions/stress-anxiety-depression/Pages/exercise-for-depression.aspx) Exercise on prescription (Times)
4. http://www.hi-mag.com/healthinsurance/article.do?articleid=20001764961 Analysis: Workplace Wellbeing
5. Skinner, Elizabeth H.; Berney, Susan; Warrillow, Stephen; Denehy, Linda (2008). "Rehabilitation and exercise prescription in Australian intensive care units". *Physiotherapy*. **94** (3): 220–9. doi:10.1016/j.physio.2007.11.004.
6. O'Hagan, Ciara; De Vito, Giuseppe; Boreham, Colin A. G. (2013). "Exercise Prescription in the Treatment of Type 2 Diabetes Mellitus". *Sports Medicine*. **43** (1): 39–49. doi:10.1007/s40279-012-0004-y. PMID 23315755.
7. O'Grady, Michael; Fletcher, Jacquelyn; Ortiz, Susan (2000). "Therapeutic and physical fitness exercise prescription for older adults with joint disease: an evidence-based approach". *Rheumatic Diseases Clinics of North America*. **26** (3): 617–46. doi:10.1016/S0889-857X(05)70159-9. PMID 10989515.
8. Stanton, Robert; Happell, Brenda M. (2013). "An Exercise Prescription Primer for People with Depression". *Issues in Mental Health Nursing*. **34** (8): 626–30. doi:10.3109/01612840.2012.758207. PMID 23909675.
9. Askew, Christopher D.; Parmenter, Belinda; Leicht, Anthony S.; Walker, Philip J.; Golledge, Jonathan (2014). "Exercise & Sports Science Australia (ESSA) position statement on exercise prescription for patients with peripheral arterial disease and intermittent claudication". *Journal of Science and Medicine in Sport*. **17** (6): 623–9. doi:10.1016/j.jsams.2013.10.251. PMID 24315956.
10. Hordern, Matthew D.; Dunstan, David W.; Prins, Johannes B.; Baker, Michael K.; Singh, Maria A. Fiatarone; Coombes, Jeff S. (2012). "Exercise prescription for patients with type 2 diabetes and pre-diabetes: A position statement from Exercise and Sport Science Australia". *Journal of Science and Medicine in Sport*. **15** (1): 25–31. doi:10.1016/j.jsams.2011.04.005. PMID 21621458.
11. "Diabetes and Exercise - Keeping Active". *Diabetes Australia*. Retrieved 17 April 2015.
12. Walton, Alice. "Vigorous Exercise Linked To Longer Life, Study Says". *Forbs*. Retrieved 17 April 2015.
13. "Diabetes and Exercise - Keeping Active". *Diabetes Australia*. Retrieved 17 April 2015.
14. Mazzeo, Robert S.; Tanaka, Hirofumi (2001). "Exercise Prescription for the Elderly". *Sports Medicine*. **31** (11): 809–18. doi:10.2165/00007256-200131110-00003. PMID 11583105.
15. Kraemer, William J.; Fleck, Steven J.; Deschenes, Michael R. (2011). "Exercise Testing for Health, Physical Fitness, and Predicting Sport Performance". *Exercise Physiology: Integrating Theory and Application*. Lippincott Williams & Wilkins. pp. 385–414. ISBN 978-0-7817-8351-4.
16. Vogiatzis, Ioannis (1999). "Physiological Response to Moderate Exercise Workloads in a Pulmonary Rehabilitation Program in Patients With Varying Degrees of Airflow Obstruction". *Chest*. **116** (5): 1200–7. doi:10.1378/chest.116.5.1200. PMID 10559076.
17. http://www.mayoclinic.org/healthy-lifestyle/fitness/in-depth/exercise-intensity/art-20046887

Categories: Physical exercise | Physical therapy

Yoga as exercise or alternative medicine

From Wikipedia, the free encyclopedia

Yoga as exercise or alternative medicine is a modern phenomenon which has been influenced by the ancient Indian practice of hatha yoga. It involves holding stretches as a kind of low-impact physical exercise, and is often used for therapeutic purposes.[1][2][3] Yoga in this sense often occurs in a class and may involve meditation, imagery, breath work and music.[4][5]

Both the meditative and the exercise components of hatha yoga have been researched for both specific and non-specific health benefits. Hatha yoga has been studied as an intervention for many conditions, including back pain, stress, and depression.[6]

A survey released in December 2008 by the US National Center for Complementary and Integrative Health[7] found that hatha yoga was the sixth most commonly used alternative therapy in the United States during 2007, with 6.1 percent of the population participating.[8]

Contents

Background and overview

Yoga came to the attention of an educated western public in the mid 19th century along with other topics of Hindu philosophy. The first Hindu teacher to actively advocate and disseminate aspects of yoga to a western audience was Swami Vivekananda, who toured Europe and the United States in the 1890s[9] (however, Vivekananda put little emphasis on the physical practices of Hatha Yoga in his teachings).[10]

A western style hatha yoga class

The physical asanas of hatha yoga have a tradition that goes back to at least the 15th century, but they were not widely practiced in India prior to the early 20th century. Hatha yoga was advocated by a number of late 19th to early 20th century gurus in India, including Tirumalai Krishnamacharya in south India, Swami Sivananda in the north, Sri Yogendra in Bombay, and Swami Kuvalayananda in Lonavala, near Bombay.[11] In 1918, Pierre Bernard, the first famous American yogi, opened the Clarkstown Country Club, a controversial retreat center for well-to-do yoga students, in New York State.[12] In the 1960s, several yoga teachers, most notably B.K.S. Iyengar, K. Pattabhi Jois, Swami Vishnu-devananda, and Swami Satchidananda became active and popular

in the West.[11][13][14] A hatha "yoga boom" followed in the 1980s, as Dean Ornish, MD, a medical researcher and follower of Swami Satchidananda, connected hatha yoga to heart health, legitimizing hatha yoga as a purely physical system of health exercises outside of counter culture or esotericism circles, and unconnected to a religious denomination.[9]

Since then, hatha yoga has been used as supplementary therapy for diverse conditions such as cancer, diabetes, asthma, and AIDS.[15]

The more classical approaches of hatha yoga, such as Iyengar Yoga, move at a more deliberate pace, emphasize proper alignment and execution and hold asanas for a longer time. They aim to gradually improve flexibility, balance, and strength. Other approaches, such as Ashtanga or Power Yoga, shift between asanas quickly and energetically. More recently, contemporary approaches to yoga, developed by Vanda Scaravelli and others, invite students to become their own authority in yoga practice by offering principle-based approaches to yoga that can be applied to any form.[16]

Yoga has roots in India. The foundational text for yoga is the *Yoga Sutra*. Religious articles from a variety of views and beliefs have been published to try to show that Yoga is leading people from their previous beliefs into eastern religions. Some websites are wholly dedicated to this purpose, under names such as "Yogadangers.com"[17] Evangelical Christian leader Albert Mohler is a critic of yoga, saying 'the embrace of yoga is a symptom of our postmodern spiritual confusion'.[18]

Nearly all types of hatha yoga practices include asana, pranayama and savasana.[19]

Research activity

While much of the medical community views the results of Hatha Yoga research to be significant, others argue t. there were many flaws that undermine results. Much of the research on Hatha Yoga has been in the form of preliminary studies or clinical trials of low methodological quality, including small sample sizes, inadequate blinding, lack of randomization, and high risk of bias.[20][21][22] As of 2011, evidence suggests that Hatha Yoga may be at least as effective at improving health outcomes as other forms of mild physical exercise when added to standard care. What is found most concerning regarding the legitimacy of Hatha Yoga as a method of healing is the current lack of specificity and standardization regarding the practice of Hatha Yoga. One recent study examined the difficulties of implementing Hatha Yoga-based therapies and methods of healing without any detailed, standardized and vetted descriptions of the asanas promoted as being beneficial for healing. This research calls for the creation of supported intervention practices that could be distributed and applied for use in clinical practice for patients.[23]

Hatha Yoga and Specific Mental Health Conditions

- **Anxiety and depression**. A 2010 literature review of the research on the use of Hatha Yoga for treating depression said that preliminary research suggests that Hatha Yoga may be effective in the management of depression. Both the exercise and the mindfulness meditation components may be helpful. However the review cautioned that "Although results from these trials are encouraging, they should be viewed as very preliminary because the trials, as a group, suffered from substantial methodological limitations."[24]
- **Attention deficit hyperactivity disorder**. No benefit.[20]
- **Dementia**. There is some evidence that exercise programs may help people with dementia perform their daily activities.[25]
- **Insomnia**. There is some evidence supporting yoga as an alternative treatment for insomnia, however it is not of good quality and it is not clear whether yoga works any better than general relaxation.[26]

Hatha Yoga and Specific Physical Health Conditions

- **Back pain**. There is evidence that Hatha Yoga may be effective in the management of chronic, but not acute, low back pain.[27]
- **Blood pressure**. Although some evidence exists to suggest Hatha Yoga might help people with high blood pressure, overall this evidence is too weak for any recommendation to be made, and little is known of the safety implications of such an approach.[28]
- **Cancer**. Practice of Hatha Yoga may improve quality-of-life measures in cancer patients. It is unclear what aspect(s) may be beneficial or what populations should be targeted.[29] Hatha Yoga has no effect on the underlying disease.[6]
- **Epilepsy**. No evidence of benefit.[30]
- **Menopause-related symptoms**. No benefit.[31]
- **Pediatric conditions**. A 2009 systematic review concludes that there is insufficient evidence to support the use of Hatha Yoga for any indication in the pediatric population. No adverse events were reported, and most trials were positive but of low methodological quality.[32]
- **Rheumatic disease**. Only weak evidence exists to support the use of Hatha Yoga as a complementary therapy for helping people with rheumatic diseases, and little is known of the safety of such use.[33]

Mind-body connection

The therapeutic benefits of yoga have been discussed by van der Kolk, who explains that because regulation of physical movement is a fundamental priority of the nervous system, focusing on and developing an awareness of physical movement can lead to improved synchrony between mind and body. This is beneficial, he says, especially for those suffering from psychological conditions such as depression and PTSD (the focus of van der Kolk's work), because an improved sense of connectedness between mind and body give rise to enhanced control and understanding of their "inner sensations" and state of being.[23]

Hatha Yoga and mindfulness

Yoga is a core component of the Mindfulness-based stress reduction (MBSR) program. Drawing from recent research on the mental and physical benefits of practicing yoga, positive psychologists have begun to look deeper into the possibilities of utilizing yoga to improve life for people even in the absence of disease.[23]

Safety

Although relatively safe, Hatha Yoga is not risk free. Sensible precautions can usefully be taken – for example beginners should avoid advanced moves, Hatha Yoga should not be combined with psychoactive drug use, and competitive Hatha Yoga should be avoided.[34]

When using Hatha Yoga as a treatment, patients should inform the teacher of their physical limitations and concerns. Functional limitations should be taken into consideration. Modifications can then be made using props, altering the duration or poses.[35]

The practice of Hatha Yoga has been cited as a cause of hyperextension or rotation of the neck, which may be a precipitating factor in cervical artery dissection.[36]

A small percentage of Hatha Yoga practitioners each year suffer physical injuries analogous to sports injuries.[37]

See also

- Yoga foot drop
- *International Journal of Yoga*
- Exercise is Medicine
- Neurobiological effects of physical exercise

References

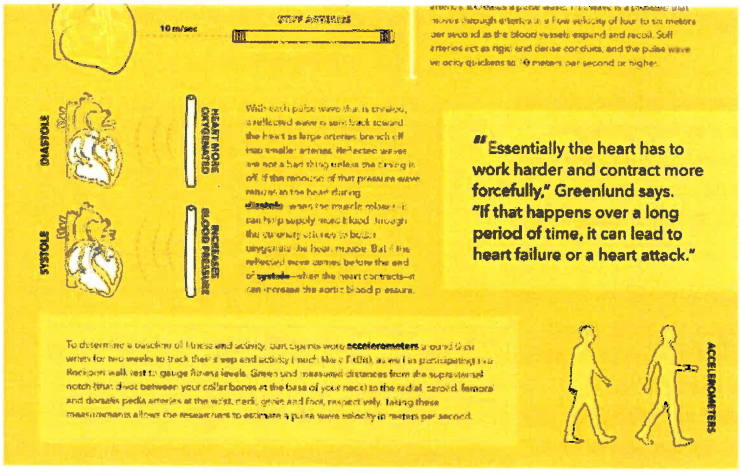
1. McCall, Timothy (2007). *Yoga as Medicine: the yogic prescription for health and healing: a yoga journal book*, p. xvii. Bantam, New York. ISBN 978-0-553-38406-2
2. Syman, Stefanie (2010). *The Subtle Body: The Story of Yoga in America*. Macmillan. pp. 268–273.
3. Ross, A.; Thomas, S. (2010). "The Health Benefits of Yoga and Exercise: A Review of Comparison Studies. (http://www.liebertonline.com/doi/abs/10.1089/acm.2009.0044)" *The Journal of Alternative and Complementary Medicine*. January 2010, 16(1): 3–12.doi:10.1089/acm.2009.0044 (https://dx.doi.org/10.1089%2Facm.2009.0044).
4. Feuerstein, Georg (2006). " "Yogic Meditation" ". In Jonathan Shear. *The Experience of Meditation*. St. Paul, Minnesota: Paragon House. p. 90. "While not every branch or school of yoga includes meditation in its technical repertoire, most do."
5. Editors, of Yoga Journal (2010). "Which Yoga is Right for you?". *Yoga Journal*: 80–85.
6. "Yoga". American Cancer Society. 1 November 2008. Retrieved April 2014. Check date values in: `|access-date=` (help)
7. "According to a New Government Survey, 38 Percent of Adults and 12 Percent of Children Use Complementary and Alternative Medicine | NCCIH". *Nccih.nih.gov*. 2008-12-10. Retrieved 2012-03-20.
8. Barnes, P. M.; Bloom, B.; Nahin, R. CDC National Health Statistics Report #12. Complementary and Alternative Medicine Use Among Adults and Children: United States, 2007 (http://nccih.nih.gov/news/2008/nhsr12.pdf)
9. Shaw, Eric. *35 mOMents*, *Yoga Journal*, 2010-09.
10. Goldberg, Philip (2010). *American Veda—How Indian Spirituality Changed the West*. New York: Crown/Random House. p. 79. ISBN 978-0-385-52134-5.
11. Cushman, Ann (Jan–Feb 2000). "The New Yoga". *Yoga Journal.com*. p. 68. Retrieved 5 May 2011.
12. Love, Robert (2010). *The Great Oom : the Improbable Birth of Yoga in America*. Viking. ISBN 067002175X.
13. Silva, Mira, and Mehta, Shyam. (1995). *Yoga the Iyengar Way*, p. 9. Alfred A. Knopf, New York. ISBN 978-0-89381-731-2
14. Desikachar, T. K. V. (2005). *Health, healing and beyond: Yoga and the living tradition of Krishnamacharya*, (cover jacket text). Aperture, US. ISBN 978-0-89381-731-2
15. Barnes, P.; Powell-Griner, E.; McFann, K.; Nahin, R. CDC Advance Data Report #343. Complementary and Alternative Medicine Use Among Adults: United States, 2002 (http://nccih.nih.gov/news/report.pdf)
16. Marc Woolford About the Yoga.... yoga is meant for anyone that wishes to improve physical and psychological health (http://www.yogawithmarc.com/abouttheyoga.html)
17. "Spiritual Dangers of Yoga and Kundalini". Yoga Dangers. Retrieved 2013-07-07.
18. Albert Mohler (2010-09-20). "The Subtle Body — Should Christians Practice Yoga? –". *Albertmohler.com*. Retrieved 2013-07-07.
19. Forbes Bo. "Yoga Therapy in Practice: Using Integrative Yoga Therapeutics in the Treatment of Comorbid Anxiety and Depression". *International Journal of Yoga*. **2008**: 87.
20. Krisanaprakornkit, T.; Ngamjarus, C.; Witoonchart, C.; Piyavhatkul, N. (2010). "Meditation therapies for attention-deficit/hyperactivity disorder (ADHD)". *Cochrane Database of Systematic Reviews (Online)* (6): CD006507. doi:10.1002/14651858.CD006507.pub2. PMID 20556767.
21. Ospina, M. B.; Bond, K.; Karkhaneh, M.; et al. (2008). "Clinical trials of meditation practices in health care: characteristics and quality". *Journal of Alternative and Complementary Medicine*. **14** (10): 199–213.
22. Uebelacker, L. A.; Epstein-Lubow, G.; Gaudiano, B. A.; Tremont, G.; Battle, C. L.; Miller, I. W. (2010). "Hatha yoga for depression: critical review of the evidence for efficacy, plausible mechanisms of action, and directions for future research". *Journal of Psychiatric Practice*. **16** (1): 22–33. doi:10.1097/01.pra.0000367775.88388.96. PMID 20098228.
23. Salmon, Paul; Lush, Elizabeth; Jablonski, Megan; Sephton, Sandra E. (February 2009). "Yoga and Mindfulness: Clinical Aspects of an Ancient Mind/Body". *Cognitive and Behavioral Practice*. **16** (1): 59–72. doi:10.1016/j.cbpra.2008.07.0(
24. Uebelacker LA, Epstein-Lubow G, Gaudiano BA, Tremont G, Battle CL, Miller IW (January 2010). "Hatha yoga for depression: critical review of the evidence for efficacy, plausible mechanisms of action, and directions for future research". *J Psychiatr Pract*. **16** (1): 22–33. doi:10.1097/01.pra.0000367775.88388.96. PMID 20098228.

25. Forbes, Dorothy; Forbes, Scott C.; Blake, Catherine M.; Thiessen, Emily J.; Forbes, Sean (2015-04-15). "Exercise programs for people with dementia". *The Cochrane Database of Systematic Reviews* (4): CD006489. doi:10.1002/14651858.CD006489.pub4. ISSN 1469-493X. PMID 25874613.
26. Taylor DJ, Grieser EA, Tatum JI (2010). "Other Nonpharmacological Treatments of Insomnia". In Sateia MJ, Buysse D. *Insomnia: Diagnosis and Treatment*. CRC Press. p. 291. ISBN 9781420080803.
27. Chou R, Huffman LH (October 2007). "Nonpharmacologic therapies for acute and chronic low back pain: a review of the evidence for an American Pain Society/American College of Physicians clinical practice guideline". *Ann. Intern. Med.* **147** (7): 492–504. doi:10.7326/0003-4819-147-7-200710020-00007. PMID 17909210.
28. Wang J, Xiong X, Liu W (2013). "Yoga for essential hypertension: a systematic review". *PLoS ONE*. **8** (10): e76357. doi:10.1371/journal.pone.0076357. PMC 3790704. PMID 24124549.
29. Smith, K. B.; Pukall, C. F. (May 2009). "An evidence-based review of yoga as a complementary intervention for patients with cancer". *Psycho-oncology*. **18** (5): 465–475. doi:10.1002/pon.1411. PMID 18821529.
30. Panebianco, Mariangela; Sridharan, Kalpana; Ramaratnam, Sridharan (2015-05-02). "Yoga for epilepsy". *The Cochrane Database of Systematic Reviews* (5): CD001524. doi:10.1002/14651858.CD001524.pub2. ISSN 1469-493X. PMID 25934967.
31. Lee, M. S.; Kim, J. I.; Ha, J. Y.; Boddy, K.; Ernst, E. (2009). "Yoga for menopausal symptoms: a systematic review". *Menopause (New York, N.Y.)*. **16** (3): 602–608. doi:10.1097/gme.0b013e31818ffe39. PMID 19169169.
32. Birdee, G. S.; Yeh, G. Y.; Wayne, P. M.; Phillips, R. S.; Davis, R. B.; Gardiner, P. (2009). "Clinical applications of yoga for the pediatric population: a systematic review". *Academic Pediatrics*. **9** (4): 212–220.e1–9. doi:10.1016/j.acap.2009.04.002. PMC 2844096. PMID 19608122.
33. Cramer H, Lauche R, Langhorst J, Dobos G (November 2013). "Yoga for rheumatic diseases: a systematic review". *Rheumatology (Oxford)*. **52** (11): 2025–30. doi:10.1093/rheumatology/ket264. PMID 23934220.
34. Cramer H, Krucoff C, Dobos G (2013). "Adverse events associated with yoga: a systematic review of published case reports and case series". *PLoS ONE*. **8** (10): e75515. doi:10.1371/journal.pone.0075515. PMC 3797727. PMID 24146758.
35. Distasio S (2008). "Integrating Yoga into Cancer Care". *Clinical Journal of Oncology Nursing*. **12** (1): 125–130. doi:10.1188/08.CJON.125-130. PMID 18258582.
36. Caso V, Paciaroni M, Bogousslavsky J (2005). "Environmental factors and cervical artery dissection". *Front Neurol Neurosci*. **20**: 44–53. doi:10.1159/000088134. PMID 17290110.
37. Penman S, Cohen M, Stevens P, Jackson S (July 2012). "Yoga in Australia: Results of a national survey". *Int J Yoga*. **5** (2): 92–101. doi:10.4103/0973-6131.98217. PMC 3410203. PMID 22869991.

