The Disparities Issue

California Health REPORT

Winter 2012/2013

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Solving the Puzzle of Infant Mortality

Saving Limbs, Saving Lives

Poverty and Mental Health

COMMUNITY HEALER

Rev. Cecil "Chip" Murray

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CaliforniaHealth REPORT

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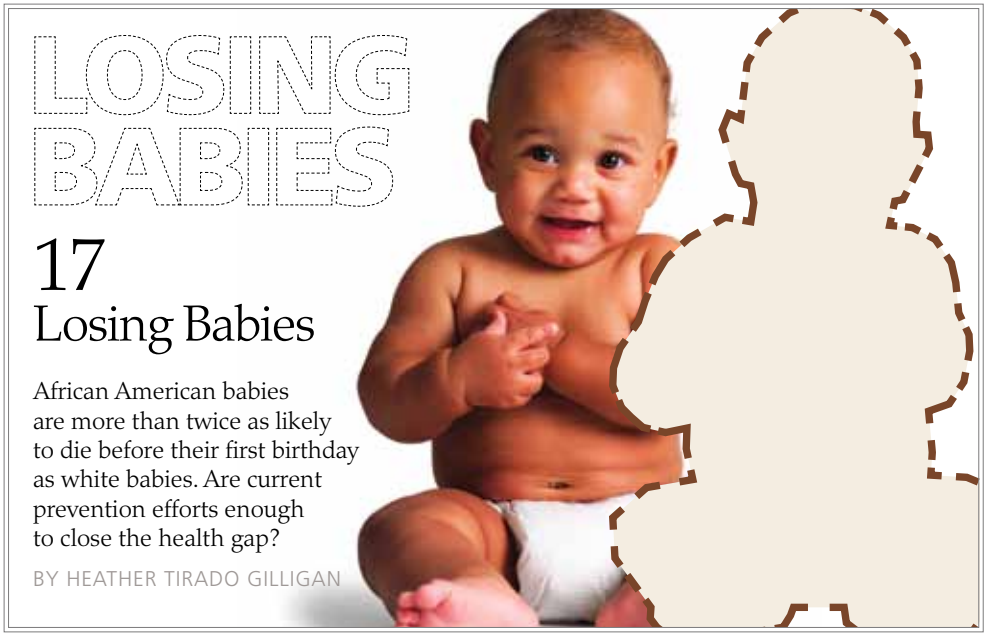

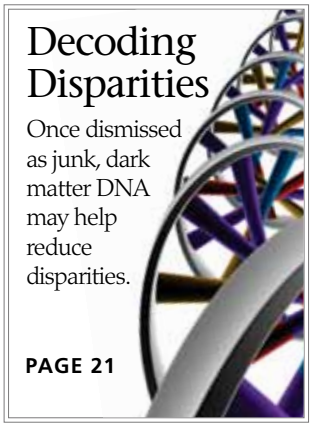

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LETTER FROM THE EDITOR

Minding the Health Gap

It may be hard to believe, but people live shorter lives in the United States than they do in 50 other countries. Health disparities—avoidable differences in health between different racial, ethnic and geographic groups—are one reason for the diminished average lifespan.

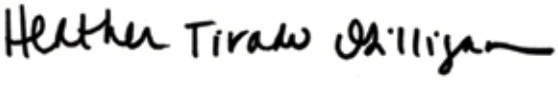
This issue of the California Health Report takes an in-depth look at health disparities, starting with one of the most tragic—the infant mortality rate in the United States. African American babies are more than twice as likely as white babies to die before their first birthday. Prevention efforts to reduce that gap are long-standing, but the disparity remains. In "Losing Babies," we examine why the disparity persists—and why public-health-based prevention efforts may not be sufficient to close the health gap.

Much remains to be understood about disparities in health. Researchers have been examining the issue in earnest for about three decades, but science still hasn't identified the exact biological mechanisms that cause poorer health among certain groups. Mary Flynn looks into new research in dark matter DNA. Once dismissed as junk in our genes, dark matter DNA may actually hold some answers to long-held questions about differences in our health, including disparities.

Researchers and practitioners do know that race and socioeconomic status affect health—but that doesn't mean there's consensus about how to react to that knowledge. Elise Craig talks to one researcher who is pushing for a more nuanced approach to understanding the toll of poverty on mental health. Judith Baer, once a poor single mother herself and now a Ph.D. in social work, says that too many disadvantaged women are labeled as disordered, when they actually suffer from stress tied to the pain of poverty. Adding a diagnosis of mental illness to their lives doesn't help with that stress, she says.

In this issue, you will find these compelling stories, and others, including a profile of Rev. Chip Murray. Murray, a dynamic civil rights leader best known for his role in calming Los Angeles during the unrest that followed the Rodney King verdict, now runs the Cecil Murray Center for Community Engagement at the University of Southern California. There, he works to encourage engagement, economic opportunity and faith leadership in disadvantaged communities.

The mission of the California Health Report is to tell stories from communities that don't always find a prominent place on the front pages of newspapers or the nightly news. Like what you see? Come over to our website, HealthyCal.org, where experienced reporters throughout the state cover stories that connect the Capitol, the community and the places in between.



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HealthyCal.org is an independent, non-profit journalism project covering health and health policy in California, led by veteran journalist Daniel Weintraub.

CALIFORNIA HEALTH REPORT

Bridging the Digital Divide

The Central Valley gets connected

BY MINERVA PEREZ

"I want to learn. We have a computer at home, but I don't even know how to turn it on," Ofelia Soto, 47, says in Spanish during a computer class in Stockton.

The course, run by California Connects, aims to increase digital literacy in the Central Valley. This Foundation for California Community Colleges program is funded by the Broadband Technology Opportunities Program of the U.S. Department of Commerce's National Telecommunications and Information Administration.

A team of trainers, spread out in 18 counties across the valley floor and in the foothills, is recruiting people like Soto—those who have always had an interest in using a computer, but lacked skills because of language or income barriers. The lack of skills has stood in the way of fulfilling needs from submitting job applications to finding a new doctor to communicating online with church groups.

In a recent class in Stockton, students finished a two-week core class on how to set up an e-mail account and conduct research on the Internet. Advances in the Internet, especially translation functions, mean that trainers are better able to teach the courses in their students' native language, says Stockton trainer Matt Jones. But there are still some frustrating barriers, he adds.

"Practice is what a lot of people here need," he says, adding that after a course ends, many people tell him it went too fast. "I had a lot of students that I overwhelmed, so I tell them they can return if they bring a friend."

Soto has a computer at home, but she's hardly ever used it, something that happens often, says California Connects staff.

"People have been curious all along. They have asked their children, but the kids don't have the patience for it," says Rosa Padilla, the Stanislaus County trainer.

"We have a computer at home, but I don't even know how to turn it on"

Broadband access is improving in the Latino population, but there are still significant gaps, according to the Public Policy Institute of California's 2012 report "California's Digital Divide." Since 2008, home broadband access among Latinos has increased significantly, from 34 to 58 percent. When you look at subgroups within Latinos, however, sharp disparities emerge. Fewer than half of foreign-born Latinos (48 percent) have broadband access. Only half of Latinos who earn less than $40,000 a year have broadband access.

The cost of broadband remains an issue for many of the 2,000 students who have graduated from California Connects. Lack of literacy skills also interferes with the computer trainings.

"It is extremely hard to teach people these basic computer skills when they don't have the skills they need to know how to fill out a job application or partipate meaningfully in their children's school," says Desiree Cervantes Holden, program manager for California Connects.

California Connects started in 2011 and will wrap up in 2013. The process has been slow, Cervantes Holden says, but the program has finally built some momentum. ***CHR***

THINKSTOCKPHOTOS

Critically Ill Children Get Better Care

Home-based treatment for sick kids keeps families together

BY HEATHER GILLIGAN

THINKSTOCKPHOTOS

The parents of critically ill children insured by Medi-Cal once had to choose between ongoing treatment and end-of-life care. Now there is another alternative. A program offering community-based palliative care was launched in California in 2009. It is improving quality of life for sick children—and saving the state money, too.

Partners for Children provides families benefits, including care coordination, respite care, home visits from a nurse every 30 to 60 days to assess pain and symptom management and in-home massage, music and art therapy. Nine counties currently offer benefits under the program.

Those services have already made a big difference for Debra Zeldin's daughter Anna, who was diagnosed with a rare form of muscular dystrophy when she was 3 years old. Before she was enrolled in Partners for Children, frequent and disruptive hospitalizations were a fact of life for Anna, now 8. In the 18 months Anna has been in the program, Zeldin says, her daughter's condition has stabilized, with only three hospitalizations.

> For more information about Partners for Children, visit their website: www.californiapartnersforchildren.org

"Getting back into a normalizing routine has been great," says Zeldin, who lives in La Mesa and receives services for Anna through San Diego Hospice.

Hospital trips are hard on families, and they are also more expensive than in-home care, according to a recent evaluation of the program, authored by researchers at UCLA and funded by the California HealthCare Foundation. Before Partners for Children, hospitalizations accounted for 65 percent of medical expenditures. That dropped to 47 percent after the program. Spending on outpatient care increased, but the program still resulted in a total savings of about 11 percent per child on average.

The movement for palliative care for children is relatively new, says Devon Dabbs, executive director and cofounder of the Children's Hospice and Palliative Care Coalition. Hospitals have been increasing their pediatric palliative care services for about five to six years, Dabbs says. But before Partners for Children, there was no way to pay for palliative services for children who continued to live at home.

Instead, Medi-Cal required the parents of sick children to sign a form saying their child would die within six months and to stop treatment before it would pay for end-of-life care at a hospice. "It was a choice between care and comfort," Dabbs says.

That is a hard choice for a parent to make about a child, she adds. "When it is a child, you are wanting to hold on to the possibility of a miracle," Dabbs says. "To me, it seems unfair to take that away." CHR

Rates of Type 1 Diabetes Rising

A recent research finding is triggering more concern about type 1 diabetes. Rates appear to be rapidly increasing.

At the turn of the last century, 1 in 100,000 people were diagnosed with type 1 diabetes in the United States, says Kimberly Chisholm, vice president of research at JDRF, a research and advocacy nonprofit devoted to finding a cure, treatment and prevention options for type 1 diabetes.

Now, some researchers say the prevalence is closer to 1 in 300, having increased by 3 percent a year for the last eight years. The increase in the rates was announced in June at the American Diabetes Association meeting.

Type 1 diabetes is an autoimmune disease that causes the immune system to attack cells in the pancreas, eliminating the body's ability to create insulin. Without treatment, the illness is fatal. Although the onset of type 2 diabetes is associated with lifestyle factors such as poor diet and lack of exercise, type 1 has been attributed to a genetic mutation.

Because of the recent increase in type 1 diabetes, researchers are now wondering if there is also an environmental component to type 1. "If it's a genetic mutation," says Chisholm, "it shouldn't change over time."

— By Melissa Flores

Database connects patients to care

BY MATT PERRY

At any given time, more than seven million Californians have no health insurance. For many, this means no doctor visits and no preventive care. Poor, frustrated and desperate, these citizens often think they have no access to health care.

In truth, there are thousands of low-cost and no-cost clinics and agencies that support the uninsured.

Californians for Patient Care (CPC) maintains a robust database of more than 5,000 contacts linking the uninsured with a wide range of discount services at the website myhealthresource.org.

"This is the most comprehensive database of its kind in the state," boasts Carmella Gutierrez, the organization's president. "There are actually more options than people think."

Included services are dentists, hospitals, Medicare, Medi-Cal, mental health, prescriptions, vision, hospice and palliative care. But the database also lists other critical services for the uninsured: food, domestic violence prevention, and alcohol and drug treatment.

Californians for Patient Care says the most surprising aspect of California's population of uninsured and underinsured—those with insufficient health coverage—is that many are solidly middle-class: They run small businesses, are self-employed or have recently been laid off.

"They're people we don't associate with the traditionally uninsured," says Gutierrez.

Gutierrez cited her own brother as an example. Employed for 24 years at a casino, he was laid off and eventually lost the insurance for his family – including three children – that he was able to keep for a time after he lost his job.

Still, he wouldn't try the available low-cost options, preferring to wait until he got a new job.

"It would make me crazy," sighs Gutierrez.

CPC's outreach efforts target both these middle-class patients and low-income Californians.

Gutierrez emphasizes that patients can travel anywhere to access needed treatment, even to neighboring counties. "You don't have to be a resident of that county to get services there," she says.

CPC leaders estimate that Latinos constitute nearly 60 percent of California's uninsured, so they work with organizations like Telemundo and the state's 10 Mexican Consulates. The Sacramento-based organization also provides hundreds of hard-copy directories for local health services.

"We're the public's starting point and hopefully their very effective connector," says Gutierrez. ***CHR***

Information = Empowerment, Engagement

Low-income Californians are more likely to feel empowered and engaged in decisions about their health care when they are more informed about their condition and the options available to them, according to a recent survey by Langer Research Associates.

And patients are more likely to feel informed when they see the same health provider regularly and believe that someone in their doctor's office or clinic knows them well. Experts have long thought that the lack of continuity in health-care providers hurts the health of the poor.

