

whitepaper

2011 conference
Prevention
Rebranding the Profession



October 27 & 28, 2011
Chicago, Illinois

:: whitepaper excerpt ::
Dan Buettner

“Building a future based on prevention would give us the win-win situation we are all looking for. It would decrease costs and increase quality of care. I believe that’s the only hope we have of moving forward.”

--Dr. John Luther

As caries rates reach epidemic proportions in children across America, and millions of people have unmet dental needs, the dental profession faces a greater challenge than ever before. To improve oral health nationwide, the goals are changing from finding better ways to manage disease to imperatives of preventing disease. Toward that end, the Institute for Oral Health (IOH) dedicated 2011 to the theme of prevention, exploring evidence-based best practices and innovative models of care that are advancing disease prevention and early intervention.

In October 2011, the IOH hosted our fifth national conference in Chicago, Illinois on **“Prevention: Rebranding the Profession.”** The event spotlighted impressive steps forward in risk assessment, reducing early childhood caries, integration with primary care, new dental roles and effective collaborations to advance prevention, as well as guiding principles for longevity from the world’s healthiest cultures. The conference welcomed guest speakers from across dentistry, medicine, dental benefits, health policy, and the American Dental Association (ADA).

Key prevention strategies discussed at the conference included:

- **Risk assessment and early disease detection** – Many experts agree that prevention in oral health needs to include a framework centered on caries risk assessment. One progressive approach is an assessment form that reduces the dental office burden by engaging patients to self-assess, and providing choices for treatment strategies that best fit patient needs and willingness to adopt healthier behaviors. Additionally, innovations in salivary diagnostics may soon make it possible for dental teams to conduct quick, scientifically accurate chairside tests to detect the presence of an array of diseases within minutes.
- **Preventive dental visits by age one** – Studies confirm that children who receive their first preventive dental services by age one have lower incidence of caries over time and require fewer hospital visits for restorative care. As a result, these early visits dramatically reduce the cost of care. Reaching parents early also helps them understand oral health milestones and increases continued usage of dental services to prevent early childhood caries.
- **Socially-relevant behavior modification** – An innovative model has been introduced that provides an interactive, visually appealing mobile application that community health workers can use to engage parents in childhood caries risk assessment and oral health education. Using simple, culturally relevant language and nutrition references, the system helps guide low-income, low-literacy minority families toward adopting healthier behaviors that help reduce and prevent caries.
- **New dental roles to increase access to preventive services** – New training programs are underway that establish a new dental team member, the Dental Therapist. Skilled in basic dental services, oral health counseling, and practice management, the Dental Therapist helps increase practice capacity for basic oral exams, risk assessments, and preventive

services, and works closely with families to help them understand ways to maintain good oral health and reduce tooth decay. Another program underway is the ADA-sponsored training for Community Dental Health Coordinators (CDHCs). Supporting the low-income communities in which they live, CDHCs serve as a trusted resource to provide culturally-sensitive oral health education, coordinate access to dental care, and perform basic dental services and risk assessments for families in public health settings.

- **Engaging primary care providers in oral health** – As family physicians and pediatricians have more frequent access to young children, these primary care providers are increasingly taking advantage of oral health training programs to help reduce early childhood caries. Providing basic oral screenings, fluoride varnish, and oral health education, they help families understand the connections between oral health and overall health, and the importance of starting dental prevention early to reduce caries risk over time.

Stay up to date on 2012 Institute for Oral Health events

Our 2012 theme is “The Evolution of Oral Health Care Delivery.” Throughout the year, the Institute for Oral Health will host focus groups with industry experts, participate in national oral health events, and convene our **6th annual national conference on October 4 & 5, 2012 in Boston, Massachusetts**. Keep up with the latest news and findings through our website (IOHWA.ORG), whitepapers, quarterly newsletter, and Facebook fan page. Additionally, check out the latest advances in oral health care on our site’s special section “Innovation Central.”

About the Institute for Oral Health

The Institute for Oral Health is dedicated to improving oral health in America by bridging the gap between research and everyday dental practice. Serving as a central resource for education and collaboration, IOH brings together nationally recognized experts to focus on important themes of concern in oral health care today, and works to promote innovation and adoption of progressive treatment guidelines, dental plans, and delivery methods.