Categories: Alternative medicine | Mind–body interventions | Hatha yoga

Exercising and eating well are greater contributors to health than standing at work

November 21, 2017 by Kelley Christensen



Credit: Michigan Technological University

By now you've probably heard the edict from the health community: Sitting is the new smoking. Perhaps you've converted to a standing desk, or maybe you have a reminder on your phone to get up once an hour and walk around the office a few times.

But are there consequences to your arteries whether you're sitting or standing? Two researchers at Michigan Technological University have set out to answer this question.

Shock Through the Heart

John Durocher, assistant professor of biological sciences, and Ian Greenlund, a master's degree student in biological sciences, have spent the past few months conducting physical tests on volunteers to determine whether sitting or standing has an effect on the stiffness of arteries.

As humans age, our arteries gradually stiffen. Consider a garden hose versus a narrow steel pipe: The walls of the hose are flexible, while the narrow steel pipe has no give. When our heart contracts, it not only pumps blood into our arteries, it creates a pulse wave. This is what you feel when you find a pulse at your wrist or neck. This wave is a pressure that moves through the walls of our arteries at a flow velocity of about four to six meters per second as the blood vessels expand and recoil.

In people with prehypertension or hypertension, the stiff arteries act as rigid and dense conduits, and the pulse wave velocity quickens to 10 meters per second or higher. Remember in grade school when you learned sound waves travel faster through solid objects? The same principle applies to the pressure waves in your arteries.

With each pulse wave that is created, a reflected wave is sent back toward the heart as our large arteries branch off into smaller arteries. Reflected

waves are not always a bad thing. It's the timing of the reflected wave that can pose an issue. If the rebound of that pressure wave returns to the heart during diastole—when the muscle relaxes—it can help supply more blood through the coronary arteries to better oxygenate the heart muscle. But if the reflected wave comes before the end of systole—when the heart contracts—it can increase the aortic blood pressure.

"Essentially the heart has to work harder and contract more forcefully," Greenlund says. "If that happens over a long period of time, it can lead to heart failure or a heart attack."

To determine whether standing or sitting for work influences arterial stiffness, Durocher and Greenlund studied 48 people classified into four groups—stands most of the day for work and is physically fit, stands most of the day for work and has lower fitness levels, sits most of the day for work and is physically fit, and sits most of the day for work and has lower fitness levels—over the course of nine months.

To determine a baseline of fitness and activity, participants in the study wore accelerometers around their wrists for two weeks to track their sleep and activity (much like a FitBit), as well as participating in a Rockport walk test to gauge fitness levels. Greenlund also measured distances from the suprasternal notch (that divot between your collar bones at the base of your neck) to the radial, carotid, femoral and dorsalis pedis arteries at the wrist, neck, groin and foot, respectively. Taking these measurements allows the researchers to estimate a pulse wave velocity in meters per second.

Durocher and Greenlund also took resting blood pressure measurements using applanation tonometry—a pencil-like device placed against the artery of interest. Finally, participants were measured on a scale that uses bioelectrical impedance to calculate body fat content by passing a current through the body. Fat is water-poor and so has higher resistance to the current; more impendence indicates higher body fat.

Using all of these measurements, as well as a questionnaire about weekly physical activity, the researchers are able to calculate how stiff a person's arteries are and examine differences between seated and standing groups along fitness classifications.

Lifestyle Choices

In this study, researchers did not find significant differences when comparing seated and standing desk groups across fitness levels. However, with the help of Min Wang, associate professor of mathematical sciences, the researchers employed a step-wise linear regression analysis on multiple predictors to determine which variables were more likely to result in increased arterial stiffness.

Carotid-femoral pulse wave velocity, which estimates stiffness within the central region of the body and is considered the gold-standard indicator of arterial health, was best predicted by age, followed by waist circumference. Essentially, younger participants in the study with trimmer waists experience lower pulse wave velocities, indicating more supple arteries. Additionally, leg pulse wave velocity values were best predicted with fitness levels, followed by waist circumference—fitter participants in the study with trimmer waists experience lower pulse wave velocities.

These results, and others, indicate that arteries stiffen with age. However, there are particular lifestyle interventions like exercising more often, increased physical activity and healthier eating that may help to reduce waist circumference and increase fitness. While standing at work does not appear to have a direct benefit on arterial stiffness, it is apparent that healthy lifestyle choices can reduce cardiovascular risk.

The moral of the story is this: Instead of spending the Thanksgiving holiday parked in front of the TV watching the Lions play the Vikings, get up and throw the pigskin with the relatives. Go on a walk. And don't wait for the New Year to resolve to spend more time standing than sitting.

Explore further: Teens and adolescents who consume too much salt show unhealthy changes to blood vessels

Provided by: Michigan Technological University

Related Stories

Teens and adolescents who consume too much salt show unhealthy changes to blood vessels May 4, 2017
Findings of a new study being presented at the 2017 Pediatric Academic Societies Meeting in San Francisco suggest adolescents who consume too much salt have measurable changes in their blood vessels associated with early ...

The mechanics of hypertension—how does stress contribute to stiff arteries? June 17, 2016
When contemplating the mechanics of blood flow through stiff arteries, consider the flooring metaphor.

Can four fish oil pills a day keep the doctor away? July 7, 2015
Fish oil is one of the most popular dietary supplements in the U.S. because of the perceived cardiovascular benefits of the omega-3 it contains. However, scientific findings on its effectiveness have been conflicting. New ...

Childhood socioeconomic status associated with arterial stiffness in adulthood September 6, 2017
A multicentre trial coordinated by the Research Centre of Applied and Preventive Cardiovascular Medicine at the University of Turku, Finland, shows that lower socioeconomic status in childhood is associated with arterial ...

Arterial stiffness linked to incidence of diabetes October 29, 2017
(HealthDay)—Increased arterial stiffness, as measured by carotid-femoral pulse wave velocity (c-f PWV), is associated with increased incidence of diabetes, according to a study published online Sept. 29 in Diabetes Care.

Long-term heavy drinking may age arteries over time February 20, 2017
Heavy alcohol drinking habits over the years may prematurely age arteries, especially in men, putting them at an increased risk for heart disease, according to new research in Journal of the American Heart Association, the ...

Recommended for you

Sunrise and sunset guide daily activities of city-dwellers November 21, 2017
Despite artificial lightning and social conventions, the dynamics of daylight still influence the daily activities of people living in modern, urban environments, according to new research published in PLOS Computational ...

Older men need more protein to maintain muscles November 21, 2017
The amount of protein recommended by international guidelines is not sufficient to maintain muscle size and strength in older men, according to a new study.

Exercising and eating well are greater contributors to health than standing at work November 21, 2017
By now you've probably heard the edict from the health community: Sitting is the new smoking. Perhaps you've converted to a standing desk, or maybe you have a reminder on your phone to get up once an hour and walk around ...

Motorcycle crashes cause five times as many deaths as car accidents, six times the health costs November 20, 2017
Motorcycle accidents are costly in terms of lives and health care costs. Compared with car accidents, motorcycle accidents cause 3 times the injuries, 6 times the medical costs and 5 times the deaths, found new research in ...

Dog ownership linked to lower mortality November 17, 2017
A team of Swedish scientists have used national registries of more than 3.4 million Swedes aged 40 to 80 to study the association between dog ownership and cardiovascular health. Their study shows that dog owners had a lower ...

New shoe makes running 4 percent easier, 2-hour marathon possible, study shows November 17, 2017
Eleven days after Boulder-born Shalane Flanagan won the New York City Marathon in new state-of-the-art racing flats known as "4%s," University of Colorado Boulder researchers have published the study that inspired the shoes' ...

password

Sign in

Click here to reset your password.
Sign in to get notified via email when new comments are made.

ACSM AMERICAN FITNESS INDEX®

COMMUNITY *action* GUIDE

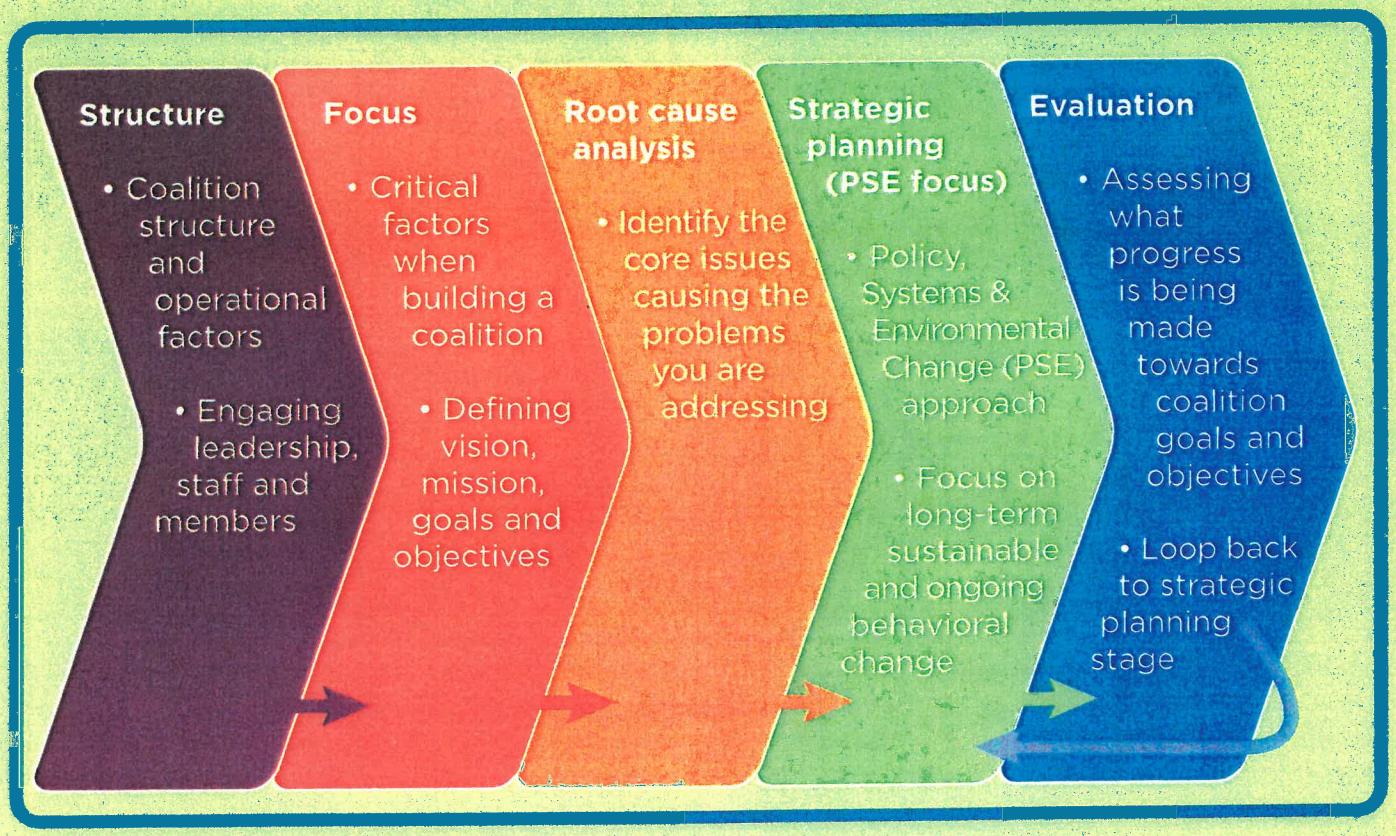
Anthem Foundation

community action framework

Quantitative Data
- AFI Data Report
- Other pertinent data

Qualitative Data
- Key informant interviews
- Case studies
- Focus groups, observations

COALITION



introduction

About the AFI Community Action Guide

The American College of Sports Medicine (ACSM) American Fitness Index® (AFI) Community Action Guide is a companion to the AFI Data Report presented annually by ACSM and the Anthem Foundation.

Whether you are just getting started or well on your way to addressing health and physical activity in your community, the AFI Community Action Guide provides an overview of the critical decisions and factors related to effective community action.

One effective strategy for community action is forming a diverse coalition of goal-oriented individuals and organizations working toward the same outcome. The subsequent sections of this guide will outline organizational and planning considerations for effective coalitions.

In addition, you'll find practical tools, examples and resources on the AFI website at **www.americanfitnessindex.org.**

Intended Audience

This guide is for anyone interested in addressing the overall health, emphasizing the level of physical activity, in your city, town or neighborhood. Some audiences for whom ACSM has created this guide include professionals working in the fields of:

- Public Health
- Smart Growth
- Community Development
- Parks
- Education
- Aging Services
- Health, Wellness and Medicine
- Faith-based organizations
- Planning
- Zoning
- Transportation
- Recreation
- Youth Services
- Physical fitness
- Local government
- Businesses

About the ACSM American Fitness Index Program

With support and funding from the Anthem Foundation, ACSM launched the AFI program in 2008 to help communities identify opportunities to:

- Improve the health of its residents
- Evolve the community to a culture of health and wellness
- Expand community assets to better support active, healthy lifestyles

The AFI program revolves around an annual data report, a reliable measure of community fitness for the country's 50 largest metropolitan statistical areas (MSAs). The report serves as a scientific, objective assessment of each MSA's strengths and challenges, and effectively informs local decision-making that can enhance the quality of life for its population.

For the purpose of AFI, the data report evaluates MSAs according to the U.S. Census Bureau. An MSA also can be referred to as a "community" and/or a "city." If referred to by city, the report is referencing the entire MSA or metro area, but uses the name of the largest principal city. For example, Atlanta is the principal city of the Atlanta-Sandy Springs-Roswell MSA. The Atlanta community and the nickname Metro Atlanta refer to the Atlanta-Sandy Springs-Roswell MSA.

The AFI Data Report reflects a composite of:

- Personal health measures
- Preventive health behaviors
- Levels of chronic disease conditions
- Environmental and community resources
- Policies that support physical activity

Benchmarks for each data indicator in the report highlight areas that need improvement.

In addition, demographic and economic diversity are included for each MSA to illustrate the unique attributes of each city. These description elements are not included in the data index calculation, but can be used for comparison purposes.

While the AFI Data Report provides detailed information for the 50 most populated cities at the MSA level, the My AFI community application tool integrates the components of the AFI program into a health promotion approach that can be used by other communities not included in the AFI Data

Report. Using this tool, leaders can understand the individual, societal and behavioral factors related to physical activity in their own community and implement culturally focused activities that are meaningful to its residents.

In recent years, the AFI program also has included:

- Technical assistance to low-ranking metro areas
- Trend reports that highlight the progress a city has made over a five-year period

The Need for Community Action

Being physically active is one of the most important ways individuals can improve and maintain his or her overall health.

Regular physical activity can reduce the risk of:

- Premature death
- Heart disease
- Type 2 diabetes
- Breast cancer
- Colon cancer
- Risk of falls

Physical activity also can:

- Decrease body fat
- Improve bone health
- Improve muscular strength
- Prevent the development of chronic diseases[1]

coalition basics

A coalition is a group of individuals and groups working together to achieve a shared goal. Coalitions function best when its members represent the diverse interests of the community.

To help assure success, coalitions need:

- A shared sense of direction among its members
- Defined objectives
- A realistic action plan
- Consistent communication
- Agreed upon measures of success

The functions of a coalition might include:

- Community awareness, community engagement and strengthening knowledge
- Educating policy makers
- Influencing public and/or private policy issues
- Building support for improvements in infrastructure
- Improving organizational practices

Emerging public health information suggests that to reach the U.S. Centers for Disease Control and Prevention's goal to improve health and fitness, prevent disease and disability, and enhance quality of life for all Americans through physical activity,

we must create a culture that integrates physical activity into our daily lives.

tip

As you begin to think about bringing together a coalition, don't get stuck on what to call your group. Additionally, avoid the temptation to debate whether your group should be labeled a "coalition," "collaborative," "partnership," "collective impact" or similar term.

What the group is called is not likely to matter, especially as the work is just beginning. After the group is organized and functioning, you can revisit the "What do we want to call ourselves?" question. For the sake of simplicity, this guide will use the word "coalition."

Some practical benefits of forming a coalition include:

1. There is strength in numbers, but a small group of quality leaders may be more efficient when beginning the process of forming a coalition.
2. People and organizations that work together can leverage their resources and skills.
3. Coalitions often command more attention than individual members.

Collective Impact as a Model for Community Action

Transforming communities into healthier places isn't a simple process. Rather, the process of increasing physical activity and helping people live healthier lives is a complex issue that will require many moving parts and several organizations working toward a common goal.

To achieve this common goal, many communities have adopted the definition of "collective impact" to incite action. For the purposes of this guide, we consider collective impact and coalition work to be similar.

Collective impact involves the same recipe for successful coalitions including:

- Common agenda
- Shared measurement
- Mutually reinforcing activities
- Continuous communication

The primary difference is that creating and managing collective impact requires a separate organization and a specific set of skills to serve as the **backbone** for the entire initiative and to coordinate participating organizations and agencies.

In this guide, you will find that many coalitions may have staff as well. For coalitions and collective impact to work, the role of leadership and staff should be to balance the tension and keep all parties coordinated and accountable, while staying behind the scenes in order to establish collective ownership.

An excellent source for learning more about collective impact is FSG, a nonprofit consulting firm focused on discovering better ways to solve social problems. [6] [10] [11]

tip

Offering food and time for networking during meetings will entice new individuals to join and is an added value to membership.

Coalition Structure

In order to be effective, a coalition should determine how it will be structured and how it will function from an operational perspective.

Questions to answer:

- Who will lead the coalition?
- Who should make up the membership?
- What staff, if any, is needed? Does the staff need to be full- or part-time?

Additional operational considerations that need to be addressed:

- Who will chair meetings?
- How will the chair be selected?
- When, where and how often will the coalition meet?
- How will agendas be set?
- What is expected of members? Will the coalition use membership agreements to formalize commitments?
- Who is responsible for administrative functions such as meeting arrangements, agenda distribution, minutes, and follow-up?
- Will the coalition need a budget, and if yes, who will serve as the fiscal agent?

Leadership

Perhaps one of the most critical first steps in this journey is to identify and engage passionate, committed leaders. These few individuals are catalysts who can begin strategic planning, engage the community, recruit and develop a strong coalition, lead concerted public policy and advocacy efforts to create systems change in communities, and help assure sustainability of efforts.