- Patients who feel informed about their health (67 percent) are twice as likely to ask questions as those who feel uninformed about their health condition (33 percent).
- Nearly 7 in 10 patients who feel very informed about their health also feel very confident in their ability to make decisions about their health care. Only 44 percent of patients who feel uninformed express strong confidence in their decisions.
- Sixty-one percent of patients who are well informed report always understanding their doctor's instructions, but just 34 percent of patients who are somewhat informed report that level of understanding.
- A third of patients who feel uninformed say that they have not followed a provider's advice or treatment plan because they did not understand what to do, compared to 14 percent of those patients who say they are comfortable asking question.

— By Daniel Weintraub

At-Risk Girls Get a Self-Esteem Boost

BY JESSICA PORTNER

Standing in the dusty stables of the Los Angeles Equestrian Center on a sweltering fall day, a half dozen teenage girls had just finished their horseback ride and were admiring the mighty animals munching on hay in their metal stalls.

This wasn't a traditional equestrian outing. It was to celebrate the end of a self-esteem program, Just for Us. The eight-week workshop, run by Helpline Youth Counseling, is designed for 13-to 17-year-old teens whose home environment, low income, delinquency or other factors put them at risk for dropping out of school, getting pregnant or committing a crime.

"Today's field trip is so that they'll have a new experience so they can build their self-esteem," says Julie Ayala, a counselor at HYC. "Girls can't normally control huge animals. It's intimidating. But once they bring [the horses] back, they are so proud of themselves."

HYC is the largest youth services provider in southeast Los Angeles County. HYC's Just for Us workshops have served more than 5,000 girls over seven years. The teens are referred by the Los Angeles County Probation Department, and through their schools, to the weekly classes. They learn self-awareness, positive self-talk and how to build relationships. The lessons also broach touchy subjects like puberty and the consequences of drug use.

"Most of my family members are drug addicts or in recovery," says Just for Us student Veronica Rodriguez, 15.

"My cousins gave me advice and they scared me… they said there are three ways to go: dead, mental hospital or jail," Veronica says. It helps, she adds, when Ayala talks with the group about anger.

"She gave me advice about anger management," Veronica says. "I'm learning how to calm down."

As she escorts the girls from the riding stables to a pizza place for a celebratory lunch, Ayala says she expects the best for this group. "I hope the girls see that there's a whole world waiting for them." *CHR*

TOP PHOTO: JESSICA PORTNER; RENDERING OF PROPOSED MACARTHUR TRANSIT VILLAGE, MACARTHUR TRANSIT COMMUNITY PARTNERS

Health Off the Rails

Transit villages—housing and retail built around a transportation hub—on the surface seem to promote a healthy lifestyle by encouraging walking and reducing suburban sprawl. Transit villages have been springing up around Bay Area Rapid Transit (BART) stops for years.

But these villages may pose a potential health hazard, too: rails often run alongside roads and the exhaust of cars and trucks. Building housing next to the MacArthur BART station in Oakland (a project in the works), for instance, means building alongside a pair of massive freeway overpasses.

Fine particulate matter, which are soot-like particles emitted by cars and trucks, can cause health problems for people living in the shadow of a highway. Exposure to fine particulate matter can lead to asthma, chronic wheezing and lung cancer.

According to UC Berkeley researchers, fine particulate matter levels around the planned MacArthur transit village, slated to open in 2021, are just 0.3 micrograms, well below the EPA threshold of 15.

That does not, however, mean that the area poses no risk to residents' respiratory health. The levels around MacArthur contribute to 2.7 "excess" deaths annually per 100,000 people exposed, as well as 34 cases of acute bronchitis, 214 sick days, and 1,136 cases of "minor restricted activity," Berkeley researchers found.

Elouise Bradley, who lives a block south of the MacArthur BART, says that it takes no small effort to keep her home clean.

"There's a lot of dust and black soot and stuff," she says from her front stoop. "You clean it up, it comes back. You get used to it."

– By Ted Trautman

Consider the Cost of Living

BY NICOLE JONES

Income has long been the standard indicator of poverty. Annual salaries determine who is eligible for federal and state benefits, even though how much a dollar buys depends largely on geographic location.

A recent report by Child Trends, a nonprofit research organization, reveals the impact of geographic variations on cost of living—and the impact of these variations on child outcomes.

"Income is important, but so is income in the context of where a family lives," says study co-author Nina Chien.

Cost of living varies drastically across the United States. One month's rent for a modest two-bedroom apartment averages $3,000 in San Francisco and $500 in Frontier County, Neb.

The current federal poverty guidelines assume that a dollar in San Francisco buys the same goods and services in rural Nebraska. The Child Trends study says this hurts poor families' ability to receive the aid they need, like food stamps, State Children's Health Insurance and other government assistance programs.

Living in a high-cost state does not necessarily mean more benefits are available. California, for example, does not have a state Earned Income Tax Credit, a refundable tax credit for low- to medium-income parents.

Existing subsidies are also difficult to access. Waiting lists for Section 8 public housing programs can be several years long or closed in metropolitan areas. Los Angeles County's list has been closed since 2009. And only about one-third of families eligible for child-care subsidies currently receive them.

The study also found that in higher-cost areas, schools are economically segregated. Living in a higher-cost area is related to lower school resources for poor families, but to higher school resources for moderate-income families.

Another study, by the Brookings Institution, estimated that within a sample of 98 cities, if costs of living were considered, eligibility for Head Start would increase by 227,000 families and eligibility for the National School Lunch Program would increase by half a million. *CHR*

DID YOU KNOW?
California's poverty rate was 16.9 percent in 2011, the highest it has been in 15 years. Nearly one in four California children live in poverty.
Source: U.S. Census Bureau

Children with disabilities more frequently victimized

BY MARY FLYNN

Advocates have long known that disabled children are at an increased risk of being exposed to violence—and a new study reveals the extent of the problem for the first time. Children with disabilities are nearly four times more likely to be victims of violence than those without a disability.

"The impact of a child's disability on their quality of life is very much dependent on the way other individuals treat them," according to lead researcher Mark Bellis.

The analysis conducted by Bellis and his colleagues at Liverpool John Moores University in the UK resulted in some grim findings. Nearly 27 percent of children with disabilities have been exposed to some form of physical, emotional

continued on next page

THINKSTOCKPHOTOS

or sexual abuse or neglect.

The researchers examined 17 studies from the US, UK, Sweden, Finland, Spain and Israel. All together, the studies included data from more than 18,000 children.

Instances of physical abuse and sexual violence throughout their lifetime were also high in these children—20.4 percent and 13.7 percent, respectively. Children with mental or intellectual disabilities face the highest risk of sexual violence.

Bellis didn't delve into the reasons why disabled children face more abuse, but researchers say that stress in families may be part of the problem.

"A disability can change the level of stress and a whole lot of factors in the family," says Dr. Marsha Saxton, researcher at the World Institute on Disability and lecturer in the UC Berkeley Disability Studies program.

Understanding the context of abuse is important, Saxton says. The common stressors that may lead to abuse in a family, such as alcoholism and poverty, can also be present in the families of disabled children. "When we look at abuse of children without understanding their particular situation, it doesn't lead anywhere."

Services provided to disabled children need to address the particular needs of each child as well as the needs of the parents and caregivers.

Disabled children's more limited ability to escape or report abuse may also contribute to higher incidents of abuse, researchers say. ***CHR***

More Suspensions, More Crime

Harsh school discipline hurts public safety

BY DANIEL WEINTRAUB

THINKSTOCKPHOTOS

Law enforcement leaders in California say that overzealous school disciplinary policies are making the state less safe. Public schools are suspending and expelling too many students for minor offenses, leaving troubled kids on the street without adult supervision and more likely to commit crimes, say three police chiefs, a county sheriff and a district attorney.

"Students who are frequently suspended from school are at a greater risk of dropping out, and eventually we will see them come across our courtrooms when they turn to crime," says San Bernardino County District Attorney Michael Ramos. A former school board member, Ramos says many districts' disciplinary practices are a "recipe for greater misbehavior and crime."

Ramos was joined by Nevada County Sheriff Keith Royal, who is president of the California State Sheriffs' Association; Sacramento Police Chief Rick Braziel; Ceres Police Chief Art de Werk; and Los Gatos Police Chief Scott Seaman, who is president of the California Police Chiefs Association.

The law enforcement leaders were convened in September by a group called Fight Crime: Invest in Kids to bolster an argument that is increasingly gaining traction in California: the idea that when it comes to school discipline, in many cases less would be more.

Schools suspended more than 700,000 students in the 2010-11 academic year, or about 11 suspensions for every 100 students in kindergarten through 12th grade. The majority of those suspensions were for nonviolent, non-drug-related offenses.

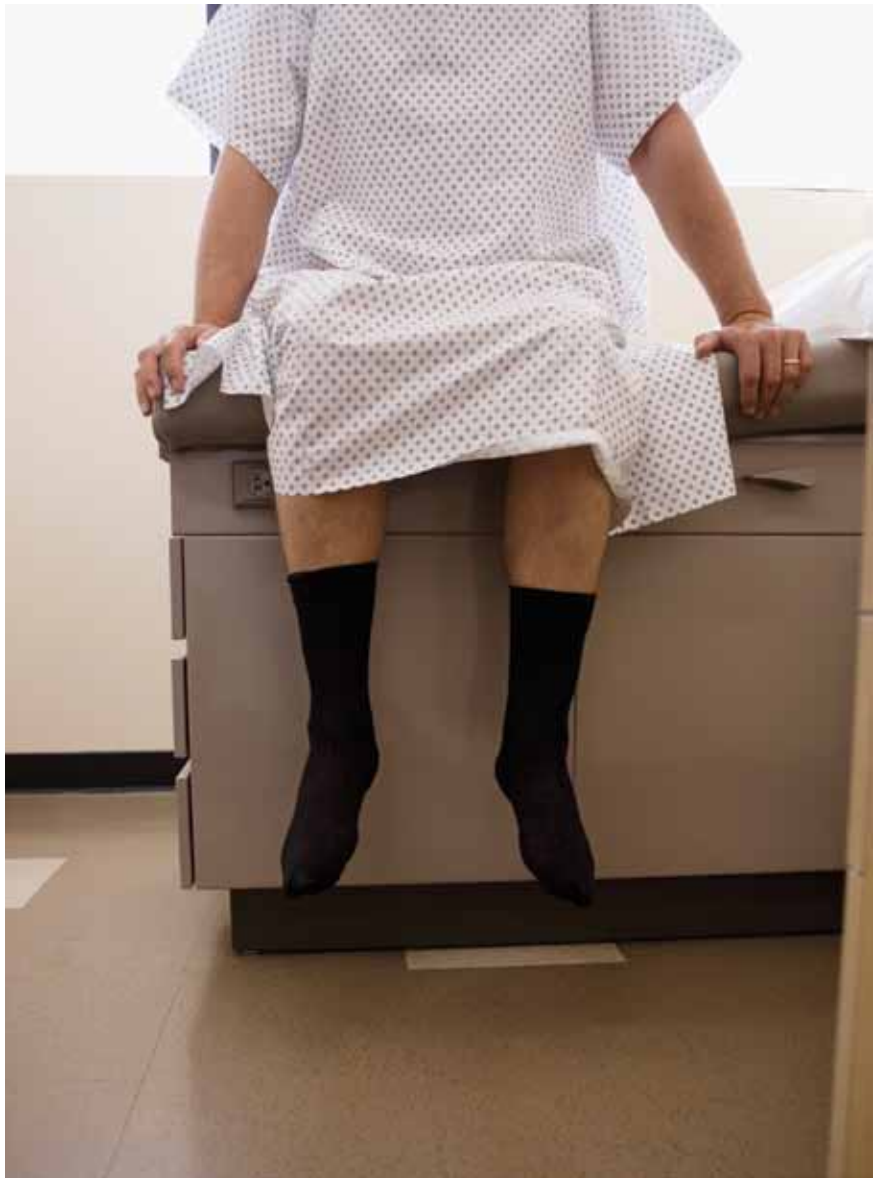
Research shows that students who are suspended are more likely to drop out of school, and dropouts are more likely to commit crimes. Schools also lose funding when they lose enrollment. ***CHR***

DID YOU KNOW? African American students make up about 39 percent of Oakland Unified School district's total enrollment. But they account for 63 percent of students with at least one suspension and 61 percent of those who were expelled. Oakland recently reached an agreement with the U.S. Department of Education to monitor the district's progress as it tries to reduce the disparities in the punishment of African American students. SOURCE: LOS ANGELES TIMES

Center keeps patients on their feet

Saving limbs, saving lives

BY HERBERT SAMPLE



Ehud Giladi knew he was in trouble when he summoned his son to help remove a sock from his foot.

Giladi, known as "Udi" to friends and family, had been badly overweight for years and was a diabetic. His left foot had developed neuropathy—the loss of feeling in extremities common to diabetics—to the degree that when a toenail partially detached, he ripped it off without feeling a thing. "I knew I was getting worse, but I just did not want to deal with it," says the Warner Bros. studio guard.