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Dan Buettner

*Best-selling Author & National Geographic Explorer;
Founder of Blue Zones®*



Blue Zones: Secrets of a Long Life

To culminate the 2011 Institute for Oral Health conference focused on prevention, best-selling author Dan Buettner shared his vision for a “new paradigm of prevention.” In partnership with National Geographic, Buettner has worked around the globe, studying cultures where people consistently live longer and healthier. He introduced Blue Zones, the organization he founded to capture best practices from cultures with longer life expectancy, and the innovative work they are doing to transform American cities into Blue Zones.

How Blue Zones Got Started

According to studies, about 90% of longevity is dictated by lifestyle and environment, as opposed to genetics. On that premise, Blue Zones was founded to determine the key factors in communities worldwide that have greater health outcomes. The goal was to extract a “formula” for longevity that could be used to improve health, wellness, and life expectancy in cities around America.

Today’s society is inundated with information about the best ways to increase longevity: exercise, organic food, vitamins, yoga. Yet with no proven remedy to slow or reverse the aging process, Buettner sought answers through an ethnographic analysis, seeking out cultures that demonstrated greater longevity, and finding out how they do it. With a generous grant from National Geographic and partnership with the National Institute on Aging, Buettner convened an international team of experts in medical anthropology, medical research, epidemiology, demographics, and community design. Together they conducted a three year study: first, to identify the five parts of the world with populations over 10,000 where people live noticeably longer; and second, to explore those cultures and learn their best practices for longevity.

The Blue Zones study focused on key criteria, specifically cultures in which people have:

- Up to 12 years more life expectancy
- A fraction of the rate of cardiovascular disease
- The lowest rate of middle age mortality
- The highest rate of people over the age of 100

The answers took them all around the globe; yet in each disparate place, the secrets to longevity were surprisingly similar.

A Visit to Three Blue Zones

Sardinia

In the remote highlands of a small, rugged island off the coast of Italy, more men live to over 100 years old than anywhere else in the world. This region of Sardinia features 17 villages

of about 42,000 people living a simple lifestyle, relatively unchanged for thousands of years. While Sardinia is the only Blue Zone with a genetic component (the second most “genetically pure” people in the world, after Iceland), most of their longevity is attributable to their lifestyle. As the rough terrain of the highlands is not conducive to farming, for centuries men have worked as shepherds, a low-stress job with a gentle, plodding pace. Women are the workhorses in this society, running the household, managing finances, and even responsible for defending villages, a role they have held since Roman times.

In America and across much of the globe, there are six female centenarians for every one male over 100. In Sardinia the ratio is 1:1. Studies suggest that because Sardinian women bear the majority of stress, their life expectancy is reduced somewhat. Nevertheless, the culture demonstrates important keys to longevity:

- **Low-impact daily exercise** – A Sardinian shepherd’s life takes them on five-mile walks over hilly terrain every day for many years. Additionally, the sloping villages of the highlands, and the manual efforts of cooking and gardening keep everyone moving in a natural, healthy way throughout their life.
- **Healthy nutrition** – As a poor culture, the Sardinians grow their own food, and live mostly on a plant-based diet, breads made of wheat germ, and a little meat once a week. They are famous for their “healthy wine,” which tests have shown has three times as many polyphenols (antioxidants) than most wines anywhere in the world. As part of the Sardinian daily diet, this wine may contribute to their lack of heart disease.
- **Attitude toward aging** – Unlike America and many other cultures, in Sardinia the older you get, the more celebrated you are. Even in their elder years, people maintain active working lives. The culture embraces a strong sense of family, with older generations usually living with their children or grandchildren --not to be cared for, but to actively participate in the vibrancy of the household. Elders cook, garden, care for children, and “transmit wisdom from one generation to the next.” One 107 year old woman claimed that the secret to her longevity was that in living with her children, she felt loved and she knew she was “expected to live.” Unlike in America, these aging adults would never waste away in a nursing home. They have purpose and meaning that makes life worth living another day.

Okinawa

Some 800 miles south of Tokyo, the island of Okinawa is “ground zero for rural longevity in women.” Okinawans have the longest, disease-free life expectancy in the world, living an average of seven years longer than Americans. They have one-fifth the rate of breast and colon cancer; one-sixth the rate of cardiovascular disease –the number one cause of death in America. As Okinawans have intermingled with neighboring cultures for centuries, genetics are rarely a factor in their longevity. Rather, a supportive, communal lifestyle plays a primary role in their long, healthy lives.