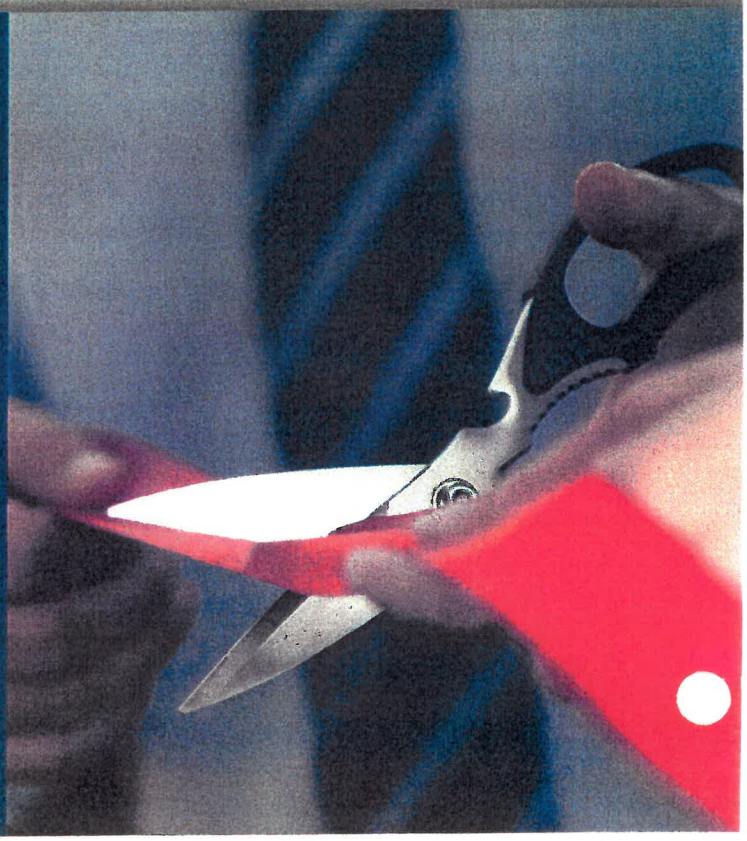
There are two types of volunteer leaders that might be involved in community action – figurehead leaders and actively engaged leaders.

Figurehead Leaders

A figurehead leader might be an individual, or individuals, who lend his or her name and image to efforts, but who might not provide much hands-on involvement. This type of

tip

Be realistic in your expectations. Prominent individuals usually have extremely limited free time. They might appear at high-profile events such as kick-off meetings, ribbon cuttings, or awards functions. But generally they are not going to be available to take part in operational activities of your community effort such as committee meetings.



Members

When selecting the members of a coalition, it's important to ask which persons or groups have a vested interest in improving the physical activity, health and wellness environment within your community.

The following list is not intended to be a complete inventory of the types of organizations, but serves as a guide to help you get started. The actual organizations you engage for your local action should be representative of your community, and the diversity, talent and resources that are available. Some examples are:

- Area businesses
- Chambers of commerce
- City and county health departments
- Community groups and organizations
- Developers/builders
- Environmental groups
- Exercise and rehabilitation professionals
- Faith-based leaders
- Farmers and community market groups
- Food/nutrition groups
- Government agencies
- Health agencies
- Health care professionals
- Health and fitness clubs
- Law enforcement or public safety
- Local universities and community colleges
- Neighborhood associations
- Parks and recreation department professionals
- Property managers
- Realtors/real-estate developers
- Retail establishments and shopping centers
- School districts
- Students
- Teachers
- Transportation experts
- Urban planners
- Zoning department

Coalition Building and Pitfalls

Coalition Building

There are excellent sources that outline approaches to coalition building – several are included in the Tools and Resources document available at www.americanfitnessindex.org. There are, however, a few factors that are critical to success that you should keep in mind, no matter what your coalition building process.

tip

Once a core group of stakeholders are engaged, you may want to consider being inclusive of anyone interested in participating, including community residents. Forming a coalition by only inviting members may overlook valuable partners that could provide long-term support and resources.

individual might be recruited as an "Honorary Chairperson" of a coalition or partnership. These individuals are typically celebrities, professional sports figures, CEOs of major businesses, or high-ranking elected officials. His or her position and other time commitments often preclude them from becoming engaged significantly in ongoing activities, but he or she can bring several important resources to the table. These include:

- The prominent status of some people is enough to attract others into a coalition or group.
- This type of leader is often able to facilitate networking opportunities and open doors to other resources that have value for the community initiative.
- If a community leader has significant resources at his or her disposal, he or she may be in a position to provide direct financial or in-kind support.
- Prominent community figures often are excellent spokespersons for your issue or cause, especially before policy-making groups, foundations and media.

Actively Engaged Leaders

An actively engaged leader is someone who has demonstrated leadership capabilities, is committed to improvement in the community, and is willing to give his or her time to be actively involved in your efforts. Initially you might identify a small number of these leaders to help your community initiative get off the ground. This type of leader is typically someone who is already engaged and passionate about your issue or cause. Actively engaged leaders might be an officer or senior staff member of an agency that shares common goals or missions with your community issues.

You might recruit several leaders who can function as an executive committee. The roles may transition as your coalition or group grows, though hopefully these leaders will remain involved and assume roles such as committee chairs.

Responsibilities for actively engaged leaders may include:

- Setting agendas
- Helping identify and recruit coalition members
- High-level strategic planning
- Facilitating meetings
- Identifying and securing resources (both financial and in-kind)
- Serving as a media spokesperson
- Building sustainability
- Making presentations to community and business groups

Questions to discuss during your leadership search:

1. Does it make sense to have a figure-head leader for the group?
2. Who are prominent figures in your community with a passion for health and well-being?
3. Who are the people in your community with a reputation of getting things done?

Staff Leadership

Some community-based initiatives are fortunate to have assigned staff members. Staff might be individuals from a lead agency or organization whose time has been allocated specifically to the initiative. Alternatively, a grant or other funding mechanism might enable an initiative to secure a staff person (or people).

Staff who are involved in community-based initiatives at a leadership level, usually require many of the competencies of volunteer leadership. In addition, they are likely to also have responsibilities such as:

- Managing finances
- Preparing reports and updates for funders and other key partners
- Assuring that plans are developed and appropriately monitored
- Ensuring smooth operational functions of activities
- Providing adequate communication with leadership and coalition members
- Keeping track of volunteer assignments and assuring follow-up is conducted
- Serving as the point-of-contact for media and policy makers.

tip

For larger coalitions, it may be beneficial to designate a leadership team or ad-hoc group to assist in key decision making and directing the coalition.

1. **Set clear goals.** Later in this guide, there is a chapter that addresses planning. A clear plan is vital to keep your efforts on track. This can be especially important if you have a diverse membership, since coalition members often bring their own organizations' goals and agendas to the table. As ideas and issues arise, continually ask the question, "How does this relate to the coalition's mission, goals and objectives?"

2. **Communicate clearly, adequately and regularly.**

3. **Listen to opposing points of view.** Often coalitions are comprised of like-minded individuals. But opposing views and opinions can provide insight and information that could be overlooked if it is not sought and valued. One way to gather this input is to talk with those who oppose your efforts. Find out why they oppose your efforts. What concerns do they have? Can you address those concerns? Are these individuals seeing potential problems that you are missing?

4. **Determine a decision-making process and stick with it.** It may be that decisions are made by a majority vote, consensus, or by sub-committees charged with making decisions on specific issues. Whatever process you have, stick with it and don't spend time rehashing or questioning decisions.

5. **Determine how tasks will be delegated and what the process for follow-up and reporting will be.**

6. **Recognize and celebrate successes and highlight members for his or her work in the coalition.** This provides momentum and helps eliminate burnout.

tip

Hosting training sessions may benefit a member's understanding of the coalition approach, while also adding value to the member experience.

tip

Under the Affordable Care Act, the Internal Revenue Service (IRS) now requires hospitals with 501(c)(3) status to conduct community health assessments and adopt an implementation strategy. Many have dedicated staff organizing these assessments through the use of community coalitions. Research active coalitions in your community to ensure you're not duplicating efforts already underway.

Coalition Pitfalls

Often efforts at building an effective coalition fail. Be aware of potential pitfalls. Go through this list with your group and talk about how you can deal with these issues. You might consider setting up ground rules or bylaws.

- Lack of clear leadership
- No plan, unclear goals/objectives, or lack of data to support objective outcomes
- Trying to focus too broadly, rather than on a few strategic issues
- No defined decision-making process
- Impatience expecting change to occur instantly
- Inadequate, infrequent, or irregular follow-up
- Inadequate communication – especially between meetings
- One agency having too much perceived or real authority
- Competition or conflict among members
- Too many meetings, meetings that last too long, or hard to get to meeting locations
- Holding meetings too frequently or too infrequently
- Not enough funding to cover basic operating costs
- Staff/member turnover and burnout
- Language and cultural barriers in multi-lingual and multi-cultural communities

coalition planning

"Begin with the end in mind." This advice is the second "habit" from Steven Covey's quintessential self-help book, *The 7 Habits of Highly Effective People*. The same is true for effective planning: a clear vision and agreement of the end goals is imperative for success.

Effective planning:

- Provides a clear focus
- Supports monitoring and assessment of results and impact
- Facilitates new program development
- Enables an organization or coalition to systematically look into the future

tip

Visit the AFI Community Action Guide resources page available at www.americanfitnessindex.org for more information on coalition sustainability and other topics mentioned throughout the guide.

Most organizations and coalitions understand the need for annual program objectives and a program-focused work plan. Funders typically require them and they provide a basis for setting priorities, organizing work and assessing progress.

Upon launching a coalition, there needs to be a discussion and eventually agreement on the vision, mission, goals and objectives of the coalition.

Once those details are established, the coalition should then address these critical questions:

- What needs to change in the community?
- What do we expect to accomplish?
- Who needs to be at the table?
- What are the various roles and responsibilities of coalition members?
- Will the coalition need sub-committees to address specific issues?
- To whom is the coalition accountable?
- What resources are already in place or available?
- What resources are needed?
- What is the intended timeframe for the coalition?
- What is the plan for sustainability?

Vision

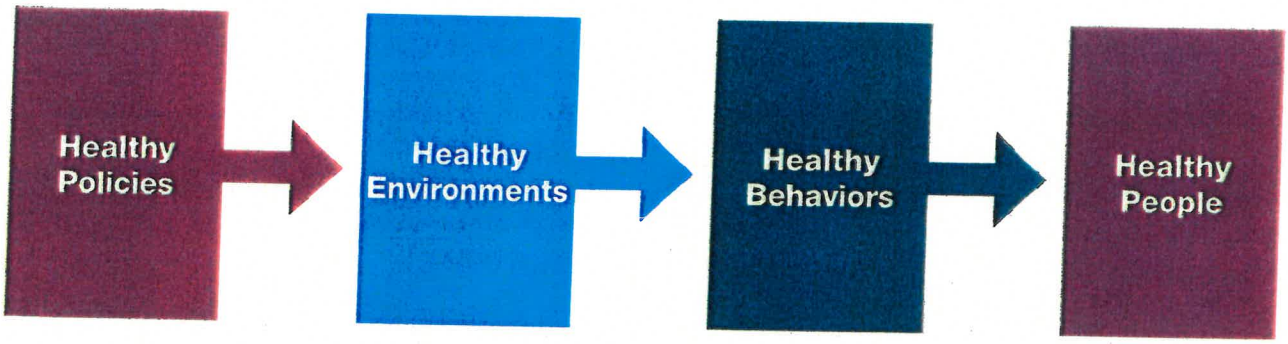
Step one for successful planning is to define the vision. The vision states the ideal conditions for your community and how things would look if the issues were perfectly addressed.

An effective vision statement is:

- Easily understood
- Broad enough to allow for diverse perspectives
- Inspiring and uplifting
- Easy to communicate

In this age of social media, a good rule to follow is for your vision statement to be 140 characters or less. If that's not enough, it should be brief enough to fit on a T-shirt.

What is Policy and Environmental Change?



Advocacy is the act of supporting or recommending a cause or course of action. As a supplement to a PSE approach, advocacy focuses on educating the public, community decision makers and policy makers.

In the area of physical activity, governmental, business and community leaders need to understand the impact of your mission, using information that is credible and valuable.

Monitoring and Evaluation

A critical step of effective planning is monitoring and evaluation. The evaluation process helps form a clear understanding of what progress is being made toward your goals and objectives. You will be able to distinguish between what is working and what is not working.

Other benefits of evaluation include:

- Enables you to measure and celebrate success
- Builds trust within your coalition
- Assists funding partners in making future funding decisions
- Provides an opportunity for you to prioritize, revise or discontinue strategies.

Additional questions to consider when planning evaluation:

1. Who will use the evaluation information?
2. What is being evaluated?
3. What methods will be used to conduct the evaluation?
4. How will the data be analyzed?
5. How can the results be put to use?
6. Would the coalition benefit from a sub-committee focused on evaluation?
7. Does the coalition need outside assistance with evaluation?

tip

The impact of coalition efforts will take time before significant improvements are measurable in a community. Celebrate the small successes and look for both long-term organizational strategies and diverse, long-term funding in order to create sustainable change in the culture of health for a community.

Mission

Taking the vision a step further, the mission statement should convey what your coalition is going to do and why it's going to do it.

A well-crafted mission statement is:

- Concise
- Outcome-focused
- Inclusive

Root Cause Analysis

A root cause analysis is a strategic means of identifying the problem(s) causing the issues you are addressing. Without this step, your action plan may not include solutions that address the core issues.

To get to the root causes, it's important to create an exhaustive list of the underlying factors responsible for the problem. This process should involve a great deal of brainstorming and a wide variety of stakeholders.

It is not feasible or desirable for a coalition to target each of the factors identified during the root cause analysis process. To narrow down the factors to a manageable and appropriate list, each factor needs to be scored and ranked. The highest ranked factors will then be used to develop coalition goals and objectives.

Goals and Objectives

The next step in planning is to prepare goals and objectives. Goals are generalized statements describing the desired change or outcome. Ideally, goals answer these three questions:

- What is the problem?
- How will change be directed?
- Who is the target group?

tip

Allow for some flexibility with goals and objectives to be in different stages such as planning, implementation and evaluation.

Taking the goals a step further involves developing objectives. **SMART** is an acronym for the five components of effective objectives:

- **Specific** – target a specific area for improvement
- **Measurable** – quantifiable or at least suggest an indicator of progress
- **Attainable** – what can be realistically achieved, given available resources
- **Relevant** – supports or is in alignment with other goals
- **Time-specific** – specify when the result(s) can be achieved

Note: measurable objectives are essential for monitoring and evaluation.

Strategic Planning

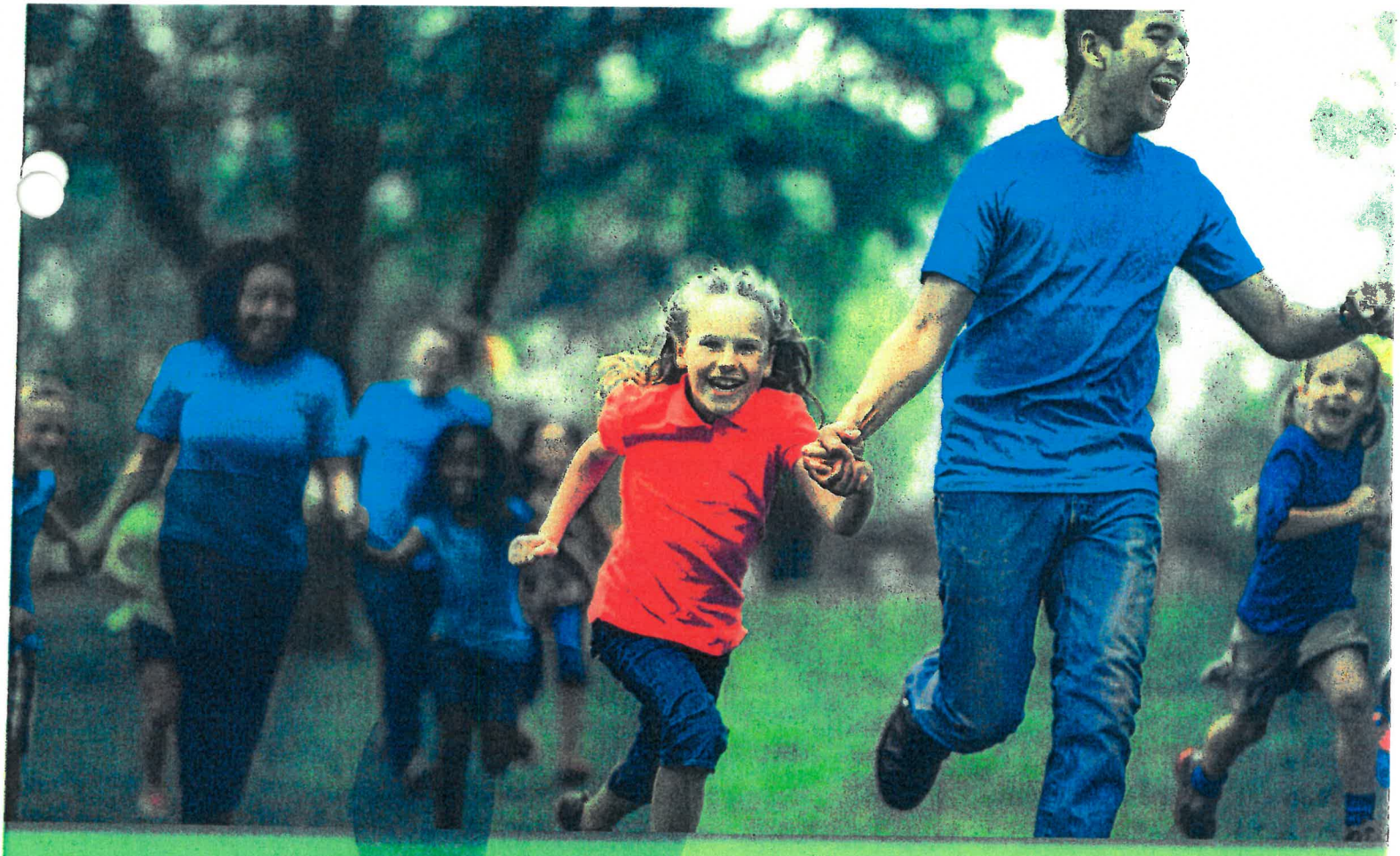
Strategies explain how the coalition will achieve its objectives. Generally, coalitions will plan a wide variety of strategies that include people from all the different sectors of the community. An action plan will detail exactly how the strategies will be implemented to accomplish the objectives.

Many communities develop programs and events as part of its strategic plan, but a more sustainable approach to gain traction is known as "Policy, Systems and Environmental Change" (PSE). The major difference between PSE compared to traditional approaches such as events and programs is that the PSE approach is aimed at long-term, sustainable and ongoing behavioral change.

The reason PSE is useful for improving health in a community is because encouraging people to live healthier lives isn't just about changing individual behaviors and creating good habits. Communities need to be places that encourage and promote healthy choices. A PSE approach makes healthier choices a real, feasible option for every member of the community by looking at the laws, rules and environments that impact behavior.

PSE Definitions:

- Policy interventions are laws, ordinances, resolutions, mandates, regulations or rules (both formal and informal).
- Systems interventions are changes that affect all elements of an organization, institution or system.
- Environmental interventions involve physical or material changes to the economic, social or physical environment.



moving forward

By reviewing this guide, you've taken an important first step in addressing community-level issues to improve health and fitness of your community. Now it's time to get moving!

As you lay groundwork for your efforts, one of the best things you can do is be a role model and advocate for good health and physical activity. Here are a few simple steps:

1. Make a commitment to gradually increase your aerobic physical activity to at least 150 minutes of moderate-intensity, or 75 minutes of vigorous-intensity aerobic physical activity a week. For additional health benefits, muscle-strengthening activities that involve all major muscle groups also should be included two or more days a week.[VI]
2. Model healthy behavior by incorporating physical activity into the daily schedule and limiting sedentary activities.
3. Get a pedometer or physical activity tracker and start counting your steps and set targets to eventually accumulate 10,000 steps each day.
4. Write a letter to the editor of your local newspaper to educate the public and bring awareness to the physical inactivity epidemic in your community. Use data from the AFI Data Report to support your argument.
5. Join an existing coalition or create your own using the help of the AFI Community Action Guide!

For more information and resources on the topics mentioned throughout this guide, visit the AFI Community Action Guide resources page.