But after his son helped remove the sock and took him to the emergency room, doctors told Giladi that all five toes should be removed to save the infected foot. During the operation, though, doctors couldn't stop the bleeding, and he was transferred to Valley Presbyterian Hospital's three-year-old Amputation Prevention Center.

DID YOU KNOW?
90 percent of Americans want to age in place
SOURCE: MILKEN INSTITUTE

It was there that Giladi says his foot—and his existence—was saved. "I pretty much owe them my life," he says.

There are dozens of inspiring stories like Giladi's at the Amputation Prevention Center (APC), the only one of its type in California. The unit, housed at Valley Presbyterian's campus in the San Fernando Valley, is run by a wry, veteran vascular surgeon and a baby-faced podiatrist who contend that their team approach has saved the limbs of some 94 percent of the patients they see with wounds, infections or related ailments.

The strategy at APC seems simple: All the specialists needed to evaluate and treat a patient in danger of losing a foot or leg are in one place. That approach eliminates crucial weeks of delay as patients shuttle between doctors' offices as their condition worsens.

"This is a unit where we all practice together," says Dr. Lee C. Rogers, a podiatrist and APC co-medical director. "We've often heard … the shock from patients: 'I just saw six doctors in 30 minutes. I just can't believe that I saw that many doctors.'"

Collaboration also is vital, says vascular surgeon Dr. George Andros, APC's other co-medical director and something of a Zen master at the center.

THINKSTOCKPHOTOS

"You know, a lot of doctors don't play well in the sandbox with other children. They just don't do it. So you've got to have people who know how to cooperate on all levels," says Andros, who co-founded the Diabetic Foot Conference, an annual meeting of physicians from around the world known as "DF-Con."

Nearly 26 million U.S. residents, children and adults alike, suffer from diabetes, according to 2010 statistics released early last year by the American Diabetes Association. That's 8.3 percent of the population. Another 79 million Americans are prediabetic, their blood glucose having reached abnormal but not diabetic levels.

> "Even if you didn't walk in," Andros says, "you are going to walk out."

The disease impacts ethnic minorities in high proportions: While 7.1 percent of non-Hispanic whites had been diagnosed with diabetes, according to the 2010 statistics, 12.6 percent of non-Hispanic blacks, 11.8 percent of Hispanics and 8.4 percent of Asian Americans suffered from it too. And among Hispanics, 13.2 percent of Mexican Americans were afflicted—a huge number in California, where the predominant subgroup consists of Mexican Americans.

Diabetes can lead to heart disease and strokes, blindness and kidney disease, as well as neuropathy and amputations. According to the American Diabetes Association statistics, more than 60 percent of nontraumatic amputations of lower limbs occurred in diabetes patients.

Giladi is grateful. When he first arrived at APC, he says, Andros told him his condition was so advanced that in another month, without treatment, he could be dead.

But before he'd operate, Andros demanded a promise from his 54-year-old patient that he'd lose weight, Giladi recalls.

The pledge was made, and in late 2010, Andros revascularized Giladi's left foot, leaving 100 stitches along his leg. Giladi had three or four operations and spent months in rehabilitation, but is now back at work, thinner and with both legs.

APC is so focused on saving limbs, Rogers says, because 68 percent of leg amputees die within five years—in part as a result of the patients' sedentary lifestyle.

"Even if you didn't walk in," Andros says, "you're going to walk out." **CHR**

THINKSTOCKPHOTOS

Best place to age? Maybe not California.

Only two of California's major metropolitan areas made it into the top 25 of the Milken Institute's recent rankings of Best Cities for Successful Aging. The Bay Area ranked 11th (just behind Pittsburg) and the San Diego Metro area ranked 25th. Five California cities rounded out the top 100 on the nationwide list. California's ratings were brought down in part by the high cost of living here. As the report's authors say: "It's extremely pricy to live in paradise."

The rankings were devised based on indicators including general indicators, health care, wellness, living arrangements, transportation and convenience, financial well-being, employment and education, and community engagement

Large and small metro areas each had their own top 100. The top spot went to Provo-Orem, UT. Next were Madison, Omaha, Boston and New York. The top five small metros were Souix Falls (SD), Iowa City (IA), Bismark (ND), Columbia(MO) and Rochester (MN). *— By Daniel Weintraub*

Here are the ranking of all of the California cities:

Large Metro Areas

#11 San Francisco/Bay Area
#25 San Diego
#30 Los Angeles/Long Beach/ Santa Ana
#71 San Jose/Sunnyvale/Santa Clara
#75 Oxnard/Thousand Oaks-Ventura
#81 Sacramento/Arden-Arcade/ Roseville, CA
#95 Modesto
#96 Fresno
#98 Riverside/San Bernardino/Ontario
#99 Stockton
#100 Bakersfield

Small Metro Areas

#58 Santa Barbara/Santa Maria/ Goleta
#63 San Luis Obispo/Paso Robles
#93 Napa

Is accountable care the health care of the future?

Or a repackaging of managed care?

BY LYNN GRAEBNER

ACROSS THE COUNTRY, DOCTORS, hospitals and insurers are forming new health care entities to increase the efficiency and quality of health care, and lower costs. Called accountable care organizations (ACOs), these groups are gaining ground—although critics worry that large groups managing care to reduce costs may in the long run hurt patient care.

An ACO is a group of health care providers such as doctors, hospitals and others entitites, including insurance companies, that agree to work together to provide comprehensive care to their patients. Those providers are accountable for the quality and cost of that care. If they reduce costs while improving patient care, they share in the savings. If they don't deliver, they may risk losing money.

Although the idea has many proponents, critics are concerned that large health-care groups that could have too much influence over physician decisions. That could backfire and ultimately result in increased health care costs and compromised care.

"Hospitals controlling and running ACOs – that makes our members very nervous," says Francisco Silva, vice president and general counsel for the Sacramento-based California Medical Association.

"It's absolutely important that ACOs are physician led," he adds. "The ACO model can be a very good thing, but it needs to be done carefully as a collaborative effort. We learned from the HMO experience. There were a lot of stories of folks being denied care."

But there is increasing support for changing the way health care is delivered and making all parties in the system accountable for the cost.

ACOs are emerging both through Medicare sponsorship and in the private sector. The Affordable Care Act requires the Centers for Medicare and Medicaid Services to develop an ACO program,

DID YOU KNOW?

Community health centers, which serve the poor and uninsured, are rapidly adopting electronic health records. Seventy–four percent of clinics have made the switch. That's thanks in part to stimulus funds through the Health Information Technology for Economic and Clinical Health Act (HITECH).

SOURCE: NATIONAL CENTER FOR HEALTH STATISTICS

THINKSTOCKPHOTOS

which as of this summer had 154 ACOs serving 2.4 million patients. Similar ACO models are being developed in the private sector led by doctors groups, hospitals and private insurers.

"If providers reduce costs while improving patient care, they share in the savings."

One advantage of the ACO is its ability to implement leading tools for improving efficiency and patient care through the adoption of electronic health records for recording and sharing patient data.

"Now we find out who the patient is attributed to and track all his or her other doctors and connect them," says Cynthia Guzman, CEO of Coast Healthcare Management LLC, which manages Premier ACO Physicians Network, a Medicare ACO.

The group is also hiring nurse advocates to help patients get in to see their doctors, answer questions and coordinate care. The advocates will also help prevent some common problems. If a patient leaving the hospital needs antibiotics but they aren't delivered on time, for example, that could result in the patient being readmitted, Guzman says.

A major component of cutting costs lies in avoiding preventable hospitalizations and unnecessary emergency room visits, says Lisa Ghotbi, chief operating officer for the Health Service System at Blue Shield of California, which has six active ACOs in the state.

One way to accomplish that is to provide an appropriate level of care when people need it. For instance Brown & Toland Physicians Group, a Blue Shield ACO, opened an After Hours Care facility in San Francisco in March 2012. Patients can be treated for asthma, fever and flu symptoms, wounds and other ailments that might otherwise have landed them in the emergency room.

Another area many ACOs are scrutinizing for possible savings is specialty care. For instance, one of Blue Shield's Sacramento-based ACOs, which serves California Public Employees Retirement System members, found high rates of hysterectomies and elective knee surgeries. The physicians' group and hospital are now investigating therapy and treatments that should be tried before resorting to surgery.

Those are the upsides of ACOs: better physician communication, reduced waste and more preventative medicine. But there are downsides too, including the risk of ACOs denying care in a manner similar to HMOs, as Silvia points out.

Despite the risks, there is a strong feeling of hopefulness about ACOs.

"There is an enormous amount of potential for taking the waste out of the system and for improving patient care and helping us control costs," Ghotbi says. ***CHR***

ACO, HMO— What's the Difference?

Health maintenance organizations (HMOs) and accountable care organizations (ACOs) share a goal: reducing health-care costs. There is a key difference, though. HMOs are usually insurance companies; ACOs are typically groups of physicians and hospitals paid by insurance companies.

ACOs care for a specific group of members. Their goal is to improve the quality of care overall for the entire group. If the health of the group declines resulting from rehospitalizations due to poor care, for instance, the doctors and hospitals share that cost and make less money.

ACOs aim to reduce costs and improve care at the same time by integrating as much treatment as is feasible into a "medical home." When primary-care physicians, specialists and rehabilitation facilities all communicate, that improves patient care and ultimately saves money, explains David Muhlestein, an analyst with Leavitt Partners LLC, a Salt Lake City-based health-care analyst firm.

HMOs are essentially health insurance plans. They are usually responsible for the reimbursement of care, not with providing care.

HMOs did not always concern themselves with patient outcomes, says David Langness, director of health-care reform communications for Oakland-based Kaiser Permanente. That's changing, especially with Medicare and Medicaid focusing more on quality, he says.

The ACO model encourages switching from paying for services to paying for quality and outcome, Langness says.

"The hope of the ACO," says Muhlestein "is to better align the incentives."

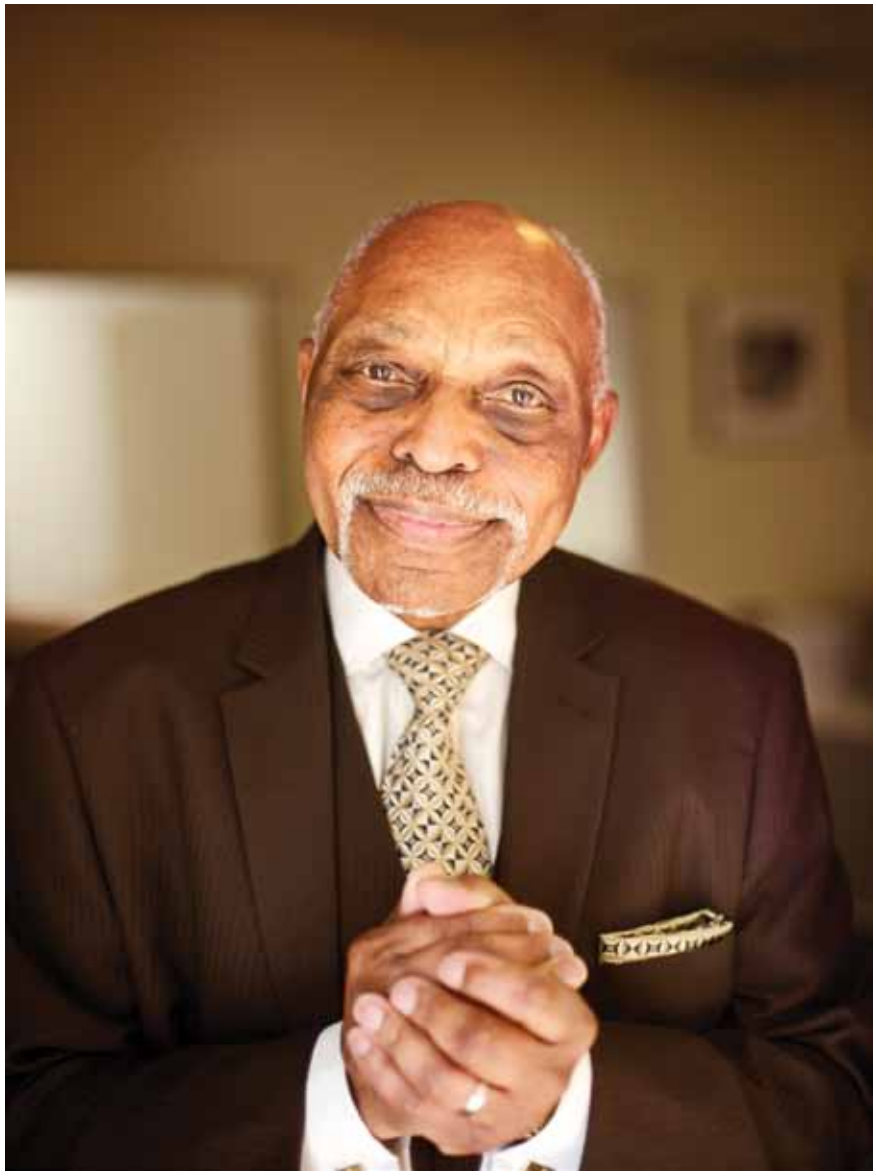
— By Lynn Graebner

THINKSTOCKPHOTOS

The Calling

The Rev. Cecil "Chip" Murray continues decades of service

BY ROBERT FULTON



The Rev. Cecil L. "Chip" Murray sits in the small conference room of the center that bears his name. He is both humbled and amazed by the fact of the eponymous Cecil Murray Center for Community Engagement, part of the University of Southern California's Center for Religion & Civic Culture.