Guiding principles that support the Okinawans’ longevity include:

- **Eating small, healthy portions** – While they live mainly on a plant based diet, their nutritional focus lies in moderating how much they eat. For 2,500 years, Okinawans have lived by the Confucian adage to “stop eating when your stomach is 80% full.” With a simple prayer before each meal, they prompt themselves to avoid overeating.

- **Close connection with community** – Unlike in America where many individuals do not have a close network of supporters to relieve stress, the social culture in Okinawa contributes to their longevity. At age five, children are connected in groups of five called *moai*, with whom they engage all their life. Like an extended family, the members in a moai support each other through good times and bad, from sharing crops to alleviating stress through illness, divorce, family deaths. The *moais* demonstrate that even in our modern age, it is possible to develop a system of support that costs nothing to the government or taxpayers; it simply engages people to care for one another.
- **Sense of purpose (*ikigai*)** – Many Americans plow through their daily lives with no real sense of inner purpose, no immediate connection to what keeps them going every day. In contrast, the Okinawans embrace the concept of *ikigai*, roughly translated as “the reason I wake up in the morning.” This sense of purpose is a driving force in the elders. When asking people over 100 about their *ikigai*, their responses are clear and immediate. For many it is their children and grandchildren, for others it is the profession they have held for decades: teaching karate or basketweaving, or spearing fish to bring to the family.

America’s Blue Zone – Loma Linda, California

Buettner’s team was aware that many across our nation might hear of these Blue Zones and think, “Well sure, if I had an easy, stress-free life in a remote village, I’d live longer too. But this is America.” As such, the team endeavored to locate a Blue Zone within the U.S., and found it in the unlikely suburbs east of Los Angeles. Loma Linda, California has the highest concentration of 7th Day Adventists, a religious faction that places a strong emphasis on health, and runs 70 of the biggest hospitals in America. While the average U.S. life expectancy is about 78, Adventists tend to live about a decade longer, and have a fraction of the heart disease.

Their longevity can be attributed to the following best practices:

- **Healthy nutrition and active lifestyle** – Adventists take their diet directly from the bible, mostly plant-based, grains, beans, seeds and nuts. Every Friday evening to Saturday evening, they follow the same rituals of prayer, nutrition, and exercise in the form of a relaxing nature walk. The power is not so much in the events themselves, but in the consistency of a healthy rhythm every week over a lifetime.
- **Strong bond with healthy community** – Because “social behaviors are as contagious as a cold,” the Adventists gain value from communing with like-minded others, which helps ensure their healthy habits ripple through society. The oldest members in the Loma Linda community are often the most active, continuing their careers late in life and volunteering to stay closely connected with the community. As an example, Buettner recounted how, after busily building his own fence, one man in his 90’s reported to the hospital– where he performed open heart surgery, a service he still engaged in 20 times a month. In another example, a spry woman over 100 lifted weights daily, volunteered for seven organizations, and helped tend to “old folks” in their 60’s and 70’s who need care.

Nine Common Denominators for a Longer Life

Blue Zones has identified the **Power 9™** that demonstrate that no matter where you go in the world, you will see the same nine principles in action among the world’s longest living people.

Move naturally

1. Rather than focusing on intense workouts, longevity is increased through natural exercise repeated consistently in the course of daily life. Regular activity that keeps the body moving might include cooking, gardening, climbing stairs, or walking to meet friends.

Have the right outlook

2. **Regularly shed stress** - People in cultures with greater longevity do not necessarily have less stress than the rest of us; however, they have “rituals to shed stress.” For example, the Okinawans spend 15 minutes each day in meditative veneration of their ancestors; the Adventists have their weekly prayer and nature walk. As stress can trigger inflammatory responses associated with many chronic diseases, alleviating this tension on a regular basis can improve health and increase lifespan.
3. **Have a sense of purpose** – Longevity is increased by having a clear purpose integrated into one’s vocabulary and lifestyle. In the cultures to which Blue Zones has traveled, elders have no sense of “retirement.” These people embrace a reason to get up in the morning, a drive to be a valuable contributor to their family and community. A key factor is being closely aware and connected to that purpose. A study by the National Institute on Aging showed that people who could articulate their sense of purpose lived about seven years longer than those who could not –which may indicate the power of really owning that purpose and using it as a tool for longevity.