For more information on the AFI program, visit www.americanfitnessindex.org.

references

I. Centers for Disease Control and Prevention Web site [Internet]. Atlanta (GA): Centers for Disease Control and Prevention; [cited 2015 Oct 15]. Available from: http://www.cdc.gov/physicalactivity/basics/pa-health/.

II. FSG. Reimagining social change. [Internet]. 2015. [cited 2015 Oct 15]. Available from: http://www.fsg.org/.

III. Hanleybrown F, Kania J, Kramer M. Channeling change: making collective impact work. *Stanford Social Innovation Review*. [Internet]. 2012 Jan. 26. [cited 2015 Oct 15]. Available from: http://ssir.org/articles/entry/channeling_change_making_collective_impact_work.

IV. Indiana State Department of Health and the Indiana Healthy Weight Initiative Task Force. *Indiana's Comprehensive Nutrition and Physical Activity Plan, 2010-2020.* Indianapolis (IN): Indiana State Department of Health; 2010.

V. Internal Revenue Service. [Internet]. 2015. [cited 2015 Nov 13]. Available from: https://www.irs.gov/Charities-&-Non-Profits/Charitable-Organizations/New-Requirements-for-501(c)(3)-Hospitals-Under-the-Affordable-Care-Act.

VI. Office of Disease Prevention and Health Promotion. [Internet]. 2015 [cited 2015 Nov 19]. Available from: http://health.gov/paguidelines/guidelines/summary.aspx.

VII. Turner S, Merchant K, Kania J, Martin E. Understanding the value of backbone organizations in collective impact: part 1. *Stanford Social Innovation Review*. [Internet]. 2012 Jul. 17. [cited 2015 Oct 15]. Available from: http://ssir.org/articles/entry/understanding_the_value_of_backbone_organizations_in_collective_impact_1

acknowledgments

ACSM American Fitness Index® Advisory Board

Chair: Walter R. Thompson, Ph.D., FACSM
Georgia State University

Vice-Chair: Barbara E. Ainsworth, Ph.D., M.P.H., FACSM, FNAK
Arizona State University

Steven N. Blair, P.E.D., FACSM
University of South Carolina

Jacqueline Epping, M.Ed., FACSM
U.S. Centers for Disease Control and Prevention

John M. Jakicic, Ph.D., FACSM
University of Pittsburgh

Liz Joy, M.D., M.P.H., FACSM
Intermountain Healthcare/University of Utah School of Medicine

NiCole R. Keith, Ph.D., FACSM
Indiana University/Regenstrief Institute, Inc.

Roseann M. Lyle, Ph.D., FACSM
Purdue University

Melinda M. Manore, Ph.D., R.D., FACSM
Oregon State University

Kenneth E. Powell, M.D., M.P.H., FACSM
Epidemiologic and Public Health Consultant

Angela Smith, M.D., FACSM
Nemours/Alfred I. DuPont Hospital for Children

Stella Lucia Volpe, Ph.D., R.D., FACSM
Drexel University

ACSM American Fitness Index® Staff

Brenda E. Chamness, M.S., MCHES
Senior Director, Strategic Health Programs

Marie N. Lewis, CHES
Research Administration and Programs Coordinator

ACSM American Fitness Index® Community Action Guide Writer

Ryan M. Puckett
Two21 LLC

Special thanks to the following individuals who provided review and input into this guide:

Healthy Charlotte Council

Lynette L. Craft, Ph.D., FACSM
American College of Sports Medicine

Pete Fritz, AICP, RLA
Indiana State Department of Health

Tevis Forman, M.A.
Creating Healthy Communities Coalition
Cincinnati Health Department

Denisha G. Porter, M.P.H., R.S., HHS
Creating Healthy Communities Coalition
Cincinnati Health Department

Erin Slevin, M.P.H., CHES
American College of Sports Medicine

Lisa Smith, M.S., MCHES, CCRP
Indiana University School of Medicine

Chelsy Winters, M.S.
YMCA of Greater Indianapolis
Top 10 Coalition

This guide is supported by a grant from the Anthem Foundation.

Questions and comments on this document should be directed to the American College of Sports Medicine at afi@acsm.org.

Anthem
Foundation

AMERICAN COLLEGE of SPORTS MEDICINE
www.acsm.org

www.americanfitnessindex.org

ACSM American Fitness Index Community Action Guide
Tools and Resources

Coalition Basics

Applied Leadership for Effective Coalitions.
(http://www.ncd.gov/publications/2001/Feb142001) The National Council on Disability developed this guide is designed to assist those interested in promoting leadership development and coalition building.

Centers for Disease Control and Prevention. Community Health Assessment and Group Evaluation (CHANGE)
(http://www.cdc.gov/nccdphp/dch/programs/healthycommunitiesprogram/tools/change/downloads.htm) The CHANGE tool helps community teams (such as coalitions) develop their community action plan. This tool walks community team members through the assessment process and helps define and prioritize possible areas of improvement

Creating an Effective Coalition: An Eight Step Guide
(http://www.preventioninstitute.org/eightstep.html) From the Prevention Institute, this guide suggests eight specific steps for coalition development.

Elevation: A Community Health Practice Guide
(http://www.communityhealthresource.com/Cultivating_Community_Coalitions.doc) From Community Health Solutions, Inc., this guide outlines 10 steps for starting an effective community coalition and 15 strategies for sustaining a coalition.

Maintaining Effective Community Coalitions
(http://www.cchealth.org/groups/health_services/pdf/maintaining_effective_community_coalitions.pdf) Chuck McKetney and Julie Freestone. This report, from the Contra Costa County (CA) Health Services, provides useful, practical information on running efficient coalitions, evaluating coalition work, and knowing when to end a coalition.

Sustainability Planning Guide
(http://www.cdc.gov/nccdphp/dch/programs/healthycommunitiesprogram/pdf/sustainability_guide.pdf) A document from the Centers for Disease Control and Prevention to help coalitions develop a plan for sustainable, long-term impact.

Coalition Planning

Blueprint for Action: Developing Livable Communities for All Ages (http://www.livable.org/storage/documents/reports/AIP/blueprint4actionsinglepages.pdf) From the National Association of Area Agencies on Aging, Partners for Livable Communities, and the MetLife Foundation, this guide provides tools to build the collaborations needed to create livable communities for people of all ages. The resources at the end of the guide can be used to find the information most immediately relevant to your community's priorities and challenges.

The Built Environment Assessment Tool Manual (http://www.cdc.gov/nccdphp/dch/built-environment-assessment/) This manual explains the importance of understanding and measuring the built environment and provides a tool for doing so.

Centers for Disease Control and Prevention Evaluation Working Group (http://www.cdc.gov/eval/) This website highlights of a framework, steps, and standards for program evaluation. Links to additional resources are provided.

Complete Streets Laws and Ordinances (http://www.walkinginfo.org/library/details.cfm?id=3968) National Complete Streets Coalition of the Pedestrian and Bicycle Information Center offers sample policies, ordinances, and design manuals.

Designing & Building Healthy Places (http://www.cdc.gov/healthyplaces/default.htm) A Centers for Disease Control and Prevention initiative promoting healthy community design. The interaction between people and their environments, natural as well as human-made, continues to emerge as a major issue concerning public health.

Designed to Move (http://www.designedtomove.org/resources) Reports and research supporting the Designed to Move call-to-action.

Evaluation Tools and Resources (http://www.samhsa.gov/capt/tools-learning-resources/evaluation-tools-resources) Resources available to support planning and management, implementation and analysis of data and evaluation.

Promoting Health Equity: A resource to Help Communities Address Social Determinants of Health (http://www.cdc.gov/nccdphp/dch/programs/healthycommunitiesprogram/tools/pdf/SDOH-workbook.pdf) Workbook for public health practitioners and partners interested in addressing social determinants of health in order to promote health and achieve health equity.

SMART: BRFSS City and County Data
(http://www.cdc.gov/brfss/smart/smart_data.htm) The Selected Metropolitan/Micropolitan Area Risk Trends (SMART) project uses the Behavioral Risk Factor Surveillance System (BRFSS) to analyze the data of selected metropolitan and micropolitan statistical areas (MMSAs) with 500 or more respondents. BRFSS data can be used to identify emerging health problems, establish and track health objectives, and develop and evaluate public health policies and programs.

Smart Growth Principles
(http://smartgrowth.org/smart-growth-principles/) Suggested principles to building a community that supports physical activity and health.

Strategic Plan, Organizational Structure, and Training System. Chapter 8 Developing a Strategic Plan
(http://ctb.ku.edu/en/table-of-contents/structure/strategic-planning) This information covers seven issues: Overview of strategic planning; developing a vision and mission statement, creating objectives, developing strategies, developing an action plan, obtaining feedback from constituents, and identifying action steps to bring about community and systems change.

Sustainability Planning Guide
(http://www.cdc.gov/nccdphp/dch/programs/healthycommunitiesprogram/pdf/sustainability_guide.pdf) A document from the Centers for Disease Control and Prevention to help coalitions develop a plan for sustainable, long-term impact.

Sustainable Communities for All Ages
(http://www.sustainable.org/creating-community/building-partnerships/190-sustainable-communities-for-all-ages) This guide from Just Partners, Inc. includes planning worksheets, issues briefs, community checklists, assessment tools, communication tips, coalition building tools, and information on resource development.

YMCA Community Healthy Living Index
(http://www.ymca.net/communityhealthylivingindex/) This is a set of five community assessment tools that measure opportunities for physical activity and healthy eating in areas that impact an individual's daily life. These tools also facilitate discussion about how to improve the community environment to increase opportunities for healthy living.

Youth Risk Behavior Surveillance System
(http://www.cdc.gov/healthyyouth/yrbs/) The Youth Risk Behavior Surveillance System (YRBSS) monitors priority health-risk behaviors and the prevalence of obesity and asthma among youth and young adults. The YRBSS includes a national school-based survey conducted by the Centers for Disease Control and Prevention (CDC) and state, territorial, tribal, and local surveys conducted by state, territorial, and local education and health agencies and tribal governments.

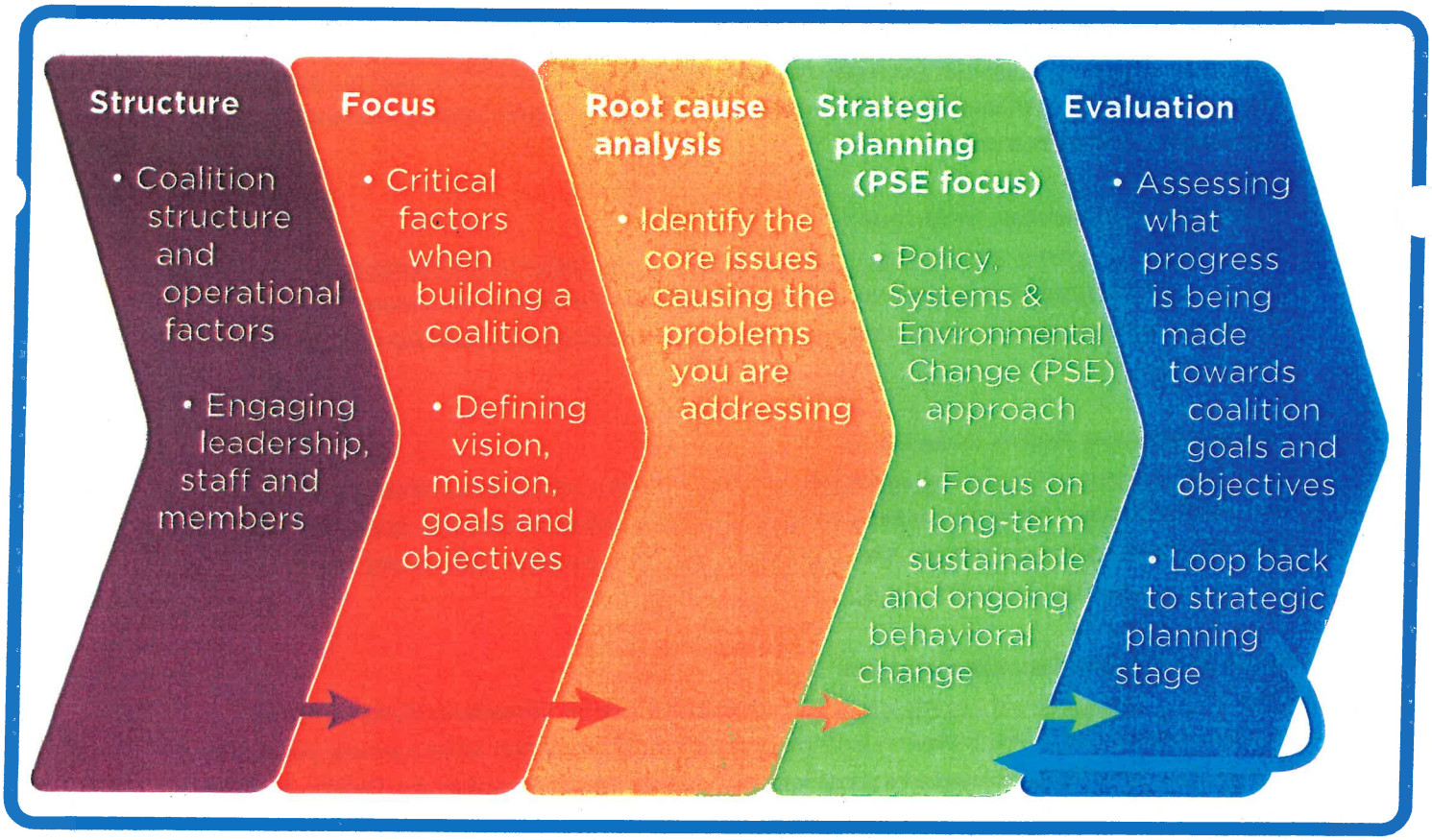
ACSM AMERICAN FITNESS INDEX®

COMMUNITY ACTION FRAMEWORK

Quantitative Data
- AFI Data Report
- Other pertinent data

Qualitative Data
- Key informant interviews
- Case studies
- Focus groups, observations

COALITION



www.americanfitnessindex.org

Anthem Foundation

Paramedic Chief Newsletter@EMS1.com

<bpalmer@fallbrookhealth.org>
bpalmer@fallbrookhealth.org

November 9, 2017 | View as webpage

PARAMEDIC CHIEF
Powered by: EMS1.com

In Partnership With
NATIONAL EMS MANAGEMENT ASSOCIATION

Download the Mobile App

Dear Paramedic Chief Subscriber,

In this month of Paramedic Chief eNews, our experts discuss the five causes of high injury rate for EMS providers. Fitch & Associates talk about evidence-based medicine solutions, and Page Wolfberg & Wirth go over the impact of EMS documentation on billing and reimbursement.

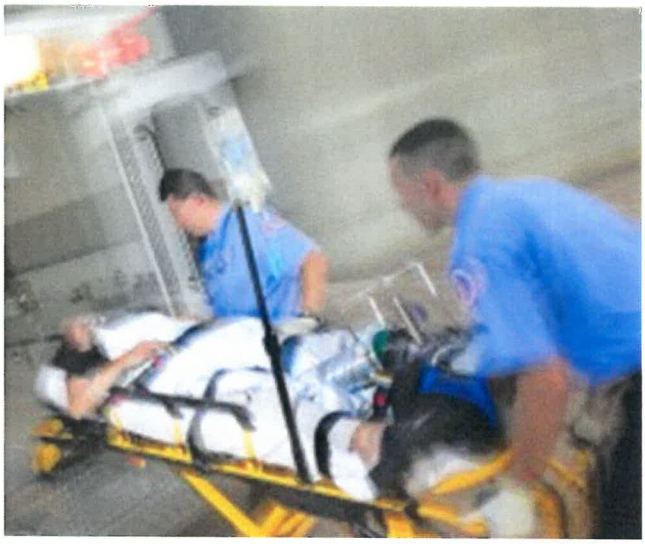
Lastly, Nathan Sweet gives you guidelines on handling underperforming employees and Mike Taigman lays out the seven challenges all health care leaders face.

— *The EMS1 Team*

FEATURED ARTICLE

3 steps to an injury-free EMS career

3 ways to reduce, prevent EMS-related back pain



5 causes of high injury rate in EMS

How Feedback Innovations Helps Your Agency Measure Patient Satisfaction

Get the data you need to improve services and get accreditation with the help of Feedback Innovations' patient satisfaction survey program.

Learn more

LEADERSHIP

MANAGEMENT

EMS and evidence-based medicine solutions

By Guillermo Fuentes, EMS1 Columnist
Challenging ALS and BLS standards of emergency medicine to improve patient outcomes and satisfaction.

No formula for success >

EMS documentation impact on billing and reimbursement

By Daniel J. Pedersen, EMS1 Columnist
Ambulance services cannot afford to feed the billing department incomplete, inaccurate or misrepresented information.

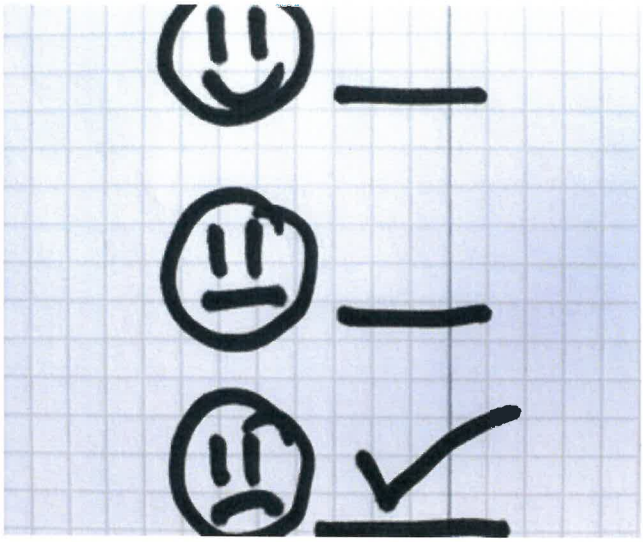
EMS billing rules >

NEMSMA

Handling underperforming employees in EMS

BETTER EMS PERFORMANCE

7 challenges faced by all health care leaders



By Nathan Sweet, EMS1 Columnist
Implement a corrective plan which fixes underlying performance issues rather than repeating the cycle of disciplinary action.

Follow up on corrective action >

By Mike Taigman, EMS1 Columnist
Health care spending, the silver tsunami, technology and epidemiology issues require innovative solutions.

Closing the gap >

PARAMEDIC CHIEF NEWS

- White House releases first responder fentanyl safety recommendations
- 2017 SAFECOM survey assesses state of emergency communications
- ALERT grant enables IAFC to continue rail safety program
- Canadian public safety group releases mental health self-screening tools

MORE PARAMEDIC CHIEF NEWS >

NOW ON LINKEDIN

Join the Conversation

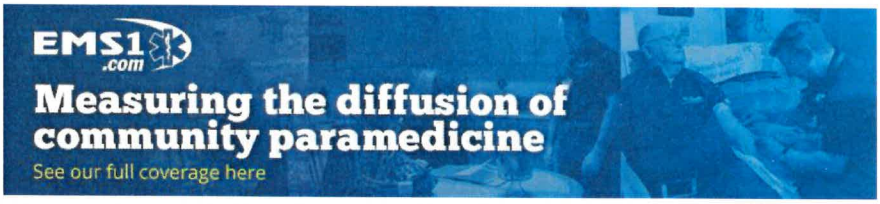
Does your organization work within the community to provide first aid training?

Write a comment...