The Murray Center uses resources at USC, including the schools of law, business, social work and public policy, to bring in speakers from across the country. The center promotes civic engagement and economic development, and has launched a Faith Leaders Institute that addresses organizing, leadership, community development, civic engagement and more.

"The genuine essence of religion is not God wants you to have it, but God wants you to share it," Murray says in his slow, steady baritone. "You would take a portion of what you have and share it with those who don't have to lift them. The same way you came from blue collar to white collar, they can come from blue collar to white collar. The same way you came from zero to hero, they can come."

Murray's energy masks his 83 years and belies the gray in his hair. His eyes still possess a youthful hopefulness for what's good and what's right. His commitment to social justice is also reflected in decades of service, first in the U.S. Air Force, then in the ministry, and more recently as chairman of this center dedicated to positive civic engagement, tucked against the 110 Freeway just a few blocks north of USC's campus in Los Angeles.

Murray is perhaps best known for his role in the civil unrest in 1992 that followed the incendiary Rodney King case. As pastor of the First African Methodist Episcopal Church of Los Angeles, a role he held for 27 years, Murray struggled to keep the peace. Church members went out into the immediate community in an attempt to stop the violence, and when that didn't work, they welcomed those displaced by fire into their house of worship. Murray went on television with talk show host Arsenio Hall to plead for people to "be constructive in your anger, not destructive, not self-destructive."

The First AME Church has a storied history in South Los Angeles. Its membership peaked at 18,000 in the 1990s; today it stands at 19,000. Outreach efforts flourished under Murray's long tenure, and church programs ranged from homeless assistance to a "lock in" program that steered young people away from drugs and gangs. "The black church," Murray told the Los Angeles Times in 1990, "must be the salvation of black men and black boys."

When asked about the 1992 riots,

PHOTOGRAPHS OF REV. MURRAY BY DAVID ZENZT

Murray looks off to the side and responds with a quote from author Langston Hughes about a dream deferred. The Murray Center's mission, as well as that of its namesake, is organizing the nonprofit and faith-based community to try to ensure that some day no more dreams are deferred.

The center has added 500 organizations into its database since it opened in late 2011, Murray says, with an emphasis on South Los Angeles specifically and Southern California at large. Its focus is on issues such as education, housing, reentry, substance abuse and legal counseling.

"If people have access and if they have motivation, then the two will go together for success," Murray says.

Major challenges face underserved and minority populations in modern America, Murray says. He draws upon Martin Luther King Jr.'s assertion that the three major threats to mankind are racism, war and poverty. In Murray's opinion, poverty is society's biggest threat, and he breaks it down into what he calls the Four P's: poverty of family, poverty of pocket, poverty of education and poverty of image.

Murray sees poverty as more than empty pockets. He wants to get beyond discussions of poverty that use the old adage about being given a fish instead of being taught how to fish. He wants to go a step further—he wants to see more people owning the pond.

"You won't last or linger without that component," Murray says. "Teach them how to fish, yes, that's fine. But it won't work much for the next generation."

Murray sums up poverty of family as too many missing fathers. For that he blames the disproportionate number of African American men in the U.S. prison system, for which he cites unfair sentencing practices relating to drug charges. Establishing reentry programs for prisoners coming out of the system is one of his priorities.

Murray sees the poverty of education as stemming from high dropout rates in poorer communities. Lack of an education leads to lower earning potential, which leads back to poverty of pocket. Too many young African Americans aren't aware of or don't take pride in accomplishments made by those who came before them—the cause of poverty of image.

When considering health care, Murray ties his Four P's together.

"When you're poor in pocket, family, image and education, you're going to be poor in health," he says.

Murray's current work reflects what he started as the pastor at First AME Church, where he stressed community engagement.

The Rev. Mark Whitlock met Murray in 1982, when his future wife took him to the First AME Church. Whitlock is now a pastor at Christ Our Redeemer AME Church in Irvine and executive director of the Murray Center.

"I think the Rev. Murray has a deep passion and compassion for people," Whitlock says.

Murray sees more recent examples of dreams deferred, from Occupy Wall Street to the Arab Spring.

"The 99 percent are rebelling against the 1 percent," he says. "It's a difficult lesson to learn, because as Lord Acton says, power tends to corrupt, and absolute power corrupts absolutely."

Murray recently sat on a blue-ribbon commission investigating jail violence at the Los Angeles County Jail. The commission found a "persistent pattern of unreasonable force."

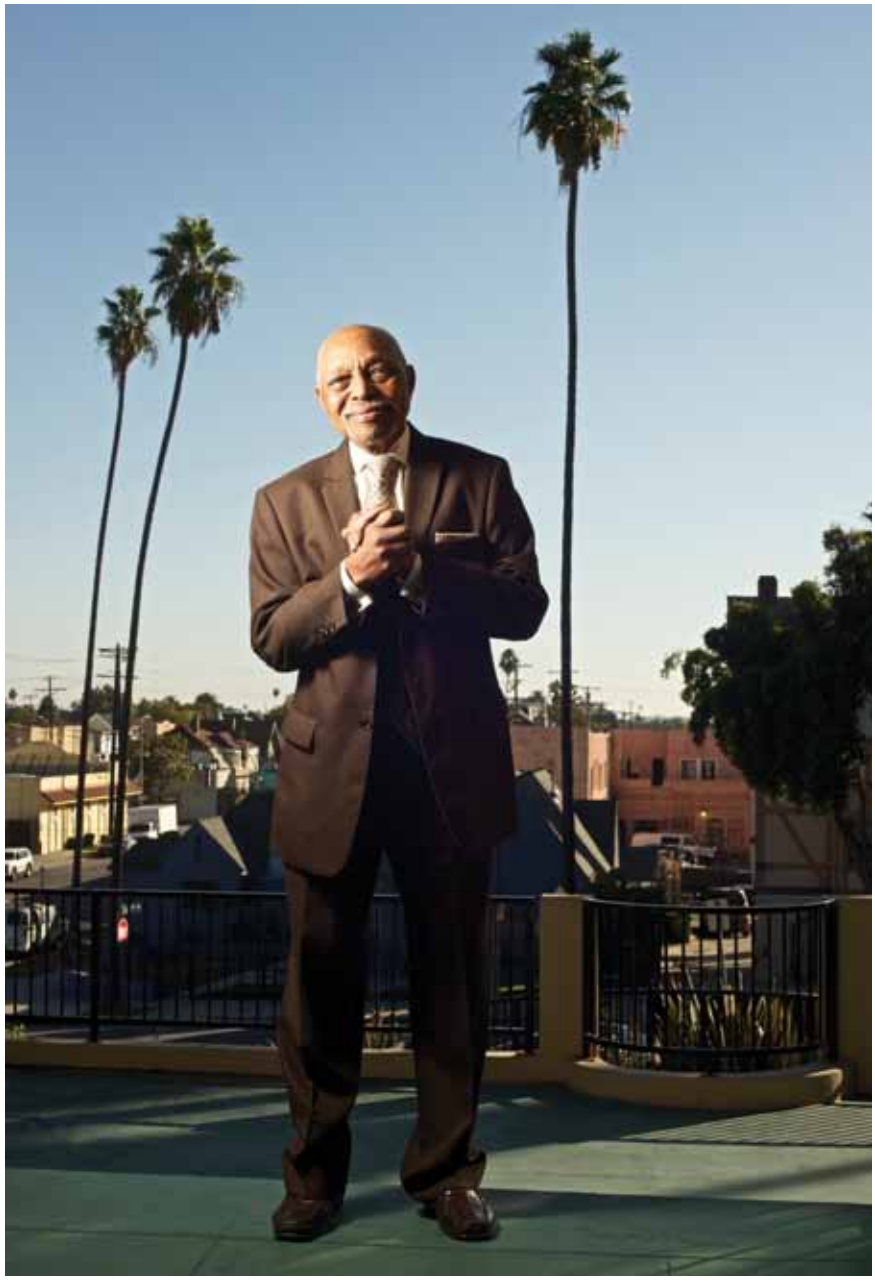
"There has to be monitoring of power," Murray says during the interview at his center. "You have to have surveillance, monitoring, disciplinary rules, and you have to insist on the execution of these rules."

Murray has been training for a job like this all his life.

He grew up in Florida and has been married to his wife, Bernadine, for 54 years. The couple has one child, Drew, also a reverend. Murray's mother died at a young age, and his father worked as a school principal. People said that the young Cecil, who had the same leadership qualities as his father, was a regular chip off the old block, hence the nickname.

Early on, Murray understood the importance of education and attended Florida A&M College (now university) in Tallahassee, where he majored in history. He repaid his $1,600 scholarship by enlisting in the Air Force.

It took a harrowing personal experience to turn him to the ministry. Though he had an interest in the ministry at an early age, an episode in the Air Force called Murray to service. As he tells the story in his memoir "Twice Tested by Fire," during a failed takeoff attempt, the cockpit filled with flames, and he heard a voice telling him to use the escape hatch in the rear of the plane. Murray survived, eventually retired from the Air Force and entered the seminary.



Murray enrolled in the Claremont School of Theology. After he completed his education, his first pastoral assignment from the African Methodist Episcopal Church landed him in Pomona. That was followed by stints in Kansas City, Kan.; Seattle; and finally Los Angeles in 1977.

"I looked at pastors who were primarily for themselves instead of for the people, and I thought that they should be working to lift their communities and their people and not themselves," Murray says. "So I shifted from being the critic to being the participant."

He works from 9 a.m. to 4 p.m. at the center, followed by additional duties such as prison or hospital visits. Though he is at an age when most would retire, Murray continues his mission. He exercises five days a week and ends his days by reading and watching the occasional basketball or football game.

"We're going to keep growing and keep the dream going," Murray says, "and the rest is up to the boss." ***CHR***

LOSING BABIES

Why Prevention Efforts Won't Close the Health Gap

The Case of Infant Mortality

BY HEATHER TIRADO GILLIGAN

LOSING BABIES

Fatimah Wilson is part of a social experiment under way in Richmond, Calif., an economically depressed corner of the San Francisco Bay Area.

Wilson is pregnant and is spending the day with other soon-to-be moms learning habits—from better eating to relaxation—to help them improve their health and the health of their babies. The goal: to erase the health disparity that results in African American infants in Contra Costa County dying at twice the rate of white babies before they reach their first birthday.

Wilson, 34, attended the West County African American Community Baby Shower, where she ate healthful food, received gifts for her baby and mingled with other local women. The women attended workshops where they learned, among other things, to use yoga-based relaxation techniques to reduce stress during pregnancy.

"We can change the statistics, because they are gross and grave throughout the United States for African American women and babies," says Lynor Jackson-Marks, one of the organizers of the shower. Nationally, African American babies are more than twice as likely as white babies to die before their first birthday.

Fatimah Wilson

Reducing disparities and educating mothers-to-be were the event's laudable goals. But years of research suggest that teaching mothers-to-be such as Wilson tips for a healthy pregnancy will only go so far. The gap in the rates of infant mortality can't be explained by unhealthful behaviors. Instead, it is part of a pattern that goes back generations and persists despite an individual's changes in income, environment, behavior and living conditions. It is a puzzle with no easy solution—and one that is almost certainly beyond what typical prevention efforts can achieve.

THE PUZZLE OF INFANT MORTALITY

Preventive programs became popular over the past few decades, as public health officials focused on the difference in health status among racial and ethnic groups, economic classes and geographic locations. That focus reflected researchers' new understanding of the close connection between health and social factors such as income and race, and is part of a larger movement to address preventable deaths.

"The idea that these are health disparities really emerged about 30 years ago," explains Nancy Adler, professor of psychiatry at the UCSF School of Medicine and chair of the MacArthur Research Network on Socioeconomic Status and Health. The fact that they are avoidable and hit poor people and people of color harder is what distinguishes a disparity in health from a difference in health. "These differences," Adler explains, "are avoidable and unjust."

About 40 percent of deaths in the United States are attributable to avoidable illnesses such as heart disease, analysis by the Institute of Medicine has shown. Among the avoidable deaths, as Adler notes, are all of those caused by disparities. Changes in behavior, researchers have come to think, can save lives, an understanding that has reshaped public health policy.

Public health departments, traditionally focused on preventing communicable diseases, have begun shifting more of their resources to prevention. Contra Costa County, where Richmond is located, has targeted disparities for a decade. The federal Affordable Care Act also reflects the sea change in moving toward improving the health of people by reducing preventable disease, earmarking a huge sum—$10 billion—for prevention initiatives. Healthy People 2020, on ongoing federal initiative to reduce chronic illness and preventable death, has reducing disparities in health as one of their primary goals. They intend to achieve that goal by "Integrating prevention into the continuum of education—from the earliest ages on," according to the program's guiding framework.