Eat wisely

4. **Enjoy a plant-based diet** – Those eating mostly a plant-based diet, with only a small portion of meat once or twice a week tend to live longer. They also incorporate protein from beans, seeds, and nuts, and avoid processed foods.
5. **Eat smaller portions** – People living longer typically use strategies for eating less, such as using smaller plates, serving only what is needed, and stopping before they feel full. Most cultures with higher rates of longevity enjoy a big breakfast, light lunch, and little or no dinner.
6. **Drink a little wine** or alcohol each day. Moderation is essential, but apparently the relaxation is a good thing for relieving stress and improving sleep for a healthier life.

Connect with others

7. **Enjoy family time** – Cultures that invest heavily in time with family and friends live a healthier, longer life than those who focus mainly on work, material gain, etc.
8. **Get involved with community** – Social connections that offer a sense of belonging, people to count on for celebration and support, can increase lifespan.
9. **Belong to a “healthy tribe”** – Engaging with people who influence healthy physical and emotional habits is key to longevity. Many habits are contagious, such as overeating, smoking, drinking, drug use, even loneliness. Likewise, so are good habits like eating well, daily walks, and meditation. Because living healthier and longer requires positive influences, it is important to invest time with people who support a lifestyle geared toward longevity.

How to adopt the practices that contribute to longevity

Our health care system spends trillions of dollars every year to fight prevalent diseases, which are mostly preventable. Buettner believes the money is “spent poorly because we’re aiming at the wrong target.” Even the millions spent on prevention-oriented strategies such as diets and fitness clubs seems ill-spent in light of studies confirming that about 70% of people abandon their healthy rituals within nine months. Blue Zones researchers discovered that a key factor in nurturing sustainable healthy behaviors relies not in individual habits, but in transforming the environment of communities as a whole.

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“When it comes to the usual rules for anti-aging, there is still no pill, no hormonal intervention, no genetic solution that has been proven to stop, slow, or reverse aging. You have to invest in things you’re going to be doing for a long time. Friends tend to be long-term ventures, with measurable influences on your life.”
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–Dan Buettner

Optimizing environment for healthier lifestyle

“We live in an environment of abundance and ease,” claims Buettner, and it may be our undoing. To increase health and longevity, Americans need to live more like the longest-lived cultures, which place less emphasis on individual gain, and more focus on communal nourishment.

- **Reduce unhealthy influences in the community** – Look at the environment within neighborhoods and around town to identify where changes could be made to discourage unhealthy behaviors. What are the smoking policies in public places? Are sugary drinks and junk food cheap and readily available? Do child care centers allow kids to watch videos instead of engaging them in play?
- **Increase perceived safety in public spaces** – Policy for public spaces has a “long-term and pervasive impact” on a society’s health. Studies show that by making healthy, safe choices in community spaces –such as cleaning up parks or adding surveillance cameras to increase perceived safety– public activity levels increase by 40%.
- **Facilitate movement in interior spaces** – A great deal of research and resources exist on strategies for designing spaces such as schools, offices, restaurants, and homes in ways that “nudge people into physical activity.” To improve health across a community, it is important to optimize interior spaces so people move and socialize more, and eat less.
- **Foster volunteerism to increase a sense of purpose** – Most communities offer numerous opportunities for people to find a sense of purpose by helping others or the environment. Whether it is volunteerism, continuing a lifelong career that engages others, or simply helping within the family, studies show that continued involvement in communal activities can help lower health care costs.

Case study: Creating a Blue Zones city

In 2009, with the help of a \$500,000 grant from the United Health Foundation, Buettner’s organization partnered with AARP and the University of Minnesota School of Public Health and investigated cities across Minnesota where they could try a Blue Zones experiment to transform the health of the community. The group targeted five candidate cities, and while all five were eager to participate, the winning city had to prove their readiness to affect real change. Buettner wanted a city that had strong collaboration across key stakeholders such

as the mayor, city manager, head of public health, superintendent of schools, chamber of commerce, and CEOs of local businesses. To vie for the Blue Zones experiment, civic leaders were asked to demonstrate buy-in by signing an agreement and providing volunteers. The winner: Albert Lea, Minnesota.