Overcoming barriers to implementing community paramedicine programs in EMS

Research offers solutions to EMS providers' hesitation regarding additional duties, hours and changing perception CP programs may bring

Nov 2, 2017

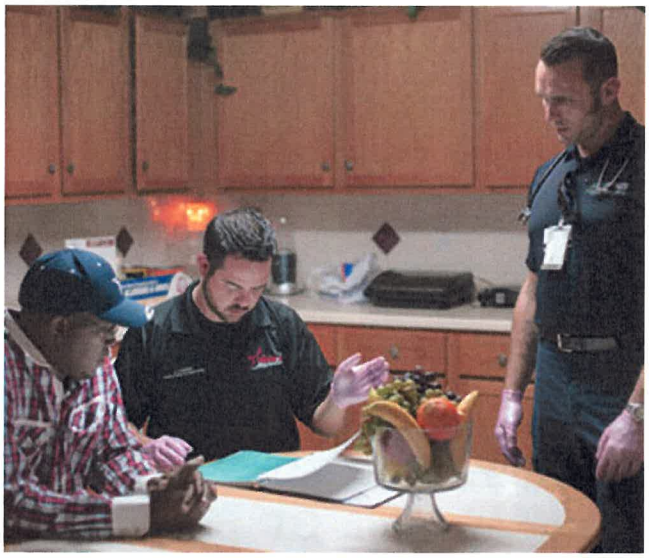


By Robert J. Steeps, MHS, RN, CEN, NRP, I/C

The number of patients presenting to emergency departments in the United States has been on the rise over the past three decades [1]. According to the Centers for Disease Control and Prevention, there was a 16.5-percent increase in total ED visits from 2007 to 2009, with 116.8 million to 136.1 million respectively [1].

This increase in annual ED visits has subsequently led to a 25-percent increase in the amount of time a patient has to wait to see a provider; 46.5 minutes to 58.1 minutes

between 2003 and 2009 [2]. These increased wait times can also hinder ambulance crews from returning to service.



One barrier discovered during the survey was the concern about time commitment for additional duties. (Photo/MedStar)

Emergency medical services professionals have begun to assuage this increased use of emergency services by developing a new model of care provided by community paramedics.

As the EMS profession begins to transition from a primarily reactive role toward one of prevention in the EMS 3.0 model, many services are beginning the process of developing and implementing their own CP programs. As EMS leaders begin this process, identification of barriers to successful implementation, such as acceptance from EMS professionals, can impact their success. A recent project conducted by a group of EMS researchers sought to examine EMS professionals' attitudes about – and willingness to participate in – CP programs [3].

COMMUNITY PARAMEDICINE SURVEY RESULTS

Results from the survey of EMS professionals indicated that female participants were nearly five times as likely to express a willingness to participate in CP programs than their male counterparts [3]. Their willingness may be influenced, in part, by the empathy levels of the participants. Several authors reported similar results when investigating the empathy levels of healthcare students queried about different medical conditions [4-8].

One barrier discovered during the survey was the concern about time commitment for additional duties. The results indicated that EMS professionals might be more willing to participate in a CP program if specific shifts or positions are developed for that purpose [3]. EMS leaders might have more success with implementation if their staff members are directly committed to CP duties instead of dual responsibilities.

While evaluating EMS professionals' willingness to perform CP duties, survey results

found no statistically significant differences with provider level, age, education or rural versus urban practice setting [3].

ATTITUDINAL COMMUNITY PARAMEDICINE IMPLEMENTATION BARRIERS

While there is a paucity of research evaluating EMS professionals' attitudes toward CP program participation, researchers have explored parallels with other public safety professions. Several published studies evaluating law enforcement officers' and firefighters' acceptance of the non-traditional role of providing patient care in the prehospital environment have been found in the literature. These reports can provide insight to EMS leaders implementing/expanding a CP program within their agencies.

A study investigating a LEO naloxone administration program found officers were concerned with the added responsibilities of the new program [9]. EMS professionals may also have concerns with the added responsibilities of CP programs with the new focus of assessing and managing chronic medical conditions in the patient's community instead of routine transports to the ED. Over one-fourth of our survey respondents felt that they became EMS professionals to respond to emergency calls and not to participate in a CP program [3]. These new responsibilities might be a participation barrier for some participants.

LEOs expressing a lack of comfort with the role change in a study of a law enforcement automated external defibrillator (AED) programs created an implementation challenge for their leaders [10,11]. It might also prove to be difficult for EMS leaders to recruit willing participants for their CP programs if their EMS professionals do not see these new duties as part of their role. Forty percent of the respondents to our survey did not think that their co-workers would be interested in performing CP duties [3]. A lack of co-worker willingness to participate in this new role change is a barrier to successful program implementation.

Other studies of LEO and firefighter AED programs found impediments to their implementation when participants were hesitant to participate related to a perception of new liabilities [12,13]. As CP programs focus on providing and arranging care in the community verses routinely transporting patients to the ED, barriers to successful program implementation may be created by EMS professionals' concerns for new liabilities.

Thankfully, a majority of our participants (74%) indicated that a CP program should be a

significant responsibility for EMS in their communities [3]. This may be an indication that liability concerns were not an issue for these professionals.

SERVING THE UNDERSERVED AND VULNERABLE

While several barriers have been found to the enactment of new programs in public safety professions, several items have been discovered in the literature to assist with implementation. LEOs and firefighters were more likely to express positive attitudes when they felt their new roles would benefit those they served in their community [10,12,14-16].

Eighty-four percent of our survey respondents felt that CP programs will help those with the greatest needs in their respective communities [3]. EMS professionals might be willing to participate in CP programs when they understand the benefits received by the underserved and vulnerable members of their response areas.

Another study found that chief officers who showed support for a LEO AED program had a majority of officers that also believed the program would be valuable to their community [12]. When EMS leaders express a high level of support of their CP programs, this may translate to the frontline providers as well. Three-fourths of our survey respondents felt that their leaders would support a CP program [3].

A majority of public safety professionals participating in a research study agreed that providing EMS-related activities improved the public's perception of their respective law enforcement agency or fire department and their members [12-14]. The additional services CP programs will provide to the community may also improve the public's perception of participating EMS agencies. In times of tighter budgets, community support is paramount to funding. Three-fourths of those responding to our survey believe that the community they serve would be in favor of having a CP program delivered by their agency [3].

EMBRACING NEW PATIENT CARE OPPORTUNITIES IN COMMUNITY PARAMEDICINE

LEOs and firefighters that personally experienced on-the-job impacts of EMS-related activities had positive attitudes toward new patient care roles [9,14,17]. Another study found that LEOs with less experience or no recent experience with overdose cases were resistant even toward naloxone training programs [17]. When EMS professionals can see the tangible benefits that CP programs can provide for their community, they may

have a more positive attitude toward implementation. Participants of our survey felt that nearly half of the patients they currently contact in the field could benefit from a CP program [3].

Another barrier found to implementing AED programs for public safety professionals has been negative attitudes that stemmed from a lack of education about the programs and their benefits [18]. Education provided about public health programs has shown an increase in LEOs' and firefighters' willingness to participate [12-14,17,18].

EMS professionals that are given education about the benefits of CP programs may also be more willing to participate in them. The majority of our survey respondents perceived that they currently have a good understanding of CP programs and that they would volunteer for additional education in order to become a CP [3].

Leaders of EMS agencies can use this information when making strategic plans for the implementation of a new CP program or the growth of a current one.

ACKNOWLEDGEMENTS

Special thanks to the coauthors of the CP attitudinal research project: Micheal W. Hubble, PhD, MBA, NRP; Denise A. Wilfong, PhD, NRP; and Daniel L. Bercher, PhD, NRP.

About the author

Robert J. Steeps has been in the emergency field for over two decades. While his career has spanned a Level I trauma center, fire-based EMS, helicopter EMS, hospital education and postsecondary education, his professional passion remains with prehospital care, education, research and the continued development of professionalism in EMS.

References

1. Tang N, Stein J, Hsia RY, et al. Trends and characteristics of US emergency department visits, 1997-2007. *JAMA*. 2010;304(6):664-670.

2. Hing E and Bhuiya F. Wait time for treatment in hospital emergency departments: 2009. *NCHS Data Brief*. 2012;102:1-7.

3. Steeps RJ, Wilfong DA, Hubble MW, Bercher DL. Emergency medical services professionals' attitudes about community paramedic programs. *West J Emerg Med.*

2017;18(4)630-639.

4. Williams B, Boyle M, Brightwell R, et al. An assessment of undergraduate paramedic students' empathy levels. *Int J Med Educ*. 2012;3:98-102.

5. Chen D, Lew R, Hershman W, et al. A cross-sectional measurement of medical student empathy. *J Gen Intern Med*. 2007;22(10):1434-1438.

6. Hojat M, Gonnella JS, Nasca TJ, et al. Physician empathy: Definition, components, measurement, and relationship to gender and specialty. *Am J Psychiatry*. 2002;159:1563-1569.

7. Boyle M, Williams B, Brown T, et al. Levels of empathy in undergraduate health science students. *Internet J Med Educ*. 2009;1(1):1-8.

8. Kliszcz J, Nowicka-Sauer K, Trzeciak B, et al. Empathy in health care providers-validation study of the Polish version of the Jefferson Scale of Empathy. *Adv Med Sci*. 2006;51:219-225.

9. Green TC, Zaller N, Palacios WR, et al. Law enforcement attitudes toward overdose prevention and response. *Drug Alcohol Depend*. 2013;113:677-684.

10. Husain S and Eisenberg M. Police AED programs: A systematic review and meta-analysis. *Resuscitation*. 2013;84:1184-1191.

11. Davis CS, Walley AY, Bridger CM. Lessons learned from the expansion of naloxone access in Massachusetts and North Carolina. *J Law Med Ethics*. 2015;43(s1):19-22.

12. Papson K and Mosesso VN. Ten years of police defibrillation: Program characteristics and personnel attitudes. *Prehosp Emerg Care*. 2005;9(2):186-190.

13. Davis CS, Carr D, Southwell JK, et al. Engaging law enforcement in overdose reversal initiative: Authorization and liability for naloxone administration. *Am J Public Health*. 2015;105(6):1530-1537.

14. Prina LD, White RD, Atkinson EJ. Automated external defibrillators and first responders: a satisfaction survey. *Resuscitation*. 2002;53:171-177.

15. Hawkins SC, Shapiro AH, Sever AE, et al. The role of law enforcement agencies in out-of-hospital emergency care. *Resuscitation*. 2007;72:386-393.

16. Elmqvist C, Brunt D, Fridlund B, et al. Being first on the scene of an accident-experiences of 'doing' prehospital emergency care. *Scan J Caring Sci*. 2010;24:266-273.

17. Groh WJ, Lowe MR, Overgaard AD, et al. Attitudes of law enforcement officers regarding automated external defibrillators. *Acad Emerg Med*. 2002;9(7):751-753.

18. Aldeen AZ, Hartman ND, Segura A, et al. Video self-instruction for police officers in cardiopulmonary resuscitation and automated external defibrillators. *Prehosp Disaster Med*. 2013;28(5):471-476.

19. Ray B, O'Donnell D, Kahre K. Police officer attitudes towards intranasal naloxone training. *Drug Alcohol Depend*. 2015;146:107-110.

Tags > Community Paramedicine • EMS Management • Leadership • Mobile Integrated Health Care • Paramedic Chief • Research

Study: Tenn. EMS agency must raise wages or become private

A compensation study found that Greene County lost 20 percent of its EMS providers since July 2016 and is only fully staffed 70 percent of the time

Yesterday at 10:12 AM

By EMS1 Staff

GREENE COUNTY, Tenn. — Researchers suggested that a county either raise EMS pay or let a private agency take over after conducting a study that found the EMS providers are paid significantly less than in surrounding areas.

Greeneville Sun reported that McGrath Human Resources Group conducted the compensation study, which found that paramedics are being paid around $3 less than the regional average for paramedics, and EMTs are being paid more than $2 less than the regional average.

"Not one of the Greene County EMS positions is within the acceptable market rate," the study said. "Therefore, not only does a paramedic start $3.18 less than the average market rate, the average salary in Greene County EMS of $10.35 for a paramedic is $3.41 less than the average paramedic makes in any of the other EMS agencies."

The study suggested raising the salaries up to the average rate, or get out of the business entirely.

"The salaries of the EMS personnel throughout the organization have not kept pace with

the external market," the study said. "The county needs to decide if it wants to maintain a high level of EMS presence to its citizens, or eliminate this service to a private provider."

Tags › Research • Salary

On Fire and EMS

with Sarah Calams, Associate Editor

How 4 community paramedicine programs are positively impacting health care

If you've seen one community paramedicine program, then you've seen one program; here's how successes from four different programs can be translated to new ones

Nov 12, 2017

An ever-popular phrase from Kelly Grayson is – "if you've seen one EMS agency, then you've seen one EMS agency."

The same can be said for community paramedicine programs.

When you talk to anybody that either has a community paramedicine program or is considering implementing one, you'll quickly realize that all programs are different because they're driven by a needs assessment.

Community paramedicine is a program that ultimately aims to use a paramedic in an expanded role to cover more ground and more needs. (Photo/FirstNet)

But at its base, community paramedicine is a program that ultimately aims to use a paramedic in an expanded role to cover more ground and more needs. The concept itself advocates an expanded use of the paramedic certification, but it's not just an excuse to expand what a paramedic does and doesn't do.

In fact, Chip J. Portz, assistant chief of EMS with Central Jackson County (Mo.) Fire Protection District, says his department's program, CJCares, which started in Sept. 2016, seeks to right-size the care that's given to patients.

NO EASY DEFINITION OF MOBILE INTEGRATED HEALTH CARE

CJCFPD employs five community health workers with non-medical certification for the resource management component of community paramedicine and has two certified community paramedics on staff. CJCares piloted for six months while data was collected to assure administration and fire board officials that the program was a good use of permanent money.

The program assists in clinical care coordination between patients and providers; and provides medication inventory and compliance; community resource navigation; and home safety checks, such as fall risk assessments and post-discharge education.

Portz, who has served as assistant chief of EMS for three years and with the CJCFPD for 26 years, said sometimes, how a community paramedicine program is intended to be used isn't how it ends up being utilized based on the community's needs at the time.

CJCares, an acronym that stands for Central Jackson County/Community Assessment

and Resource Evaluation Service, aims to reduce emergency call volume by applying a fire prevention model to an ever-increasing emergency call volume. CJCFPD's call volume has increased by more than 20 percent over the last four years, Portz explained.

"Our original goal was to reduce the usage of the emergency crews by targeting the superusers," Portz said.

CJCFPD first identifies the cause of frequent calls for assistance and then assists patients in finding non-emergency solutions. As a result, their interventions reduce the need for unplanned EMS trips to the hospital and increase the availability of emergency resources.

In order to track their success, Portz starts documenting at the first point of contact on a repeat patient.

"We start counting how many times we see them after we contact them," he said. "If it's been six months since we've contacted them, and we may have contacted them multiple times, I'll go back six months before and compare those two sets of numbers."

By using that method, CJCFPD has seen a decrease of 54.6 percent in superusers.

Portz says it's mostly not a matter of 911 abuse, but more so a matter of trying to identify what a patient needs and how to provide it.

"A good portion of our population that's calling frequently actually has chronic medical problems that aren't being solved by being transported to the emergency department," he said. "The reduction in frequent callers is our biggest documentable success."

The CJCares crew follows up with patients referred by EMS systems to help curb subsequent unplanned ambulance usage.

"We take references from a lot of different places, but some of the most important ones are the emergency crews that are out all the time on these calls," Portz said. "An emergency crew might have been to an address one time, but they may call and say that the patient looks like they have a chronic medical problem and that their needs aren't being met."

Portz clarified that even though a patient may not pop up on a frequent caller list, it doesn't mean that crews cannot identify those patients that may need more help.

"The interaction with the crews and the acceptance of the concept that maybe just taking someone to the emergency room isn't how we solve their problem is another hard-to-document success. It does demonstrate that we can sometimes do more than just transporting them to a hospital and dropping them off."

The biggest hurdle so far, Portz said, is that the CJCares program still doesn't have any reimbursement for its services.

"Some say that if you reduce your emergency calls and your transports, that as a transporting agency, you're actually reducing your revenue. And that's true, you can look at it that way. But by reducing those emergency transports, we're actually keeping the emergency resources available for true emergencies."

And right now, the program isn't marketed – it's mainly word of mouth.

"We do as many educational outreaches as we can, but one of the things that I insist on is that we go slowly. It frustrates the crew sometimes, but I still only have one crew to do all these things."

Portz reminds his team to focus on why the program was started – to reduce superusers and to make emergency resources more available.

"If we expand very quickly and don't put the brakes on, then we lose sight of why we started. I think the worst thing in the world we could do is promise something that we can't deliver.

PUTTING COMMUNITY HEALTH CARE FIRST

If anyone can explain the benefits of going slow when it comes to community paramedicine programs, it's Fire Chief Steve Orusa. Chief Orusa, who has been a paramedic for 20 years, has served as chief for Fishers (Ind.) Fire and Emergency Services since April 2011.

In 2016, the department started its community paramedicine program. The department has one community paramedic on duty at all times.

"We had a conversation with our EMS division and we quickly realized that it's everyone's responsibility to put the health and wellness of the community first," Chief Orusa said.

The community paramedicine program began with four parts – blood pressure screening, CPR training, home safety surveys and a hospital discharge program. The department, which partnered with Community Hospital North, followed up with congestive heart failure patients for a year and was able to reduce CHF patients' readmission rate by 15 percent.

As a result, the program has been able to capture some grant funding from hospitals to help defer costs. Furthermore, the department is looking to expand the community paramedicine program with a mental health component.

The impetus to incorporate mental health in community outreach came from a midnight ride-along with the police department. After his experience, Mayor Scott Fadness came to Chief Orusa and said, "'What are we doing for mental health in our community?' I said, 'You know what, we're not prepared.' So he started us on a journey over the past three years to get educated on mental health and really try to create a community that embraces mental health before the crisis occurs."

The department is working to embed a licensed clinical social worker in the community paramedicine program.

"For example, one of the things we were successful in doing this past year was improving the mental health program in our schools," Chief Orusa said. "If a kid had a mental health issue, and that kid was immediately detained at Community Hospital North, that child was discharged and the school never knew about it. The community paramedicine program never knew about it."

Chief Orusa identified that gap in the local mental health and wellness system. Since then, the program has hired a full-time mental health coordinator and was able to hire mental health counselors to be in every school starting in January.

"At the hospital, parents can sign a release, so now the schools can get the kids services that they need and the community paramedicine program can follow-up at home with services as well. We have a continuum of care for that child's health and wellbeing.

where before we had breaks in the chain."

The department is also working on a program for adults.

"We realize that it's going to be a marathon, not a sprint. We have a lot of things in play. It starts at the top – we can want to make progress and get better, but if we don't have the resources and leadership support, then it doesn't happen and we become frustrated," Chief Orusa related.

PARAMEDICS CAN REDIRECT CARE

Kurt Krumperman, executive director with Albuquerque (N.M.) Ambulance Service, also prefers a community paramedicine program that grows slowly.

"It doesn't mean going 100 mph is a bad way to go, but it has a lot of risks," Krumperman said.

Krumperman, who has been with AAS for 6.5 years, has been involved in EMS since 1982. He spent most of his career in Syracuse, New York, where he was first exposed to paramedics playing a role in taking people to the right level of care.

"We had a snowstorm of 48 inches in less than 24 hours, and suddenly the idea was to take patients to the closest urgent care center rather than the ED. The idea of having paramedics redirect patients seemed to be an acceptable concept during a snowstorm. That's what got us started looking at the issue of the role paramedics play in determining what the right level of care is."

AAS' community paramedicine program started three years ago and it has four full-time community paramedics and one half-time community paramedic.

The department obtains a list of patients who frequently go to the ED from insurance companies. Representatives visit the patients and educate them on the difference between the ED, urgent care and primary care. The department also visits patients who are at high risk for readmission after discharge from the ED or a hospital.

"The program has been amazingly successful. We've reduced the frequent users' utilization of the ED by 70 percent," Krumperman reported.

Sometimes, crews find out during visits that patients really are doing poorly.

"There have been a few times that we've called 911 for an ambulance to pick them up and take them to a hospital because they weren't doing well," Krumperman said. "But it's with a definitive diagnosis, not a question. We know they aren't doing well because of our assessment."

AAS has maintained its community paramedicine program by developing relationships with both its hospital system and insurance companies.

"We've been able to do this in collaboration with them and with reimbursement from them. We haven't relied on grants at all. We are self-sustaining financially," Krumperman said.