The focus on individual behavior as a way to address health disparities seems to suggest that differences in health behavior cause disparities. In the case of infant mortality, for instance, events such as the community shower might imply that African American mothers have bad habits that white mothers do not share. But that's not actually true, researchers have found. Pregnant African American women, for instance, do not smoke more than other pregnant women or engage in other behaviors linked to higher infant mortality rates in numbers sufficient to explain the higher death rates of their babies.

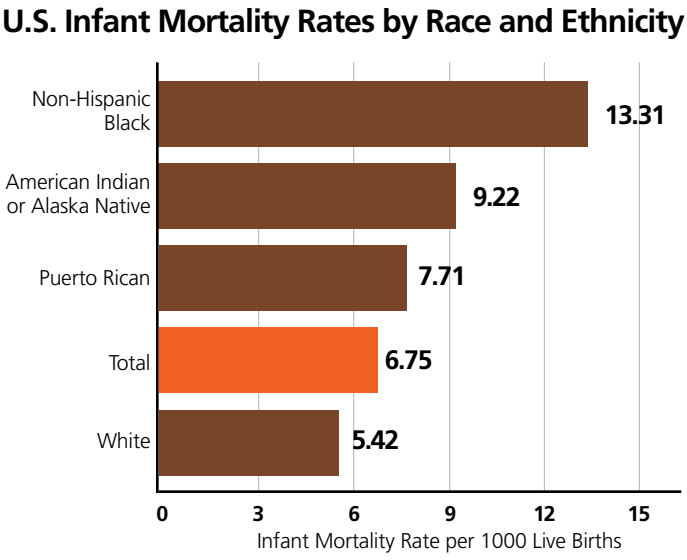
The problem is much harder to untangle: It is the result of a lifelong diminishment of health that starts before birth and is passed on through generations. On close examination, what has been treated as a problem of an individual's life choices emerges instead as a deeply rooted social problem.

"What we are seeing in differences between blacks and whites is not just a result of what is happening during the nine months of pregnancy, but actually has also to do with what happens prior to pregnancy," says Dr. Neal Halfon. Halfon is a professor in the departments of pediatrics, health sciences and policy studies at

PHOTO BY HEATHER TIRADO GILLIGAN

UCLA, the director of the Center for Healthier Children, Families and Communities, and a former policy advisor to former Vice President Al Gore.

His groundbreaking 2003 article on disparities in infant mortality (co-authored with UCLA colleague Michael Lu) featured an illustration imagining the effects of circumstances on health as a series of upward and downward pressures over the course of a lifetime. Positive events boost health, and stressful, negative events hurt health. Because of poverty and discrimination, African American women often experience more stressful life events and fewer positive ones compared to white women, and as a result their health suffers. So does the health of their children, starting with their development in the womb.



During different periods of development, we are more or less sensitive to our environment. A baby's initial development in the womb is a critical time. Other important moments occur in childhood. Trauma and stress during these periods affect health permanently. Chronic stress outside these critical periods of development hurts health too. The cumulative effect of stress and disadvantage over the mother's lifetime, Halfon explains, affects the health of their child.

Some of the stress African American women feel comes from living in disadvantaged neighborhoods where violence and uncertainty in housing and employment are facts of life. And African Americans are poor at sharply disproportional rates. More than 27 percent of African Americans were poor in 2010, compared to about 10 percent of whites.

Health is closely related to income. As income levels for African Americans rose between 1968 and 1978 following the civil rights movement, for instance, mortality rates for African Americans declined. When African American income started to fall again in comparison to white income in the 1980s, the gap between the mortality rates of the two groups grew once again.

The relationship between race, income and health is seen specifically in infant mortality too. Researchers at the National Bureau of Economic Research, for instance, found a relationship between income and low birth weight. Raising the incomes of single, high school educated mothers by as little as $1,000 reduces rates of low birth weight, a predictor of infant mortality, by about 7 to 11 percent. The biggest improvements, they found, are among African American mothers.

Researchers have been trying to unearth the causes of these relationships for years. They do know that the feeling of being a part of an isolated group—one that other social groups view as distinct and below them on the social hierarchy—is a part of the experience of poverty that's harmful to health. That connection was revealed by a groundbreaking study of British civil servants in the late 1960s, called the Whitehall Study, which showed a social gradient in health. People at the top of the social hierarchy have the best health, and people at the bottom have the worst. People in the middle of the hierarchy, who do not lack access to care and have sufficient incomes, also have worse health than those at the top of the hierarchy. The social gradient affects everyone's health—and that may be the primary culprit in the poor health of low-income people.

Amani Nuru-Jeter, a professor of public health at the University of California, Berkeley, says that people understand when their place on the social ladder is on the lowest rung. "People know when they are living in those kinds of neighborhoods," she explains. "And knowing that can be stressful."

But the puzzle is even more complicated than that. African American babies who are not born to poor mothers are also more likely to die within their first year of life than white babies, suggesting that the effects of poverty linger past the day when a woman is no longer poor. That fact also suggests that race affects health whether or not you are poor. African American mothers with a college education—an indicator of higher socioeconomic status—have infant mortality rates of 10 per 100,000 births. That's three times higher than rates for babies born to white mothers with a college education.

For African American mothers, stress is "ever present in your life, because of how you are treated as a member of a racial minority in this country," Halfon says. Kids are often aware of their status as a minority from a young age. "Children who experience the kind of racism that has to do with their status in society feel that status," he says. "That can just wear against them over long periods of time."

A telling fact that supports the relationship between discrimination and health is the lower death rates of babies born to African immigrants. African immigrants who are new to the United States have similar birth outcomes to those of white women. The children of African immigrants, however, have birth outcomes similar to those of African American women—a pattern not seen in white immigrants. The data suggest that something particular to living as a black woman in the United States is hurting the health of their children.

The experience of poverty and the stress of occupying a lower rung of the

INFOGRAPHIC BY NATALIE JONES

social ladder may be the cause of the disproportionate share of health problems borne by African Americans. But thinking about health in that way—as a social problem rather than an individual problem, and a systemic problem rather than a health behavior problem—requires a conceptual shift in thinking. And it means that a solution to health disparities will require much more than the current emphasis on prevention programs.

"It's no one thing," says UCSF professor Nancy Adler about the cause of disparities. "It's a cacophony of many things, especially things that go on for period of time." Chronic stress, health behavior, lack of access to care and exposures to more carcinogens all may play a role in the chronic health problems that disproportionately affect African Americans. In addition to disparities in infant mortality, those problems, just to name a few, include higher death rates from heart disease, stroke and cancer and increased rates of obesity and diabetes. "It may be that it's not each of those things," Adler explains about the root of disparities, "but that the more you have, they begin to be synergistic."

GLOBAL APPROACHES

People live longer on average in Sweden and Norway than they do in the United States, as do people in 49 other countries. The United States ranks 50th in life expectancy from birth, a number that is attributable at least in part to sharp health disparities, including the infant mortality rate.

Halfon points to the example of the protective social programs in Scandinavian countries, where education is equalized and unemployment benefits are generous enough to keep citizens from feeling that they will fall into an abyss if they lose their jobs. Social programs don't kick in only after an individual is in acute distress, as they do here.

"We pay when people fail," Halfon says. "Other countries invest for success—and invest for equity." They have figured out that early investments produce social dividends for everyone. Our approach, he adds, lacks that kind of consideration. "If NASA used the same kind of philosophy that we used in social programs," he says, "they would launch satellites into any old trajectory and spend all of their money to make sure they didn't fall to the ground." In light of the scale of disparities in problems like infant mortality, solutions that rely on individuals making different choices are unlikely to work.

Laurette Dubé, the founding chair and scientific director of the McGill World Platform for Health and Economic Convergence, is one expert pushing for a change of thinking about global health. Dubé's work on the interconnection between systems such as the agriculture industry and worldwide problems such as hunger and obesity appeared in a recent special issue of Proceedings of the National Academy of Science.

Behavior is linked to health, as current approaches to reducing preventable illness suggest. But so are social and economic systems. "Right now public health experts are saying we should behave differently than we do," Dubé says, "and they are right." But, she adds, "if the whole machine is going 300 miles per hour in a direction that runs counter to the change we need to be making, we will never make any significant dent in the changes that need to be made."

Improving health requires changes to entire systems, Dubé says. Public health plays an integral role in improving population health, but prevention efforts must be more closely tied to widespread reform to truly improve health. "It is clear that we need a whole social change."

PREVENTION EFFORTS MUST BE CLOSELY TIED TO WIDESPREAD REFORM TO TRULY IMPROVE HEALTH.

Change, Dubé stresses, is "critical." She points to escalating health-care costs and their ever-increasing share of national budgets. Health-care expenditures in the United States, for instance, doubled between 2000 and 2010, according to analysis by the Centers for Medicare and Medicaid Services. "In industrialized countries," Dubé says, "we are reaching the limits of what financially society can afford in terms of health care."

Despite the urgency, sweeping changes do not seem to be on the horizon. "I've been seeing more that's distressing," Adler says. "It seems like we are going in the wrong direction on this issue."

"We may not have the political will to do it," she adds. "But disparities are preventable over time if we would make that a priority. We could drastically reduce them."

Nuru-Jeter of UC Berkeley agrees that larger policy changes would help reduce health disparities. But since that is unlikely, smaller interventions remain important. "I definitely think we need broader scale society reformation," she says. "In the meantime, we don't just sit still and wait for that to happen."

At the baby shower in Richmond, no one was simply waiting for better health to happen. Instead, the women carefully followed directions from an instructor to breathe in and out at a late-morning stress management class, doing what they could to improve their own health and the health of their children.

Prevention programs have been successful in the past. For example, they have been shown to sharply reduce smoking and the illnesses associated with tobacco, and disparities in infectious diseases like the flu were reduced decades ago. In short, prevention has made huge improvements in the health of the U.S. population. These programs, however, have dealt with problems that are simpler to solve, with a clearer cause and effect. But disparities such as those that affect infant health and mortality today are far more complex. They are a profound public health problem, but they may also be a problem that public health can't solve. ***CHR***

THE DNA OF DISPARITIES

Do Solutions to Health Inequities Lie in Dark Matter?

BY MARY FLYNN

Everybody carries the potential for diseases in their genes, but that potential doesn't always result in illnesses. What flips the genetic switch to create disease in some people and not in others?

And even more critically, why is it that those who have ongoing exposure to stress—living in a violent neighborhood or below the poverty level, for example—are more prone to such diseases?

Studies have shown that people in the United States with low incomes suffer from illness in their 30s and 40s that wealthier people don't see until they are 60 or 70. They are much more likely to be obese, have high blood pressure, suffer heart attacks and be depressed compared to people with higher incomes. People of color suffer from similar disparities in health. African Americans, for instance, are much more likely to die of heart disease than whites regardless of their income level. And Hispanics without a high school education are much more likely to die of diabetes than their white counterparts.

In the last few years, there have been some breakthroughs in the study of the genetic component that may cause these diseases. Groundbreaking findings on "junk DNA"—which scientists now call dark matter DNA—could help researchers get to the bottom of the mystery of how, exactly, stress hurts the health of poor people and people of color.

And that, in turn, could help prevent disease.

Dark matter DNA, once dismissed as evolutionary baggage or junk in our genes that served no function, has a critical role in gene expression. Scientists once thought that only the coding portion of DNA was important to genetics. In a series of research papers released in September 2012, scientists found that dark matter actually contains a complex system of switches—many more than were previously thought—that regulate the encoding portions of DNA.

The research project, called ENCODE for Encyclopedia of DNA Elements, is a huge undertaking by 442 scientists in laboratories across three continents. The ENCODE project, launched in 2003, resulted this fall in the coordinated publication of more than 30 papers in journals.

The data may help solve the mystery of what causes health disparities by revealing more about gene expression.

"This is one more step to our really understanding the mechanism by which the environment may switch the genes on and off," says Nancy Adler, professor of psychiatry and the director of the Center for Health and Community at UCSF School of Medicine.

Adler has long examined the effects of socioeconomic influences and education on health. For the past 15 years, she has collaborated with other researchers as part of the MacArthur Research Network on Socioeconomic Status and Health to try and determine the reasons for health disparity.

The MacArthur network asks this question: Why are people who live in poverty, are poorly educated or are unemployed so widely different in their health status from those at the other end of the spectrum (with ample wealth, respected occupations and comfortable housing)? The common assumption is that people of a different socioeconomic status or lower education have limited access to health care, and that results in a lower quality of health.

Access to care, however, can't explain the extent of disparities in health. Poor people and people of color also don't have genetic differences that would explain their poorer health. Instead, the culprit likely lies in a complex interaction between environment and genetics that results in gene expression.

Exactly how physical responses to stress result in worse health, however, is not fully understood. One recent study has suggested, for instance, that stress affects the body's ability to regulate inflammation, interfering with the immune system's response to illness, the response that allows the body to heal. Other studies have suggested that stress causes premature aging that results in poor health—an effect researchers recently found in children as young as 10 years old.