To transform Albert Lea's population of nearly 20,000 people, the Blue Zones team focused on optimization on three fronts: environment, nutrition, and individuals.

Optimizing environment

The Blue Zones team started with a platform of 60 evidence-based, cost-effective interventions proven to help a population incorporate natural movement into their daily lives. Instead of widening the main street to bring in more traffic from Minneapolis as planned, the team encouraged leaders in Albert Lea to retain the relaxing charm that made the center of town a safe, welcoming hub of the community. The budget was then diverted to revising spaces around the city to facilitate healthier lifestyle. Some success stories in Albert Lea include:

- Revising the sidewalk paths to ensure that every neighborhood in the city's four quadrants was connected to downtown. In this way, they facilitated more physical activity and community interaction.
- Introducing a trail system around a previously inaccessible green space and around a lake near downtown. Now nearly any time of day, people can be seen walking or biking, enjoying both the activity and the community engagement of this space.
- Adding public gardens with volunteer gardeners to parks that were previously open lawn space.

Optimizing nutrition

To encourage healthier eating habits, the Blue Zones team introduced changes at restaurants, grocery stores, workplaces and schools including:

- **Restaurants** – They made subtle adjustments, such as reducing the size of plates, requiring customers to ask for bread rather than simply delivering it to the table, and rewording menus to gently nudge people away from highly caloric choices. The latter used a little reverse psychology with terms like “fresh” and “healthy,” which people tend to avoid in favor of heartier dishes.
- **Grocery stores** – They tagged foods that were optimal choices for supporting longevity, and ensured the impulse-buy section at the checkout stand had only healthy choices.
- **Schools** – All 7 schools agreed to implement a policy to deter in-between meal snacking by stating kids were no longer allowed to eat in hallways and classrooms, which eliminated eight hours of potential junk food consumption. Additionally, candy was no longer offered as a reward for good performance or used as a fund raiser.

Optimizing individuals

To build buy-in across the community for the Blue Zones transformation, citizens were encouraged, but not required, to participate. If they agreed, they signed a pledge to participate in the following changes:

- Adopt at least six out of 25 recommendations to change their individual environment for long-term gain, and follow them consistently. Changes ranged from agreeing to garden

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- Adopt at least six out of 25 recommendations to change their individual environment for long-term gain, and follow them consistently. Changes ranged from agreeing to garden and use smaller dining plates, to letting experts optimize their home and keeping a sign near the stove to remind them to plate the food instead of serving family style.
- Connect with others in a five-person moai, arranged by the Blue Zones team. Groups were asked to walk or volunteer together on a regular basis, to encourage new friendships. Out of 110 moais started three years ago, 70 are still connected.
- Attend a purpose seminar to help people assess their strengths, talents, and passions, and determine how to put those to work in a meaningful way.

Measuring the success

Receiving wide-ranging media coverage, the transformation of Albert Lea, MN was considered “stunning.” Over the past three years since the Blue Zones experiment began, the city has achieved measurable results, including:

- 25% of the population participated, considered very high for a public health initiative
- More than half of employers reported drops in absenteeism
- Raised the number of smoke-free campuses from zero to 25%
- Increased healthy food purchases at grocery stores
- Decreased the average weight of citizens and increased life expectancy
- Decreased health care costs by 40% for city workers as reported to Blue Cross Blue Shield

Based on these successes, Blue Zones has now partnered with Healthways and began a program in the South Bay Beach Cities of Los Angeles in Q4 of 2010 and the entire state of Iowa in Q3 2011. In looking at health trends in communities nationwide, Buettner emphasized that, “for the first time in our history, the life expectancy of our children is lower than ours.” It has become an increasing challenge for people to live healthy in a society that inundates us with high fat foods and sugary drinks, and encourages car-based convenience as part of daily life. To effectively advance disease prevention and longevity requires discipline and innovation on an environmental scale to support change across entire communities so they can get healthier as a collective over time.

“The answer to the trillion dollar question of health care is unleashing lots of evidence-based ways to permanently, systematically change people’s environment, and doing it one ready community at a time.”