AAS currently has contracts with three insurance companies and Krumperman said they're hoping to add a fourth in the near future.

And even though funding hasn't been a barrier, AAS has had difficulty with redirecting 911 patients away from the emergency department.

"Initially, we had a pilot project where we were redirecting low acuity callers into the 911 system to a nurse advice line, but that didn't work so well. We might try it again, but not in the near future."

AAS is currently working on creating a project where certain low acuity patients, if they qualify and are willing, will participate in a telemedicine consult with a physician who can redirect them to urgent care if they meet the criteria. Krumperman said AAS will most likely pilot the project in early 2018.

"We believe our program has been very successful to date. The main successes are people that are able to get the care they need without having to go into the hospital."

ESTABLISHING PILOT PROGRAM PARAMETERS

While all community paramedicine programs differ in goals, successes and roadblocks, Daniel Gerard's community paramedicine pilot program at Alameda (Calif.) City Fire Department has its own unique characteristics, accomplishments and obstacles.

Gerard, the EMS coordinator for the department, was a paramedic and EMT for 20

years in northern New Jersey. He has also been a professor of emergency medicine at George Washington University, orchestrated the ambulance redesign for Hong Kong Fire Services Department and worked with Pan American Health Organization in the Bahamas. He has been with ACFD for five years, went to the city of Oakland for six, and returned to ACFD to help run the community paramedicine pilot program.

The pilot program, which began in 2015, includes eight community paramedics. However, only two are in the office at the same time; they come in for three- to six-month rotations. They report all of their program data to the University of California, San Francisco.

The pilot is currently limited to the frequent user and the post-discharge Medicare patients. The pilot focuses on the patients who have a higher probability of readmission 30 days post discharge.

"Once we're past the pilot phase, we will be providing all of the services that the state of California will empower us with," Gerard said. "It's going to be based on community needs."

So far, the pilot program has been able to reduce hospital readmissions for the primary Medicare diagnosis by 75 percent; for the frequent users, they've reduced their admission to the hospital by 50 percent.

"The frequent user population is more challenging because they move around from community to community," Gerard said. "Because we're a pilot project, there's no way to pass those people off by giving another community a head's up."

Once the department moves from the pilot phase to a permanent program, Gerard said it will be able to come up with a better methodology to track those patients to make sure their needs are met wherever they live.

In the meantime, Gerard said the department is focusing on ways to fund to program.

"Every year, we have to scramble to put together the money to continue the pilot. We get measure money from the county, our city puts some money in and the EMS agency puts some money in. Getting everyone together on who's going to provide what dollar amount can be difficult."

Another issue they've run into – mainly because they're a pilot program – is having patients referred to the department that fall outside the boundaries of the pilot.

"These are vulnerable populations, but they may not meet the parameters of the pilot that we have set up. We made a commitment early on to try and work with these people the best that we could."

In one instance, a disabled man, who had a fire in his home, was in the hospital less than a day but needed help finding housing and food.

"All of his things were destroyed. We worked with him for a 48 to 72-hour period, where normally he would have been referred to the Red Cross and he would have had very limited housing options. There really wasn't a lot of support for him. We try to work with people the best that we can – even though they technically fall outside the pilot's parameters."

The other issue that the pilot program has encountered is coordination with other hospitals and medical facilities.

"When one of our patients ends up in Kaiser or Alta Bates Summit, there's a bit of a hurdle trying to work with them because they don't understand our role. But that's just evolved over time by building those relationships," Gerard noted.

Because Alameda is bound by the lines of geography, when patients leave the island and an incident occurs, sometimes that information doesn't get back to the department in a timely manner.

"Our community paramedics have to remain diligent. They work hard and work the program really well. They're well-known with the social workers at the different hospitals."

PROVIDING KEYS FOR SUCCESS

At Alameda Hospital, Gerard said the social workers internally promoted the pilot program, which has contributed to its overall success. However, outside of the hospital, community paramedics have to make those relationships on their own.

"They really care about the patients and they want to make sure they get the care and

the service that they need."

Gerard, reflecting on his favorite success story, said one community paramedic's desire to help his patient above and beyond the call of duty stood out the most. "We had an elderly female, who had CHF and diabetes, and she didn't have a lot of family support," he explained. "She was really at risk."

Community paramedic Patrick Corder worked diligently with the woman to get her the support that she needed.

"It was everything from Meals on Wheels, to get her back and forth to the doctor's office, he put her into a community group so that she could get active and wouldn't be in her house all the time."

And even after she successfully completed the program, Corder still worked with her.

"She had his phone number and would call him up once in a while and he continued to work with her to maintain that success. She was successful because we gave her all the tools she needed."

Corder also went with her to a doctor appointment in San Francisco to be an advocate for her and explain her issues to her primary care physician.

"He didn't say, 'OK, you're done' after she graduated the program. He continued to work with her. We're really proud of the program. The success of the program is wholly due to the community paramedics that we have."

The common link that binds all four community paramedicine programs together is the idea of a service that meets the needs of the community to ensure the people who need emergency services have them readily available. Each community has its own distinctive rhythm – including a variety of health care needs for people who call 911.

Services the programs provide, like mental health care for children and adults, and long-term care for people with chronic illness, are not readily available or provided by other emergency medical professionals. The programs may run differently, but slow and steady work will win the race.

About the author

Sarah Calams is the Associate Editor of EMS1. In addition to her regular editing duties, Sarah delves deep into the people and issues that make up the EMS industry to bring insights and lessons learned to EMS providers everywhere. She can be reached at Sarah.Calams@ems1.com.

Tags › Community Paramedicine • EMS Management • Leadership • Mobile Integrated Health Care • Paramedic Chief

San Diego exploring new emergency response model amid ambulance crisis

Ambulance (Comstock / Getty Images/Comstock Images)

By **David Garrick**

NOVEMBER 5, 2017, 5:00 AM | SAN DIEGO

A crisis in ambulance costs is prompting San Diego officials to seek an alternative model where non-emergency patients could take a taxi or Uber to a clinic or urgent care facility and get reimbursed by private insurers, Medicare or Medi-Cal.

The goal is stemming a sharp rise in ambulance costs for the city and patients by discouraging rampant abuse of the 9-1-1 system, where 30 percent of callers don't end up actually needing an ambulance ride to an emergency room.

government officials and the insurance industry to
al of a 24 percent spike in the cost of an ambulance

RELATED: Ambulance fees could spike in San Diego amid response time concerns

The spike will immediately affect only a small number of patients because many have Medicare or Medi-Cal, or have private insurance where ambulance fees are already higher than their annual deductible.

But some insurers may refuse to pay the higher rates, and industry experts say the spike will eventually prompt insurance companies to increase premiums and deductibles, making health insurance more expensive for everyone.

That's why an alternative model is needed to stem a 22 percent increase in 9-1-1 calls for ambulances in the last four years in San Diego, said Stewart Gary of Citygate Associates, a consulting firm hired by the city to analyze the issue.

Many non-emergency patients, especially those with lower incomes, would use another form of transportation than an ambulance if their insurer or their government health care provider told them it would be covered, he said.

But private insurers, Medicare and Medical cover ambulance rides only, not trips in a taxi or ride-sharing service like Uber or Lyft.

The new approach wouldn't eliminate high-frequency abusers of the 9-1-1 system, such as homeless people with health problems that prompt hundreds of calls to 9-1-1 each year from passers-by who see them and want to help.

But Gary said a much larger slice of the increase in ambulance calls are people who aren't sure what's wrong with them and don't know what to do about it.

"In health care in America today, tragically 9-1-1 emergency medical services is the health care of last, first and only resort for many of your populations," he said.

Anthem Health Insurance recently announced it will start covering such alternative modes of transportation in 2018, a move Gary said he hopes other insurance companies follow.

The city's ambulance provider, American Medical Response, hopes to work with the city, county, private insurers, Medicare and Medi-Cal to copy that approach in San Diego and make the region a model.

Meanwhile, San Diego city officials plan to study the city's call triage process to reduce the number of ambulance trips by better weeding out 9-1-1 calls where an ambulance isn't necessary.

"It's going to require going through each one of those determinants and really looking at what type of patient care is going to be required," said Chief Brian Fennessy of the Fire-Rescue Department, adding that changes must be made to the existing system. "It's just not sustainable."

Fennessy, Gary and American Medical Response told the City Council last week that the 24 percent spike in ambulance fees — 9 percent immediately and 15 percent on Jan. 1 – is warranted based on AMR facing increased costs.

San Diego's fees for ambulance responses including advanced life support services such as intubation or chest decompression will climb from $2,154 to $2,671.

Fees for less aggressive instances of advanced life support will climb from $1,933 to $2,396, and fees for basic life support, which might only include an assessment, will rise from $1,631 to $2,022.

The rate increase would push San Diego near the top of communities below state Route 56 for ambulance fees, according to a survey conducted by the city.

But AMR officials said the increase will affect a small number of patients because 27 percent of San Diego ambulance patients in 2017 were covered by Medicare, and 30 percent were covered by Medi-Cal.

Medicare pays a flat rate of $434 for ambulance rides and Medi-Cal only pays $118.

AMR also says that 20 percent of its patients don't pay anything because they have no insurance and can't afford to pay.

And 13.2 percent of patients have commercial insurance, where annual deductibles are typically lower than what the city already charges for an ambulance ride.

But health care industry experts said it would be unwise to conclude those patients won't pay anything long term.

Some insurers might simply refuse to pay the higher fees, Gary said.

An AMR spokeswoman said the company is ready for that.

"When they deny coverage or short pay, we work with the patient and appeal to the insurance company," said the spokeswoman, Madeleine Baudoin. "Sometimes the insurance company will agree to pay the full charges. If not, the patient will be responsible for the balance."

But she said a more likely scenario is insurance plans increasing premiums and deductibles because of AMR's fee spike, and industry experts agree.

"There's no free lunch in health care," said Kristof Stremikis, head of market analysis for the California Health Care Foundation. "Someone's got to pay down the line and those health insurance companies are going to recoup those extra charges, probably by raising premiums. There's no 'we're going to charge the insurance companies and it won't hurt consumers.'"

While it might seem insurers would risk losing customers by raising premiums and deductibles, Stremikis said that's not necessarily true because patients and employers have limited choices in the market.

"In a normal market, when you raise prices people are less likely to purchase the service," he said. "But when it comes to health care, the normal rules of markets and consumer behavior don't always hold."

In exchange for raising fees, AMR agreed to let its ambulance contract with the city expire one year early, in 2019.

City officials say they plan to release a request for proposals next summer for a new ambulance contract, either with AMR or another provider.

david.garrick@sduniontribune.com (619) 269-8906 Twitter:@UTDavidGarrick

This article is related to: Health Insurance, Healthcare Providers, Hospitals and Clinics, Medicare

MedStar partners with Lyft for transport of low-priority patients

Officials said Lyft drivers will not be expected to perform any medical procedures

Apr 10, 2017

By EMS1 Staff

FORT WORTH, Texas — MedStar Mobile Healthcare has partnered with rideshare company Lyft to help transport low-priority patients.

NBC DFW reported that MedStar and 14 surrounding communities will use a triage nurse to make a decision about the type of care required for a patient calling 911. MedStar triage nurses will recommend a Lyft if patients do not require an ambulance.

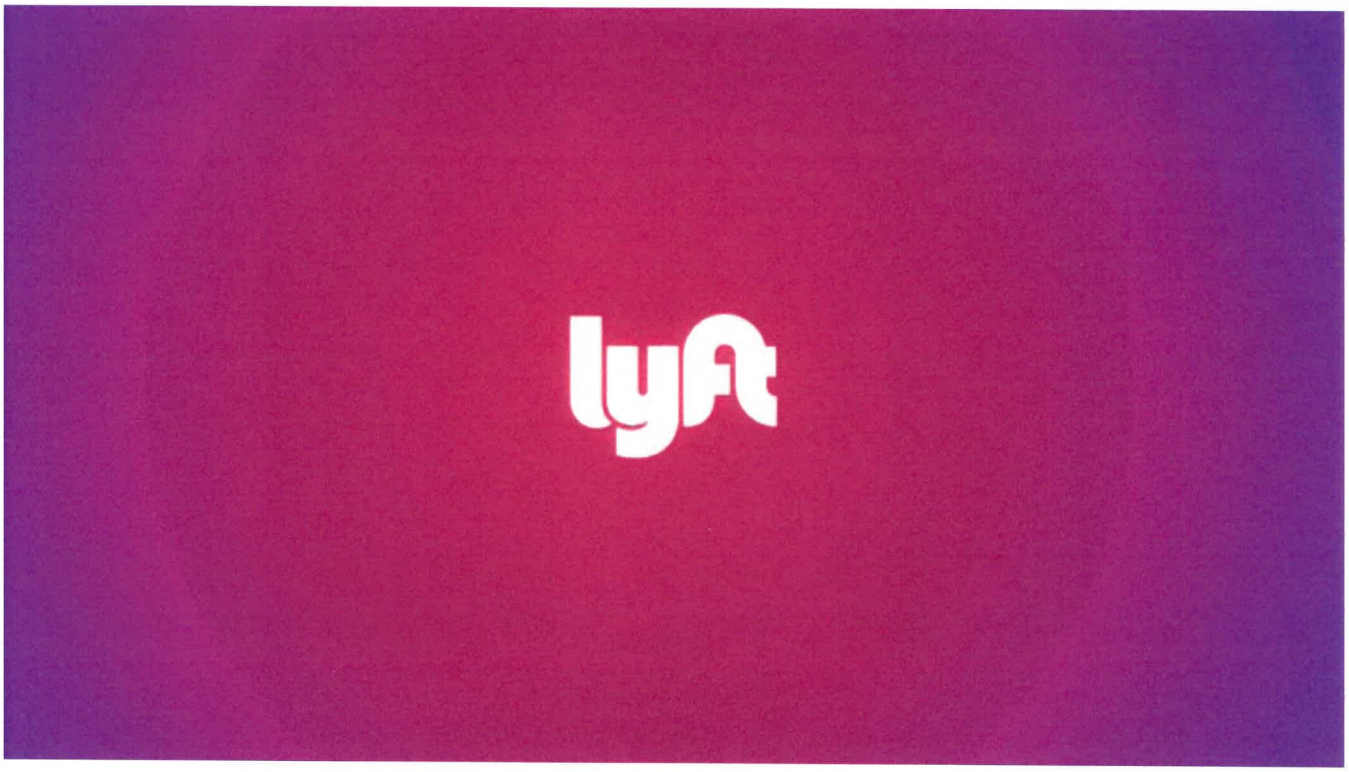
"The partnership between MedStar and Lyft here in Fort Worth we believe is unique," MedStar spokesman Matt Zavadsky said. "We've not heard about it anywhere else in the country."

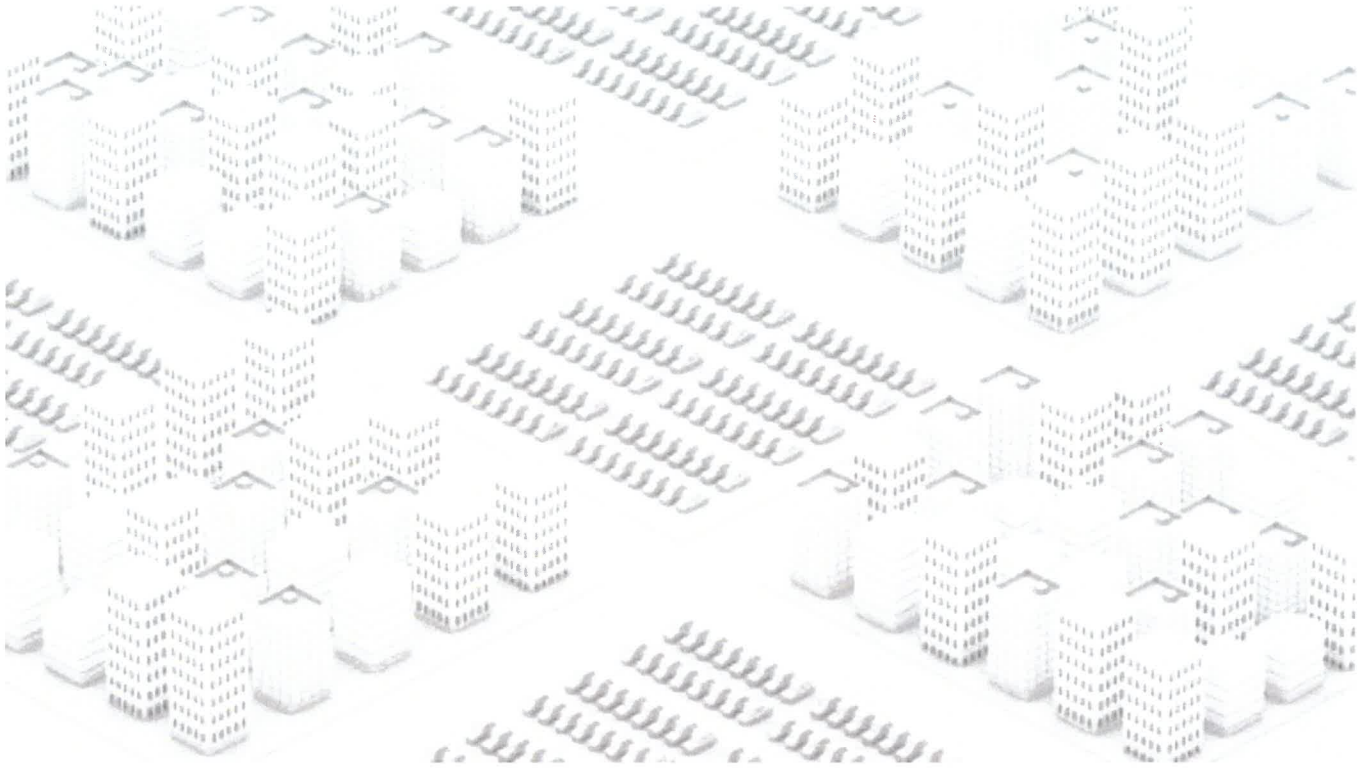
The cost incurred from dispatching an ambulance, according to MedStar data, is $450; a Lyft bill for 38 rides was $429.97 for one month.

Lyft drivers aren't aware that their passenger is en route to a hospital until they arrive for pick-up.

"You see so many different people, so many different things and you hear so many stories it's possible [the trip to the hospital] might not even be the craziest thing they do that day," Lyft Dallas-Fort Worth general manager Aaron Fox said.

Fox said the drivers aren't expected to perform any medical procedures.


lyft




lyft

Anthem's CareMore & Lyft

CareMore

- Medicare Advantage Plan
- Health plan focused on personalized care
- Provide Transportation to medical appointments

Pilot Results

- 30% Reduction in wait times
- 32% Cost Savings
- 80% Satisfaction Rate

CAREMORE
It's what we do.™

BlueCross BlueShield

Sutter Health & Lyft

CPMC

- Replace existing taxi vouchers
- 6 month pilot to compare results
- ER discharges

Pilot Results

- 25% Reduction in costs
- 70% Reduction in wait times
- 25% increase in net promoter score

El Camino Hospital & Lyft

Road Runners

- Transportation program for seniors
- Supplement volunteer pool of drivers
- Transportation beyond medical

Pilot Results

- 25% increase in rides offered
- Elimination of wait times
- High customer satisfaction
- Significant cost savings

Healthcare Partners

AMR

ASCENSION

CAREMORE

HCA
Hospital Corporation of America

LogistiCare

BROOKDALE SENIOR LIVING

NMN

Sutter Health

alc
AMERICAN LOGISTICS COMPANY

El Camino Hospital
THE HOSPITAL OF SILICON VALLEY

greatcall

BlueCross BlueShield

and many more...