The ENCODE data are a "very promising avenue" for understanding exactly how social and physical environments can result in disease, Adler says.

Researchers Nancy Adler and Steve Cole

Traditionally, researchers have focused on mapping the genome and paid less attention to what some call the "exposome" or the "environome," ingredients in one's external environment that interact with genetic vulnerabilities. These ingredients include anything from job stress and social relationships to air quality and noise pollution.

The recent research puts more emphasis on this question, Adler says: "If there's a switch, what determines what flips that switch?"

Research examining what physical mechanism flips genetic switches in people living under stress is still in its beginning phases, but preliminary experiments suggest that answers lie in dark matter.

"What ENCODE and a variety of other studies have shown is that there's really not a lot of explanatory power within the coding region of genes," says Steve Cole, associate professor in the Division of Hematology-Oncology at the UCLA School of Medicine. Cole, who was not involved with ENCODE, focuses his research on explaining why genes get activated or expressed in a way that facilitates disease.

Most disease-linked genetic changes happen in the stretches of DNA sequence that lie outside the coding region, where ENCODE has identified many "regulatory sites." These regulatory portions of dark matter act like a set of dimmer switches.

They determine the extent to which the gene is activated within the cell, if it's activated at all, and they also control what kind of a cell it will be. This information provides new leads for linking the genetic variations to diseases.

Cole researches how social environments influence gene expression. His studies examine how social stress and isolation affect the expression of inflammatory genes, which play a role in many diseases, from the common cold to heart disease. As it turns out, stress and isolation affect a pathway created by what was once written off as junk.

Some of the clearest examples of dark matter DNA's effect on the body, Cole says, have been experiments conducted using small animals. He described a study that induced a psychological-stress response in cancer-ridden mice (by placing individual mice in a box) to study the effect of that stress on the cancer cells. The stress response, researchers observed, activated par-

Violence Can Alter a Child's DNA

Repeated exposure to violence may accelerate the aging process

Researchers and public health officials have known that the basis for adult health lies largely in childhood. The environment in which one is raised affects how healthy that person will be as he or she ages. New research suggests that children who are repeatedly exposed to violence appear to be aging at a faster rate.

Researchers at Duke University and King's College London report that the DNA of 10-year-olds who have experienced violence shows signs of the wear and tear associated with aging.

Scientists determined that the children's DNA had shorter age-marker sequences called telomeres. Telomeres are special sequences of DNA found at the ends of chromosomes. Like the plastic tips of shoelaces, telomeres keep strands of DNA from unraveling.

"We know from studies on adults that stress is causing acceleration of telomere erosion, but we didn't know that it can also happen in children," says Idan Shalev, a postdoctoral fellow at Duke University and one of the researchers involved in the study.

If the telomeres get too short, Shalev explains, the DNA degrades and the cell stops dividing, entering a state of senescence. Senescence is biologists' speak for aging. In most cases, when the cell stops dividing, it eventually dies.

Telomere erosion is associated with age-related disease, cancer and high mortality rate. It is not, however, necessarily the cause of any of these problems.

The families involved represent a wide range of socioeconomic status and health in the general population. Researchers collected DNA samples from the children at 5 and 10 years old and measured the mean telomere length of all the chromosomes at each age. Of the 236 child participants, 42 percent had experienced violence.

Researchers assessed three types of exposure to violence in children: domestic violence between the mother and her partner, frequent bullying and physical abuse to the child. Cumulative effects of violence had the most impact; children who had experienced more than one type of violence showed the greatest telomere erosion.

Researchers will collect DNA samples for assessment again when the participants reach the age of 18.

— By Mary Flynn

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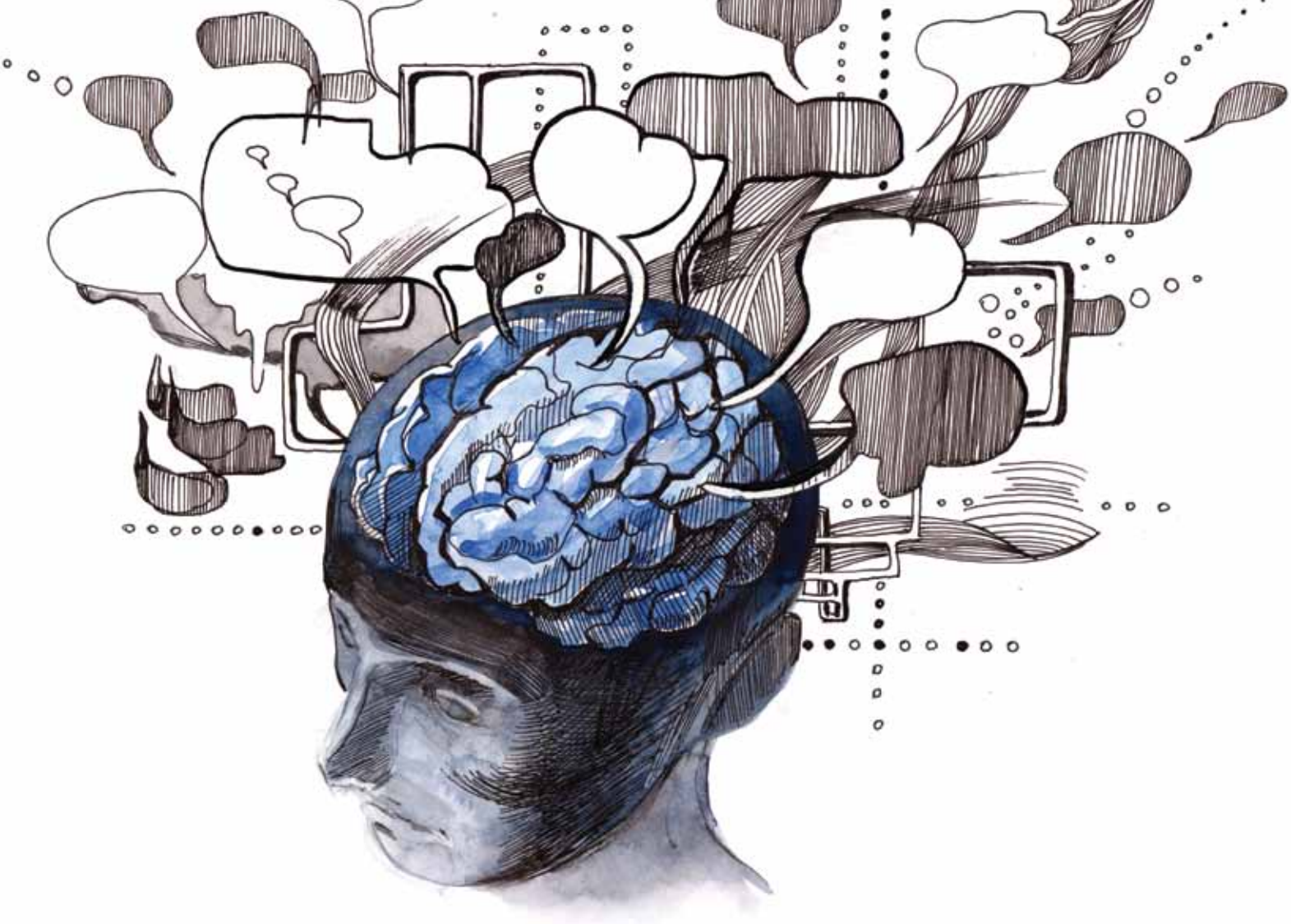
ticular receptors on the surface of cells in the mice, and those receptors in turn activated protein "transcription factors" within the cell to bind onto the dark matter of DNA. The transcription factors activated genes that created an inflammatory response, and the tumors grew and metastasized.

Cole says the mice experiments were revelatory. "In those kinds of models, we can see a lot," he explains. "Once we understand those receptors, we can give the mouse a drug that blocks those receptors" by decreasing the stress signals' ability to reach dark matter DNA and activate the genes that promote cancer metastasis.

Cole warns that although this approach may work in small animal models, humans operate very differently—some effects might occur differently or not at all in a human study. More studies will need to be conducted before researchers understand how the non-encoding regions of the DNA are affected by stress and in turn affect gene expression.

Despite the need for more research, these studies do emphasize the essential role of dark matter DNA. "It's actually the eyes and ears of the system," Cole says. "In terms of the basic philosophy of genetics, we need to look more at the eyes and ears, and less at the hands and feet, of the genome."

Eventually, researchers expect, the ENCODE project will provide a blueprint of the human genome. When it is mapped in its entirety, it could pave the way for truly personalized medicine. ***CHR***



The difference between poverty and mental illness

A social worker pushes for better diagnoses

BY ELISE CRAIG

Judith Baer is worried about how poor people, especially poor mothers, are labeled with diagnoses of mental health problems. Once a teenage mother, today she is a professor who understands the anxiety that comes with poverty—and she wants the diagnostic manual to reflect that kind of understanding, too.

"I was one of those people we study," says Baer, an associate professor of social work at Rutgers University and an adjunct professor of psychiatry at New York University's School of Medicine.

When Baer was growing up in Texas, her first couple of decades were fraught with challenges. Her father left her mother when she was only 3, and Baer never saw him again. At 19, she gave birth to her first child, a son. Eleven months later, she had her daughter. By age 22, she was a single mother with two toddlers, no money—and a passionate desire to get to college.

She graduated from the University of Houston, funding her education by working at a psychological institute called the Jung Center, pulling her kids around in a red wagon while she worked a paper route as a side job, and finding subsidized child care. Eventually she earned her Ph.D., also from UH.

Baer's memory of that experience—balancing her kids, her

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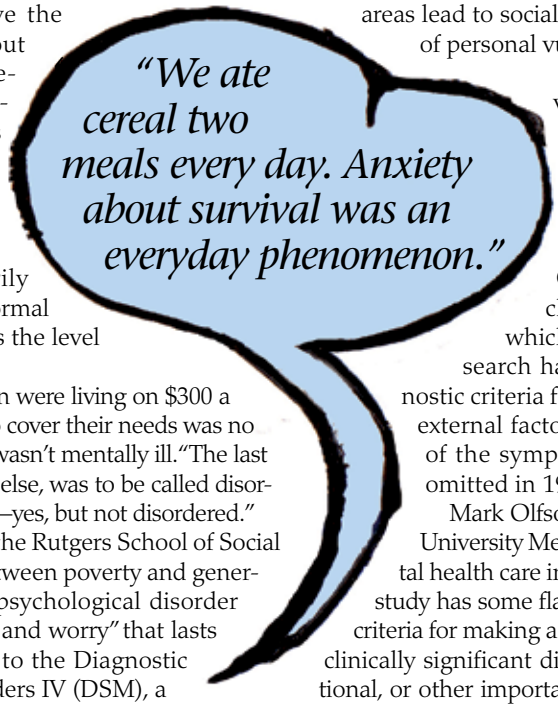
jobs and her schoolwork, and desperately trying to make something of herself—has driven her to research risk and resiliency, and the factors that help people to overcome long odds like the ones she faced. It's also led her to question how we define mental illnesses like anxiety disorder among the poor.

"We ate cereal two meals every day," she says. "I used to look at people drinking a Coca-Cola and I would want one so bad, but didn't have the money. Anxiety and distress about survival was an everyday phenomenon. Any life event beyond the ordinary, such as an ill child, was overwhelming."



PATHOLOGIZING PAIN

Anxiety isn't always necessarily mental illness. Sometimes it is a normal reaction to life's challenges, such as the level of poverty Baer experienced.

In the 1960s, Baer and her children were living on $300 a month. Making the money stretch to cover their needs was no easy feat. She was stressed. But she wasn't mentally ill. "The last thing I needed, on top of everything else, was to be called disordered," she says. "I was very anxious—yes, but not disordered."

Recently, Baer and colleagues at the Rutgers School of Social Work examined the relationship between poverty and generalized anxiety disorder (GAD), a psychological disorder characterized by "excessive anxiety and worry" that lasts for at least six months. According to the Diagnostic Statistical Manual of Mental Disorders IV (DSM), a set of diagnostic criteria published by the American Psychiatric Association, symptoms of the disorder cause "clinically significant distress or impairment in social, occupational or other important areas of functioning."

But the symptoms associated with the disorder could also be caused by normal reactions to the stressors of life. Failing to account for factors like significant financial stress may lead to the overdiagnosis of the disorder in the low-income population. Environmental and social conditions are often overlooked, Baer and her co-authors wrote in the August 2012 "Child and Adolescent Social Work Journal."

She worries that other young mothers now in her shoes might be diagnosed with a disorder, when their anxiety could really stem from a very natural reaction to financial stress. "I'm concerned about this disease narrative," Baer says. "If as a poor woman, you are concerned about feeding your children or getting a job or all those things embodied in that situation, and you're told have a disease, how is that helpful?"

The lowest-income mothers have a greater chance of reporting symptoms associated with the disorder, Baer and her co-authors found. Mothers who were the recipients of free food, for instance, were 2.5 times as likely to exhibit symptoms of general anxiety disorder as outlined by the DSM, while mothers who had problems paying utilities were 2.44 times as likely, and those who had to move in with others were 1.9 times as likely.