Case Studies

Lyft Ride Types

- **Line:** Carpool
- **Lyft:** Traditional 4 seat sedan
- **Plus:** 6 seat vehicle (van, SUV, etc)
- **Access:** Wheelchair accessible vehicle
- **Car Seat:** Car seat vehicles
- **Premier:** High end vehicle with four seats
- **Lux:** Premium black car service
- **Lux SUV:** Premium black SUV service

Lyft Trust & Safety Commitment

DMV & Background Checks

Critical Response Line

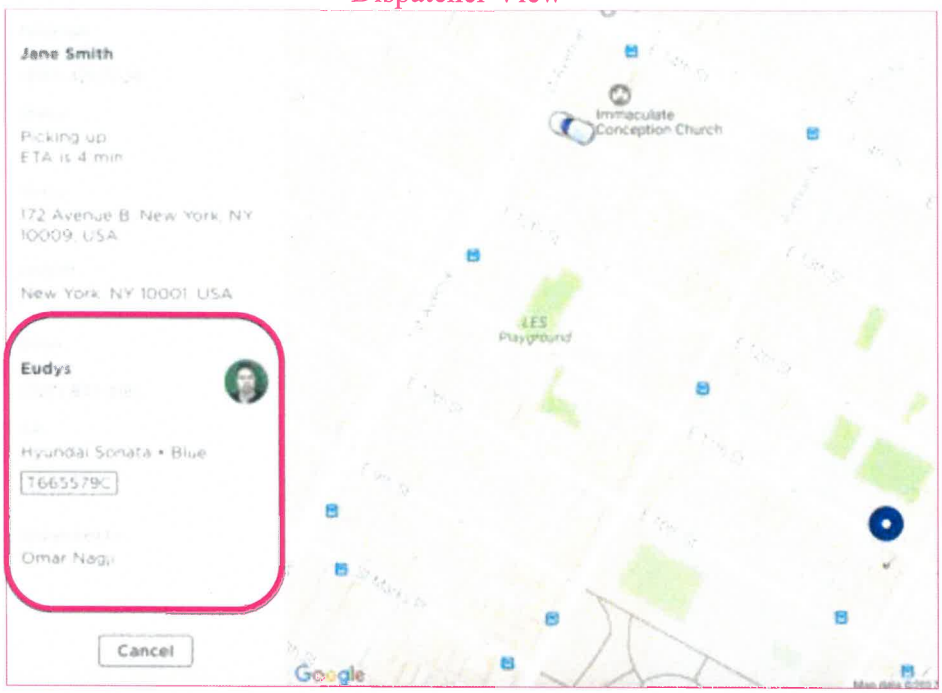
Vehicle Inspections

$1M Insurance Protection

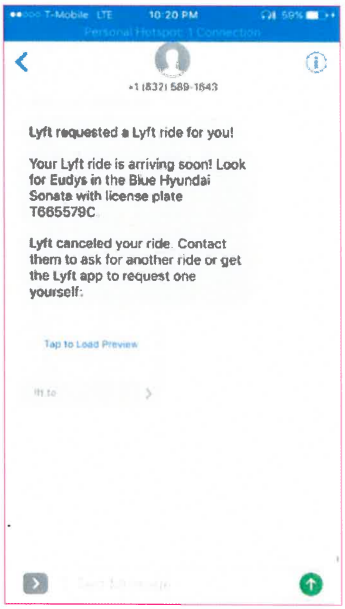
Two-way Ratings

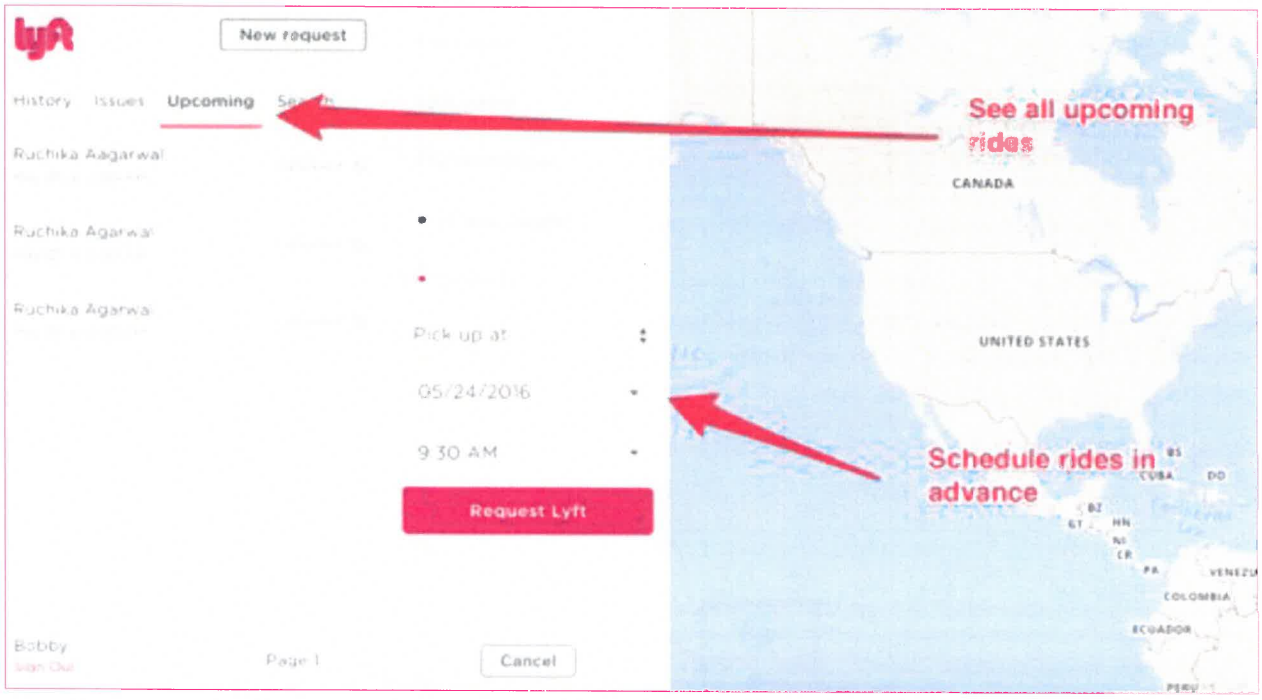
Zero Tolerance Drug & Alcohol Policy

Dispatcher View

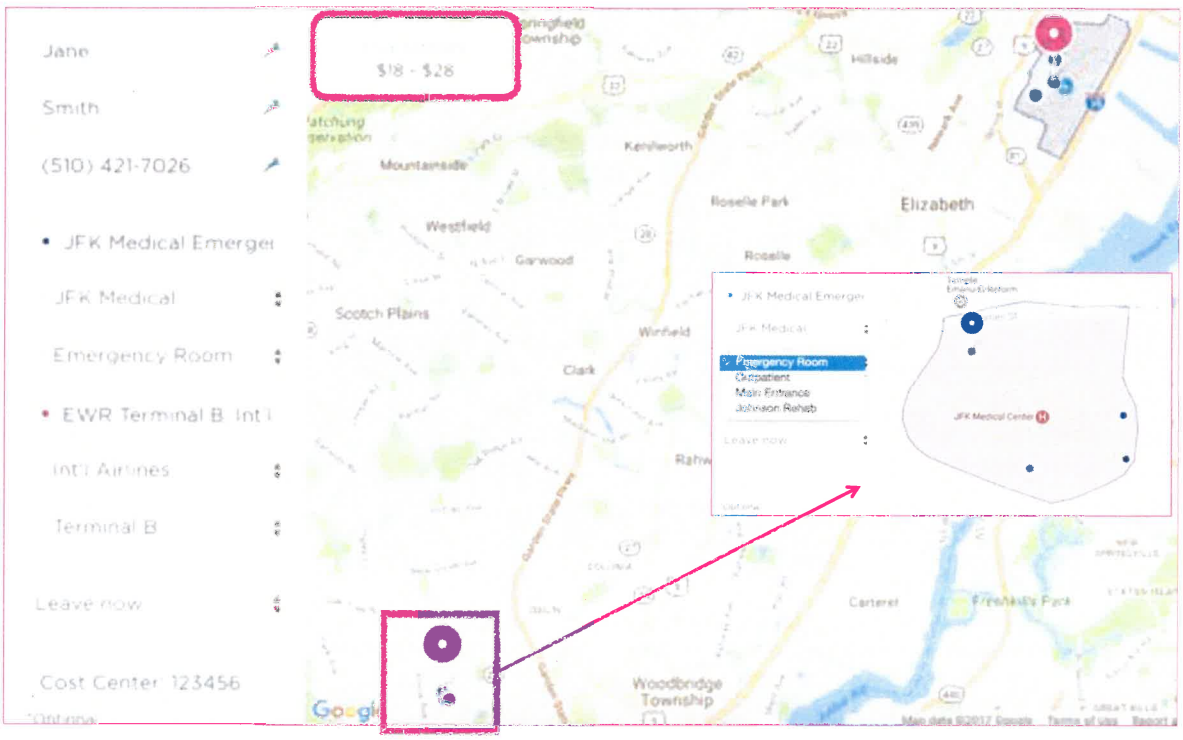


Patient View





Healthcare Solution



Patient Flow	Population Health
• ER & Unity Discharge Planning • Increased Patient Satisfaction • Increased Bed utilization • Reduce cab voucher spend • Safe discharges	• Increase access to care • focus on preventative care • reduce re-admissions & catastrophic events • reduce cancellations and missed appointments
Clinician Transportation	**Clinical Trials**
• Increase access to care • Reduce challenges with parking and inter-campus transportation • Increase quality of care in rural and outlying areas • Improve staff satisfaction	• Expand Population Size • Enhance Patient Experience • Increase outcome tracking • Reduce Administrative Burden

Anti-Kickback Regulations

OIG issued updated guidance this year that allows for transportation

- **Established patient of the medical system**
- **Need for medical treatment**
- **Lack of reliable transportation**
- **Transportation to and from the appointment**
- **< 25 miles urban & < 50 miles rural**

Clinical Trials

- Expand population size
- Enhance patient experience
- Reduce administrative burden
- Accelerate the speed of trials and bring new drugs to market

Health Systems

- Improve the quality of care
- Patients don't wait an emergency to seek medical care
- Patients have to way home after an hospital visit
- Improve the patient experience
- 50% of Healthcare costs are on 5% of the population

Medicaid & Medicare

- Increase access to care
- Lower ETA's & grievances
- Lower cost
- Increase consistency

- 30% of medicaid appointments are missed
- 40% of missed appointments are due to lack of

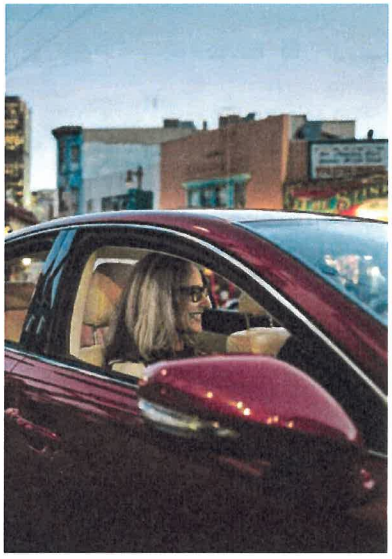
Senior Care

- Increased Independence
- Stay active & reduce isolation
- Transportation for caregivers & clients
- Decrease missed appointments

Giving Healthcare a lyft
Solving Transportation

Healthcare & Lyft

3.6 Million People miss or delay medical appointments due to a lack of transportation



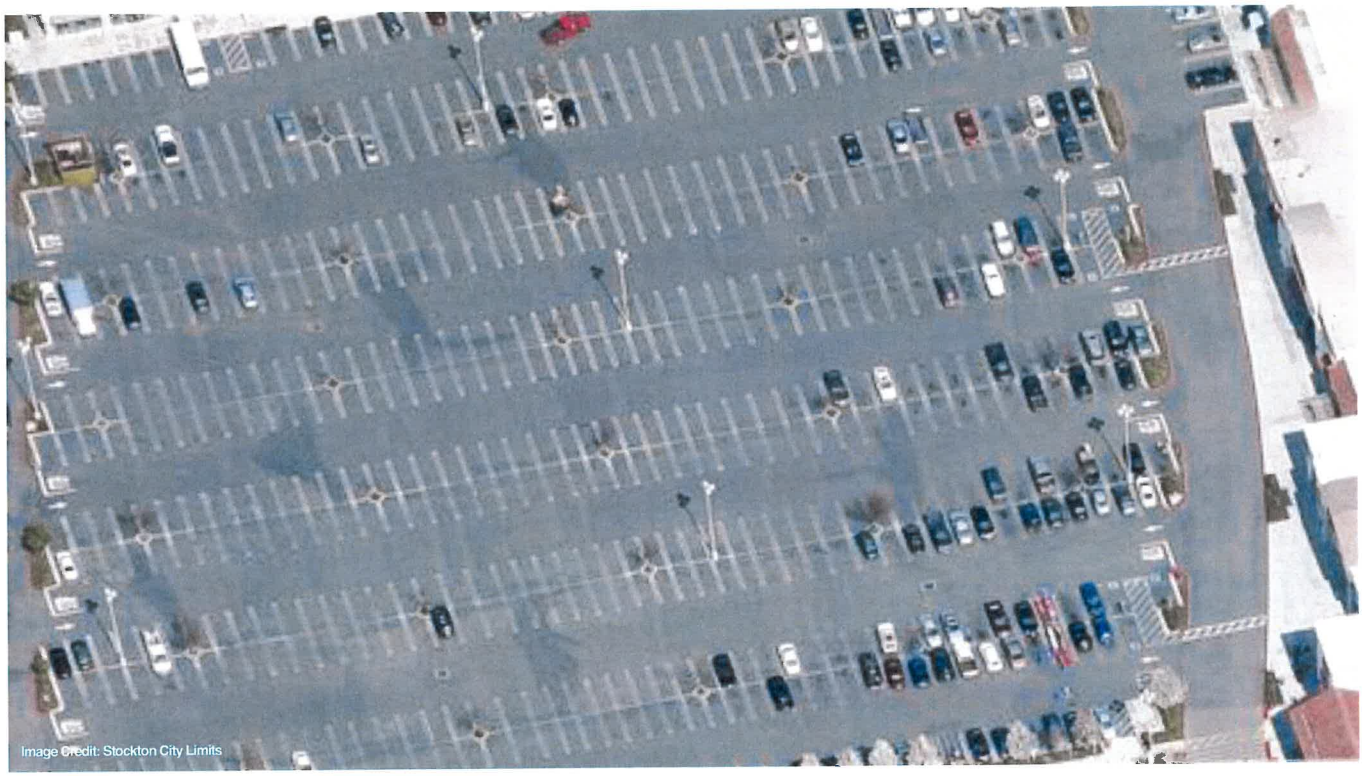
The High Line, NYC

Image Credit: Timeout

Octavia Street, SF

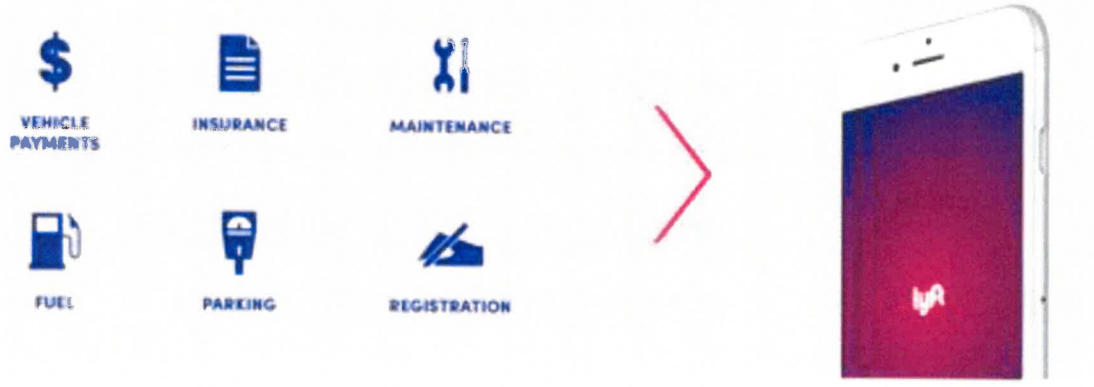
Image Credit: Reporting SF

Cities re-designed for people

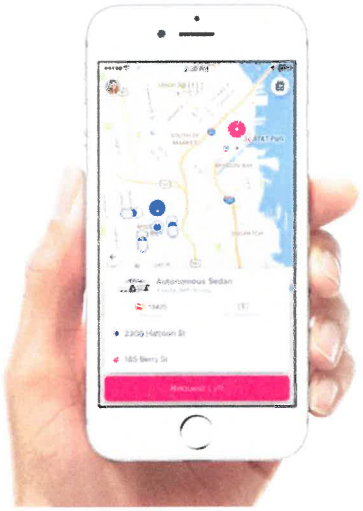


By 2025, private car ownership will all-but end in major U.S. cities.

THE ULTIMATE SUBSCRIPTION



Over 30% of 16-24 year olds don't have a drivers license

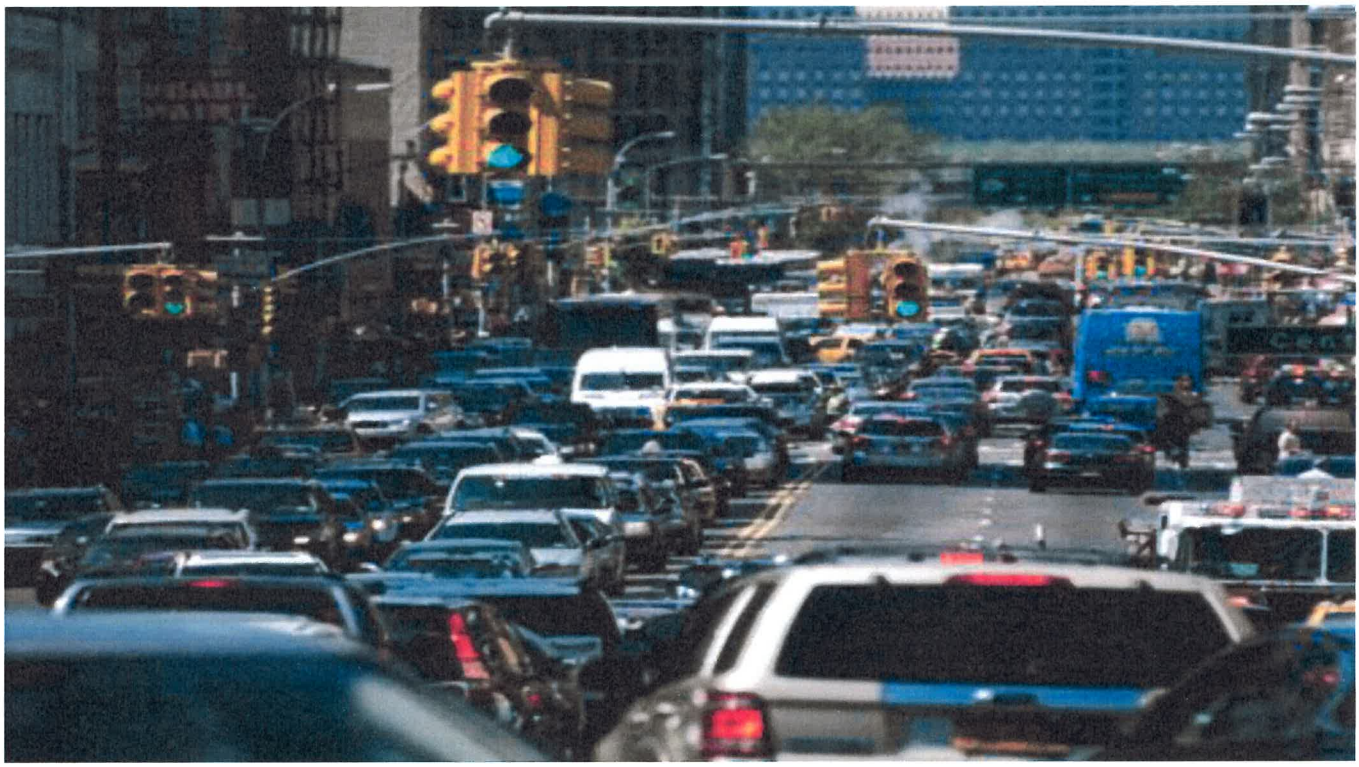


Within five years a fully autonomous fleet of cars will provide the majority of Lyft rides across the country

The Third Transportation Revolution

Ride Sharing Transportation & Autonomous vehicle fleets


Image Credit: California Historical Society Collection, USC Libraries




M
B
R
A
NOVELTIES


Image Credit: WTTW


Image Credit: Ally on Cars


Image Credit: Water Power Associates

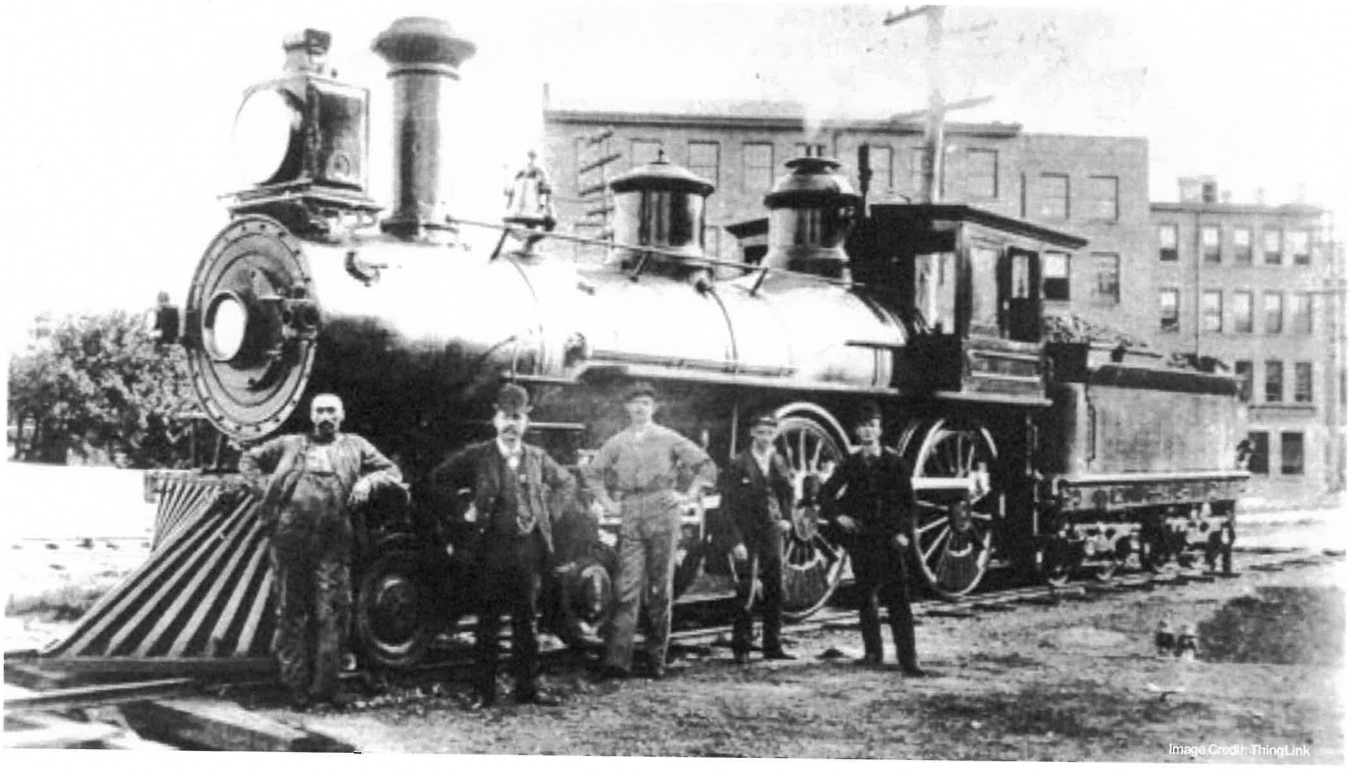
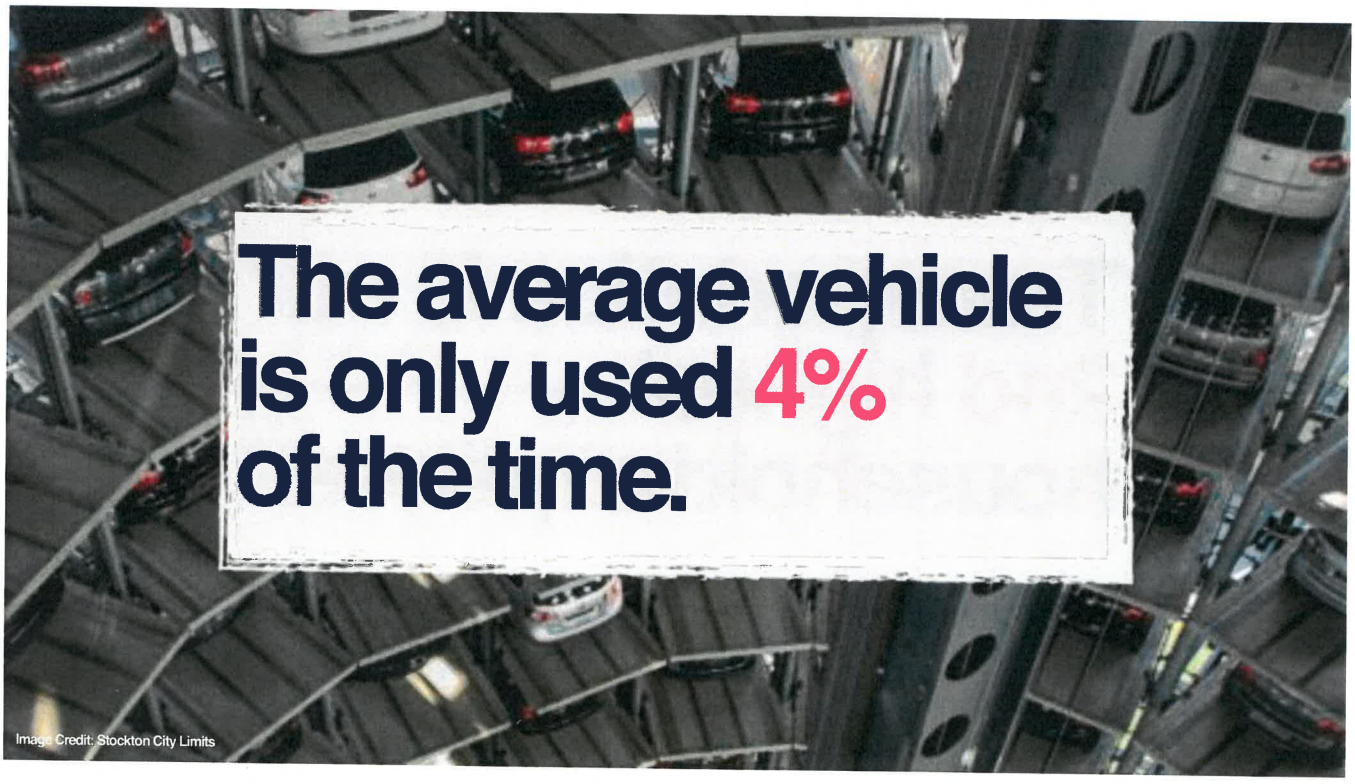
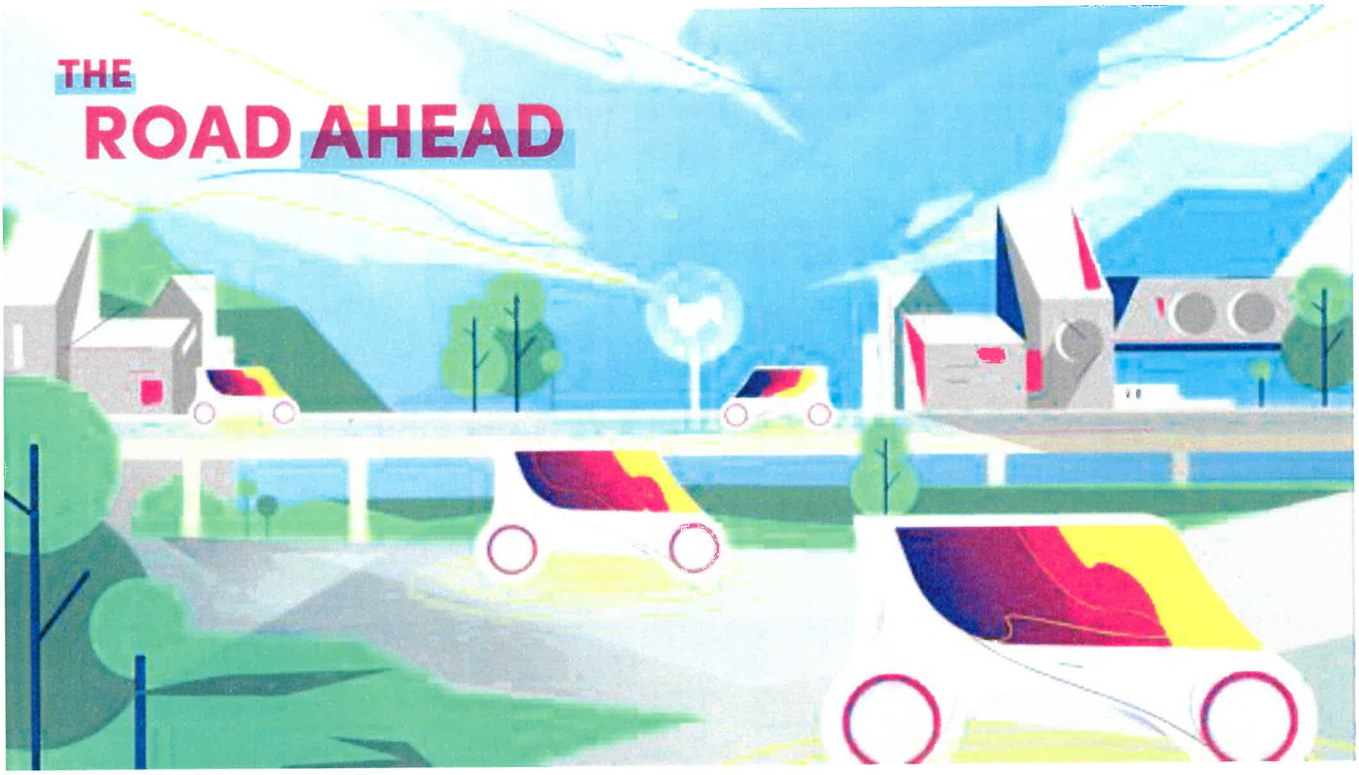


Image Credit: ThingLink

The Third Transportation Revolution

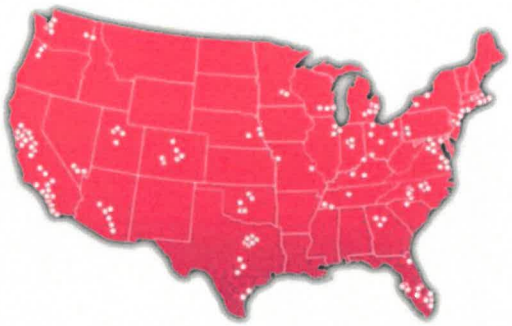

Americans spend
30 billion
hours commuting
per year.


The average vehicle
is only used 4%
of the time.
Image Credit: Stockton City Limits



Transportation is our 2nd highest household expense.

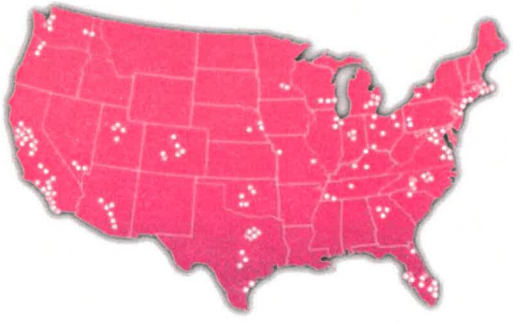
350 cities across the US
2017



94% of the American Population

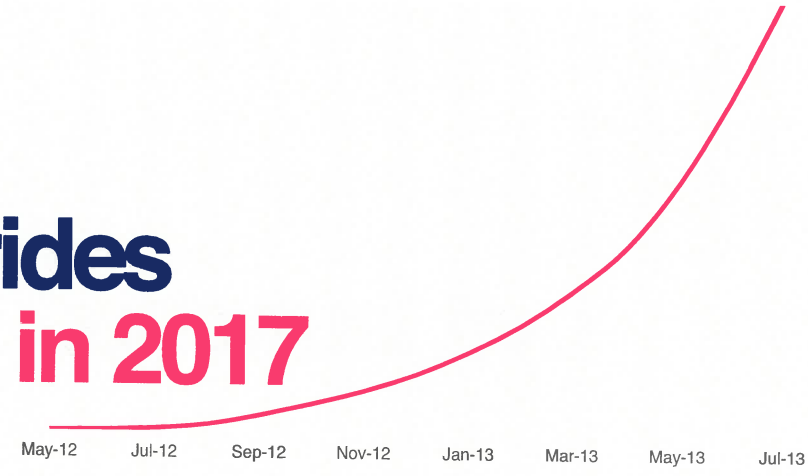
Improve people's lives with the world's best transportation

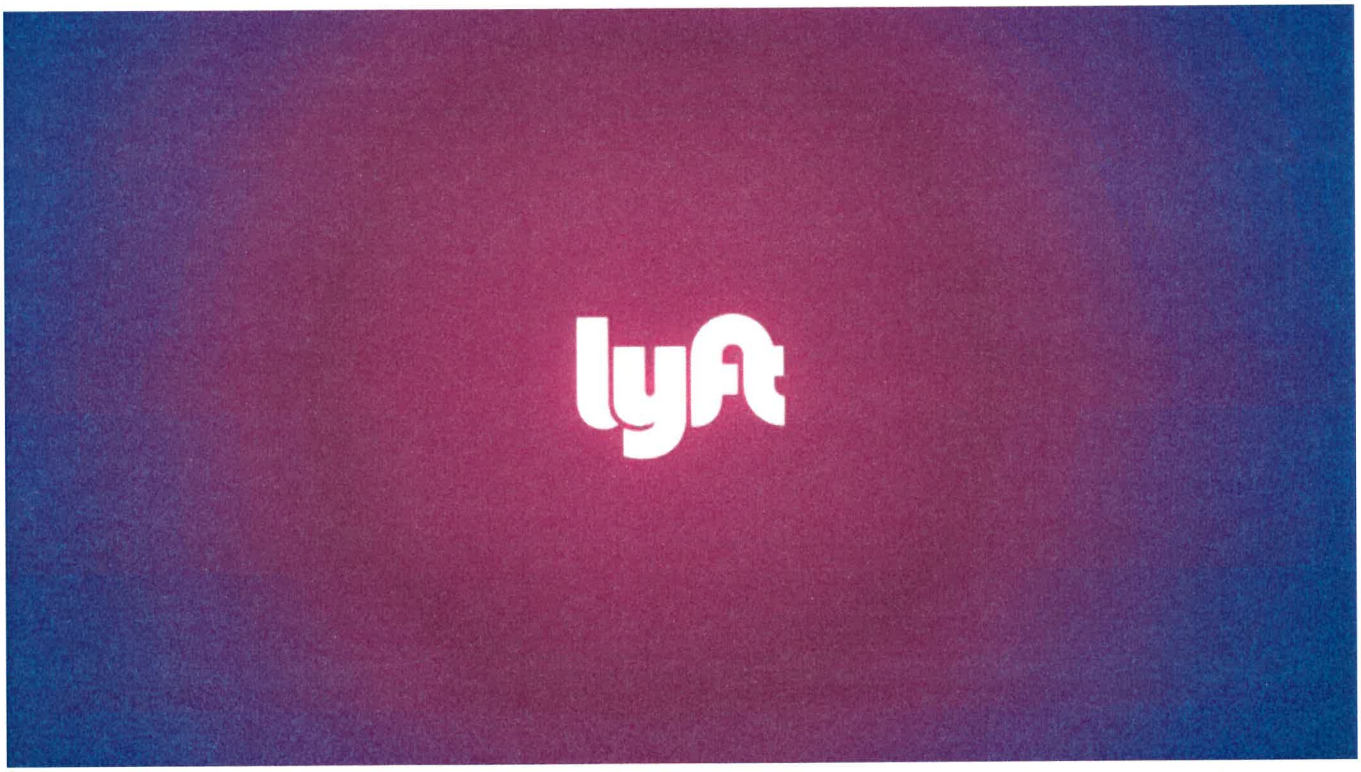
200 cities across the US
2015



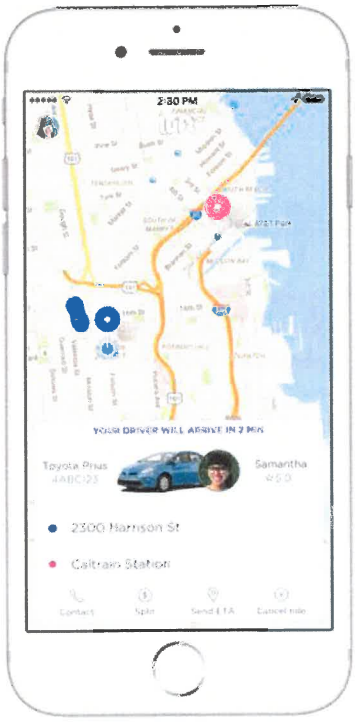
1 million rides
2013

1 million rides
Each Day in 2017





Lyft launched 2012



October 2017 Wesmed Plus Urgent Care Totals															
Date	Fallbrook Total	After Hrs. Pt.	Insured	Uninsured	ER Refer	911	Age 0-1	Age 1-18	Age 19-54	Age 55-up					
1-Oct-17	12	12	11	1	0	0	0	4	1	7					
2-Oct-17	9	9	8	1	0	0	0	2	4	3					
3-Oct-17	17	5	17	0	0	0	0	6	5	6					
4-Oct-17	10	5	9	1	0	0	0	3	4	3					
5-Oct-17	11	6	10	1	0	0	0	1	8	2					
6-Oct-17	17	9	16	1	0	0	1	4	4	8					
7-Oct-17	16	16	13	3	0	0	0	3	6	7					
8-Oct-17	10	10	9	1	0	0	0	3	0	7					
9-Oct-17	28	9	26	2	0	0	0	11	11	6					
10-Oct-17	16	10	16	0	0	0	0	2	11	3					
11-Oct-17	15	9	14	1	0	0	0	7	6	2					
12-Oct-17	14	5	13	1	0	0	0	5	5	4					
13-Oct-17	11	6	9	2	0	0	0	4	4	3					
14-Oct-17	13	13	11	2	0	0	0	4	6	3					
15-Oct-17	10	10	10	0	0	0	0	0	4	6					
16-Oct-17	19	11	18	1	0	0	0	6	11	2					
17-Oct-17	19	8	16	3	0	0	0	6	8	5					
18-Oct-17	15	7	12	3	0	0	1	7	4	3					
19-Oct-17	16	6	14	2	0	0	0	7	6	3					
20-Oct-17	25	12	24	1	0	0	0	11	8	6					
21-Oct-17	14	14	12	2	0	0	0	7	4	3					
22-Oct-17	14	14	13	1	0	0	0	4	4	6					
23-Oct-17	21	8	19	2	0	0	0	9	8	4					
24-Oct-17	10	2	9	1	0	0	1	4	3	2					
25-Oct-17	15	8	12	3	0	0	0	4	9	2					
26-Oct-17	12	8	11	1	0	0	0	4	3	5					
27-Oct-17	25	16	21	4	0	0	2	6	11	6					
28-Oct-17	14	14	12	2	0	0	1	1	5	7					
29-Oct-17	14	14	13	1	0	0	0	1	9	4					
30-Oct-17	13	8	12	1	0	0	0	3	6	4					
31-Oct-17	10	4	9	1	0	0	0	3	6	1					
Totals	465	288	419	46	0	0	6	142	184	133					
Averages	15	9	14	1	0	0	1	5	6	4					
											P				