Ignoring those factors could have serious consequences beyond the misdiagnosis of a single patient, says Kim Jaffee, an associate professor who coordinates the master's in social work program at Wayne State University. "What particularly concerns me is that this overdiagnosis of GAD, without adequately assessing the social environmental factors, contributes to the racial and ethnic disparities in mental health."

"People with mental illness are overrepresented in high-poverty neighborhoods," she says, "where a disproportionate share of minorities live." The environmental factors in those areas lead to social conditions that "exacerbate the impact of personal vulnerabilities."

For Baer, fighting for changes in the next version of the DSM, which will come out in May of next year, is a necessity.

The loose definitions presented in the DSM, Baer and her co-authors say, have led to a widening of the symptoms that can classify a disorder. One of their biggest concerns was a change between editions of the DSM, which is updated whenever enough new research has come out to merit a revision. Diagnostic criteria for GAD once included an evaluation of external factors like the social and financial context of the symptoms, but that piece of the entry was omitted in 1995.

Mark Olfson, a professor of psychiatry at Columbia University Medical Center who directs studies on mental health care in community settings, points out that the study has some flaws. It did not screen for one of the main criteria for making a GAD diagnosis: that the anxiety "causes clinically significant distress or impairment in social, occupational, or other important areas of functioning." He does, however, agree with the authors' conclusion that socioeconomic context is important in diagnoses.

Understanding the causes of anxiety is key, Baer says. If clinicians diagnose patients based solely on symptoms and ignore context, they run the risk of diagnosing a false positive. Also, mental health professionals who understand the causes of anxiety can create treatment plans that focus on practicality, self-empowerment and resiliency—helpful tools for low-income patients.

"For something to be a mental disorder, it needs to cause distress, but there also needs to be some breakdown of an internal mechanism that's not functioning," Baer says. "That's a true disorder. We don't know true disorder from the vicissitudes of life."

TREATING THE WHOLE PERSON

At the Woman's Clinic and Family Counseling Center in Los Angeles, the therapists not only focus on patients' mental health issues such as symptoms of depression and anxiety, but also try to understand and treat their problems in the larger context of their lives. Although clients seek treatment for an array of issues, from anxiety and depression to abuse and addiction, monetary problems are a consistent concern. "Financial pressures are bigger than ever," says Carla Becker, director of counseling at the center and a private clinician. She started at the clinic in 1997 and now supervises the 25 volunteer therapists who work at the center.

Some patients who come into the clinic can clearly attribute

their anxiety to occupational or economic stressors, says Jennifer Hayes Silvers, a counselor.

"In my young career, when I think about GAD, there's not a client that I have where [the anxiety] is not situational," Hayes Silvers says. "It's very much about whatever particular situation they're dealing with at the time."

Despite their shared belief in the necessity of considering financial and social factors when treating patients suffering from anxiety, the Women's Clinic staff members aren't that concerned by the exclusion of social and environmental context from the definition of GAD in the last version of the DSM. Neither is Columbia's Mark Olfson.

Any counselor treating patients would have been trained to consider those factors, they say, and the DSM-IV does include general criteria for a multiaxial assessment, where counselors are expected to consider five different factors when treating their patients. The fourth axis is recent psychosocial stressors, like the loss of a job or a loved one.

But the DSM does have limitations. As Kara Hoppe, a fellow counselor, and Becker point out, it only allows six months for bereavement, for instance. "You only get six months to mourn a parent," Hoppe says. "I don't think you get more than that if you lose your job, according to the DSM."

To Becker, the DSM should be used as a tool for understanding the cluster of symptoms associated with a particular disorder—but a clinician needs to think outside the manual and consider a client's circumstances, too. Even biological issues like thyroid problems can cause anxiety. Clinicians need to consider those as well.

"Does that bug me that it's not a holistic approach or view of the person? Yes," she says. "I've never liked that."

There are also dangers to being labeled with a stronger diagnosis. As Baer's study points out, mental health care is often an entry point into the health-care system for low-income patients, and added social stigma could keep them out of the system. And for patients who do have insurance, Becker says, a diagnosis of GAD, a more severe condition than something like an adjustment disorder (anxiety related to a specific event and lasting for less than six months), could drive up future premiums or prevent coverage, depending, of course, on changes in health-care laws.

But to Baer, the real problem is that the health-care system is pathologizing a normal response to difficult situations.

"Psychology is creeping into what's obvious and normal," she says. "People in desperate circumstance feel anxious, as they should. I'm concerned about the narrative that if you're suffering, you have a disorder." ***CHR***

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Defining Disorder

The Diagnostic and Statistical Manual of Mental Disorders, known colloquially as the DSM, is a classification of the symptoms of psychiatric disorders published by the American Psychiatric Association (APA). First released in 1952, it's the main reference resource for mental health professionals in the United States and is used by everyone from psychiatrists to social workers to nurses to counselors. The latest edition, the DSM-V, is set to be released in May of next year.

As the understanding of mental health has evolved over the second half of the 20th century, so has the DSM. Whereas earlier editions reflected the limited mental health understanding of their times—the first considered homosexuality a disorder, for example—since 1980, the DSM has focused solely on its use as a diagnostic tool, eliminating recommendations for patient treatment.

The effort to update the most recent manual began in 1999 and has included input from mental health professionals from major health organizations in the United States and abroad, including the APA, the National Institute of Mental Health and the World Health Organization. For the last five years, an APA task force has reviewed the strengths and problems of the 1995 edition, conducted research reviews and considered scientific advancements and clinical expertise. Members of the task force also include diagnostic work group chairs, who lead reviews of the base literature. Drafts of the manual have been released for public commentary three times, and the APA will continue to update the manual until its release in May. *— By Elise Craig*

Teens train teens to stop violence

Children are the future of prevention

BY MARNETTE FEDERIS

PHOTOS BY MARNETTE FEDERIS

Long known as one of the most violent cities in California, Oakland is taking a novel step to try to reduce crime: empowering children to train one another in violence prevention.

Teens on Target trains high school students and then deploys them to middle schools in the city to talk to younger students about guns, gangs and unhealthy relationships. The hope is that a message of nonviolence will have more impact coming from fellow teens. The initiative is led by the Oakland-based group Youth Alive! Each year, 30 students at Castlemont Community of Small Schools, which is part of the public school system, study violence prevention before fanning out around the city to spread their gospel.

On a recent afternoon, students in an East Oakland classroom flipped through magazines searching for words to snip out of the pages. They cut out the words "Survival Guide," "Beautiful" and "50 reasons to have hope," ready to be put into a collage. The idea was to find the right words and images to describe what they had learned over the past year.

In a city that consistently ranks high in homicides and violent crimes—there were 103 murders in Oakland in 2011, an increase from 90 the previous year—Teens on Target is one effort that advocates say is helping curb violence through educationand community building.

"[In the classroom,] kids usually talk about history, math," says Caheri Gutierrez, a violence prevention educator with Teens on Target. "We come in and we give them a space to talk about real stuff, real issues that are going on."

In the first semester, participants in Teens on Target delve into what causes violence, listen to speakers who have lost loved ones and talk about the city's crime statistics. The teens also are trained in public speaking and encouraged to examine how violence has affected their lives.

During the second part of the school year, the teens move out to middle schools to hold workshops about the different types of violence and the ways to prevent it.

It's a win-win for all students involved, advocates say. The high school students, who are compensated with a small stipend, gain professional and development skills, as well as self-confidence.

"Once you're in front of the kids, they're all listening to you, so that makes me feel like I'm a good influence," says Marianne Williams, a junior with Teens on Target. "No matter what's going on at home, no matter what's going on at school, it's something I can look forward to doing, and you feel good."

Meanwhile, the middle schoolers are more apt to take in the message of staying away from guns, gangs and drugs when it comes from older peers. "Middle school is the point at which kids decide what they're going to be like in high school," says Jennifer Almendarez, a junior. "It's more likely they'll listen to you because you're actually in high school … you're not just another adult pushing them around."

Teens on Target was established in 1989 and has been recognized by both national and local leaders. It's one of the three components of Youth Alive! Since the early 1990s, Teens on Target has trained as many 830 students and presented the curriculum to more than 40,000 young people in Oakland and Los Angeles.

Demetria Huntsman, program coordinator for Teens on Target, says many of the students have experienced trauma in their lives but aren't comfortable sharing that trauma, identifying it and seeking help.

Students learn about decision making and ways to alter behaviors—for example, staying away from people who carry guns—in order to remain safe.

"Anytime you hang out with anybody carrying a gun, you are three times more likely to be injured by a gun. Period. That's a statistical fact," Huntsman says. "That statistic doesn't say you love this person any less…but it is a true fact, and so now you have to make healthy decisions based off of that statistic."

The high schoolers also use their own stories to get the message across. Briana Dunn, a senior and participant in Teens on Target, has been a victim of gun violence. At the beginning of the academic year, while waiting for a bus after school, she was shot in the foot. Another boy, the primary target of the shooting, was also injured. "I've seen violence in movies before," Dunn says, "but I never thought I would be in that position."

Recovery is ongoing for Dunn. At nights, when she hears gunshots in the distance, her anxieties come back and bring her to the moment when the bullet hit. But she says being part of Teens on Target and telling her story to middle schoolers have made her deal with the trauma.

"We're not in a bubble of this violence prevention curriculum—we are really conscious of and are focused on [what's going on] in the community," Huntsman says.

The root cause of the city's violence, which is especially acute in the West and East Oakland neighborhoods, is hard to pinpoint.

Many of the high school and middle school students Huntsman talks to have stories of loved ones being shot or family members becoming victims of violent crimes. But the most disturbing of these stories are ones about how easy it is for kids to access guns.

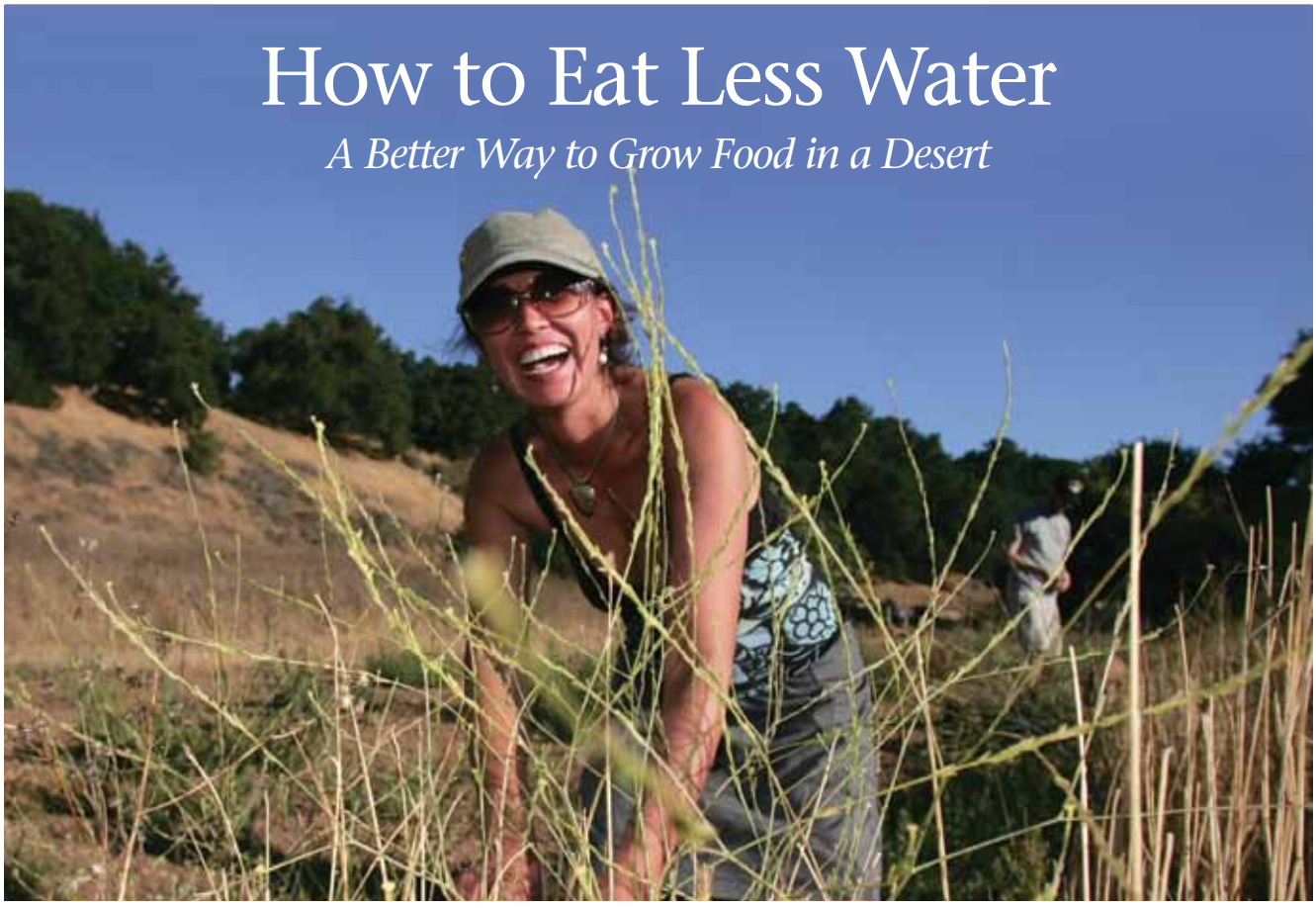
"If you ask them who in here can get a gun, in five minutes, all of them will raise their hands," she says. "It's a reality that lets us know how prevalent weapons are."

That prevalence is what Teens on Target is trying to fight against.

"To them, that's just the way it is," says Huntsman. "Once you educate them on all of these different areas of violence, they definitely become connected to the root causes and see that those causes really can be changed. It may not happen in their lifetime, it might take more work than they might have perceived, but it is possible." **CHR**

How to Eat Less Water

A Better Way to Grow Food in a Desert



BY HANNAH GUZIK

Nearly every afternoon this summer, Florencia Ramirez drove past the strawberries and lima beans growing in the Oxnard plain. Each time, she grew angry about what she saw.

As the plants gulped in the Southern California sun, high-powered sprinklers ricocheted over the fields, spraying water into the air during the heat of the day, when evaporation is at its peak.

In an area plagued with water shortages and droughts, Ramirez says, "some of the largest agricultural producers in the nation seemed to be using water with abandon."

"I couldn't believe it," she says. "We live in what is technically a desert, and I pass thousands of acres of farmland every day that are wasting a tremendous amount of water."

The Oxnard resident, who holds a master's degree in public policy from the University of Chicago, wondered if there was a better way. She began to research agricultural water use and stumbled upon the concept of dry farming—which relies only on precipitation to grow crops.

"I found out that even here, amidst all these irrigated farms, there are a few people dry farming, growing wheat, olives, even apricots, with limited water," she says.

Ramirez, whose friends aptly call her "Flo," is now turning her anger at water waste into action. She's writing a book aimed at consumers on how to "Eat Less Water," a trademark phrase she uses to explain the concept of conserving the natural resource through farming practices and grocery-buying habits.

Dry farming doesn't work in all locations or for all crops, but it can work successfully even in relatively dry climates, such as Southern California's, Ramirez says. And many of the principles of dry farming, such as paying close attention to weather and soil composition, can be applied to conventional farming to help save hundreds of thousands of gallons of water a year, she adds. Those plants that require more water, such as lettuce and many other vegetables, can be drip irrigated, instead of watered with sprinklers or by flooding a field.

Water experts predict that by 2025, Ramirez notes, two-thirds of the world will be experiencing water scarcity.

"We live in this illusion that we have enough water, but most places, like right here in Oxnard, are experiencing water deficits, which means we are using more than is naturally replenished each year," she says. "It's not sustainable."

The average American household uses 100 to 150 gallons of water daily, a huge amount compared to the four or five gallons an African family uses each day, Ramirez says. "But what we use on a daily basis really is a drop in the bucket compared to industrial use and the virtual water footprint of what we eat, drive

and wear, which is 1,100 to 1,300 gallons per day."

Seven out of every 10 gallons of freshwater on the planet are used to grow food, "so if we're going to have a true conversation about water usage, we have to talk about what we eat," Ramirez says.

The U.S. Department of Agriculture's organic certification doesn't include any stipulations on water usage, something Ramirez would like to see changed.

Dry-farmer John DeRosier grows primarily wheat, spelt, corn and a number of other grains on five parcels in Paso Robles. He says the key is creating rich soil by rotating crops and conserving moisture.

"That's absolutely paramount to the whole flow of the operation," he says. "Although it's called dry farming, it's ultimately water management. Instead of rainwater being stored in reservoirs or piped down from the delta, it's all stored in the subsoil."

Although dry farming sometimes results in smaller yields than conventional farming, DeRosier says his crops, particularly his tomatoes and watermelons, are much tastier because the sugars are concentrated and they're not waterlogged.

About 80 percent of the state's developed water supply goes to agriculture, says Katy Mamen, program director for Ag Innovations Network, a nonprofit that remains neutral on water usage but holds forums for farmers to dialogue on the issue.

Although curbing water runoff from farms can often help conserve water and prevent pesticides from traveling, it can also have negative effects, altering nearby ecosystems and resulting in less water seeping into the deep soil to recharge the groundwater, Mamen says.

"It's complicated, and real solutions have to be tailored to each individual farm," Mamen explains. "When we talk about water stewardship, there's not a one-size-fits-all approach."

Ramirez says her goal is to get consumers to push for water conservation by buying from dry farmers and growers at farmer's markets. From her kitchen in Oxnard's historic district, Ramirez serves meals made with ingredients grown on dry farms, and she's teaching local residents to do the same. She holds regular cooking classes and has a blog, eatlesswater.com.

At a recent pizza-making class, she told the dozen women gathered that 321 gallons of water are used to produce the ingredients in a typical Margherita pizza. That's 40 gallons a slice.

Adding toppings increases the water footprint even more, so Ramirez recommends adding in-season organic vegetables and other foods produced with limited amounts of water. She also encourages consumers to buy grains grown on dry farms and to buy organic foods, which don't leach pesticides into groundwater.

Ramirez is visiting dry farms across the country and writing about her experiences in her book, which she expects to be published in the coming year. The granddaughter of farmworkers, Ramirez says she feels that caring about land and water use is in her blood.

"I want to be a part of rewriting what our current story is when it comes to water on the planet," Ramirez says. "I want to do it for my kids, who are going to inherit this world." **CHR**

How to dry farm in your backyard

Dry farming, or growing crops without irrigation and using only precipitation, can be done on a small scale—right in your backyard.

In California, the easiest way to start is by dry farming vegetables in the winter, when the state receives the most rain, says John DeRosier, who dry farms on five parcels in Paso Robles.

"Paying attention to the climate and the weather is the foundation of dry farming, whether that's on an actual farm or in your backyard," he says. "I call it 'having a sense of place.'"

Prepare plots in the fall as you would for traditional gardening, breaking up the soil and raking it smooth.

Sow seeds right before forecasted rainfall so they receive an initial watering. Alternatively, you can start vegetables in pots, water them initially and then transplant them once they have sprouted.

Most winter vegetables, which are generally hardier than summer varieties, can be dry farmed, including kale, collard greens, carrots and beets.

After growing a winter crop, gardeners can try dry farming in the summer, a more difficult task in California, where the summers are typically dry and hot.

The most important step is preparing the soil, DeRosier says. In the spring, when your area is still receiving rain, work the top six to 10 inches of soil, making it easy for rain to soak deep into the ground.

Till the soil this way before or during each spring rain.

Once the rain stops falling, sow your seeds and leave the soil alone. In contrast to winter dry farming, seeds shouldn't be watered initially, because this tricks the seeds into thinking there will be plenty of water available throughout the growing season.

The best varieties for summer dry farming are watermelon, cucumber, tomato and squash, including butternut and pumpkin.

— By Hannah Guzik

Policy Rx

A Q&A with Dr. Richard Pan

Assemblyman Richard Pan (D-Sacramento), who is also a pediatrician and holds a master's in public health, is the new chairman of the Health Committee. He recently sat down in his Capitol office with California Health Report editor-in-chief Daniel Weintraub to talk about his priorities and how his medical training influences his legislative agenda.

Daniel Weintraub: What are your priorities as Health Committee chairman?

Richard Pan: We're coming up to 2014. There's a lot more work to do for implementation of the Affordable Care Act.

Although on Jan. 1, 2014, we're not going to have a whole health-care system that emerges like Athena from Zeus's head, where it's all been worked out. It's the beginning of a transition that's going to take place, not only for the coverage and the plans and the exchanges and so forth, but we are also talking about a transformation in health-care delivery.

So we have an individual market reform bill we need to do, working with the Senate and the administration. We have to deal with Medicaid expansion, and I realize there's some fiscal concerns the administration is looking at. And we're going to be going back and forth on that.

Those are probably the two big tasks.

But to me, what we also need to think about is how to create a health-care environment in which the people who are operating within the health-care system—the plans, the hospitals, the physicians--take cost-effective, high-quality care to people when they need health care [and] that you get rewarded for doing that. That's the best way to become successful. And everyone spends their time and energy and mental focus trying to figure that problem out.

We need to have an environment where that happens, so people are working to try to solve these problems, how to take care of people with chronic illness, how to create better systems of care.

Dr. Pan sees patients.

Weintraub: How is the system focused now?

Pan: We have a system currently that's focused overly on basically process, visits and procedures. That's what we get paid for. When you get paid for basically piecework, it tends to overdrive utilization, and while people get access to these visits and procedures, it does not necessarily lead to better outcomes. The payment is oriented toward doing things, not toward doing things at the right time at the right place.

Weintraub: You are believed to be the first physician to serve as chairman of the Assembly Health Committee. What does your experience help you bring to that job?

Pan: We have a lot of very good, smart [staff] people here who are more knowledgeable than I am about the laws, the regulations, how state government is organized, how all of that works. And how we make something happen in the state, the different levers of the agencies, the regs, those details.

The part I bring that the staff don't have is the on-the-ground experience of being in practice and having to sit there with a family and explain why it is taking so long to get the hearing test when their kid has speech delay, when I had to fill out a bunch of paperwork and we are still waiting to hear from the state whether it's been approved or not.

I also have a background in public health, in population health and statistics and epidemiology. So I know what it's like on the individual basis but also on the population basis, what is the potential impact from that perspective. Putting the two together hopefully will lead to a better outcome.

I can take a look at a policy someone is proposing and say, 'How would that really work for someone who has to actually work with that policy?'

I'm not saying no one else can do this. But certainly one of the things I am going to be asking is how does this translate on the ground for the physician, the nurse practitioner, the dentist. I know what it's like to be in those shoes.

Once you explain it to me, I am going to put my practitioner hat on and say, 'That makes sense,' or 'That doesn't make sense. I don't see how that's going to work when I have to be down there.' To be able to raise those kinds of questions will, I hope, make better policy. ***CHR***

DANIEL WEINTRAUB

How California beat down whooping cough

California government has a reputation, rightly deserved, for being dysfunctional. Voters rank legislators down there with car salesmen on the trust scale.

So it's worth taking notice when the state does something right, especially when it happens in a matter of life and death. That was the case with California's response to an epidemic of pertussis, better known as whooping cough. The nasty respiratory infection can last for months and is sometimes deadly, especially in infants, who typically don't get immunized until they are 3 months old.

The illness cycles through the population on a somewhat regular rhythm, with peaks every three to five years. So it did not come as a shock to doctors at the state Department of Public Health when they got a call early in 2010 from staff at a children's hospital in Madera County. We just want to make sure, the caller said, that you know about this spike in whooping cough that we've been seeing.

Pertussis, a reportable disease, would have come to the attention of health officials in Sacramento in due course. But the phone call let them know what was coming and speeded up the response.

"We hopped on that right away," Dr. John Talarico, who heads the department's immunization branch, told me in an interview. By then, however, the disease was already in full flower across most of California. It would become the most serious outbreak in 50 years.

The severity of the epidemic seemed tied to a vaccine introduced in the 1990s. The new drug replaced one that was effective but was the subject of complaints about side effects, including high fevers and seizures. The new vaccine had fewer side effects, but it also wore off more quickly. Unlike immunizations for measles, the whooping cough vaccine does not last a lifetime.

As a result, even children who had received a full series of five vaccinations before starting kindergarten were coming down with the disease a few years later, when they should have still been protected.

People were still more likely to get the disease if they had not been immunized, but the number of victims who had been fully vaccinated surprised many experts. One study in Marin County found that 80 percent of those with whooping cough in 2010 had been vaccinated.

Once the magnitude of the problem became clear, the Department of Public Health swung into action with a massive public information campaign warning Californians about the epidemic and encouraging people to be vaccinated, increased awareness of the epidemic among practitioners and offered free vaccines to local health departments and hospitals.

In a key move, the state also expanded the population targeted for vaccines to include seniors, children between 7 and 10 years old who had not completed the vaccination series already, and women of childbearing age before, during or after pregnancy. This was an important move because infants who have not yet been immunized are at the greatest risk for catching the disease, and they usually get it from their mother or another close relative.

It took some time for all of these moves to penetrate doctor's offices, clinics and hospitals across the state. Meanwhile, the epidemic gained strength. Before the year was over, more than 9,000 people would be infected, and 10 infants were dead. Only one had been vaccinated—and that was a baby who had been born premature at 28 weeks gestation.

But the epidemic peaked in July of 2010. There has not been a death attributed to the disease since October of 2010.

Unfortunately, much of the rest of the country is now going through what California experienced two years ago. Learning from California's misery, other states are implementing many of the same strategies that helped to end the epidemic here. National guidelines for immunizations have also been tweaked to reflect the lessons learned in California.

It's reassuring to know that although California led the nation going into this epidemic, the state's public health establishment reacted quickly and effectively. And now other Americans might benefit from our experience. *CHR*

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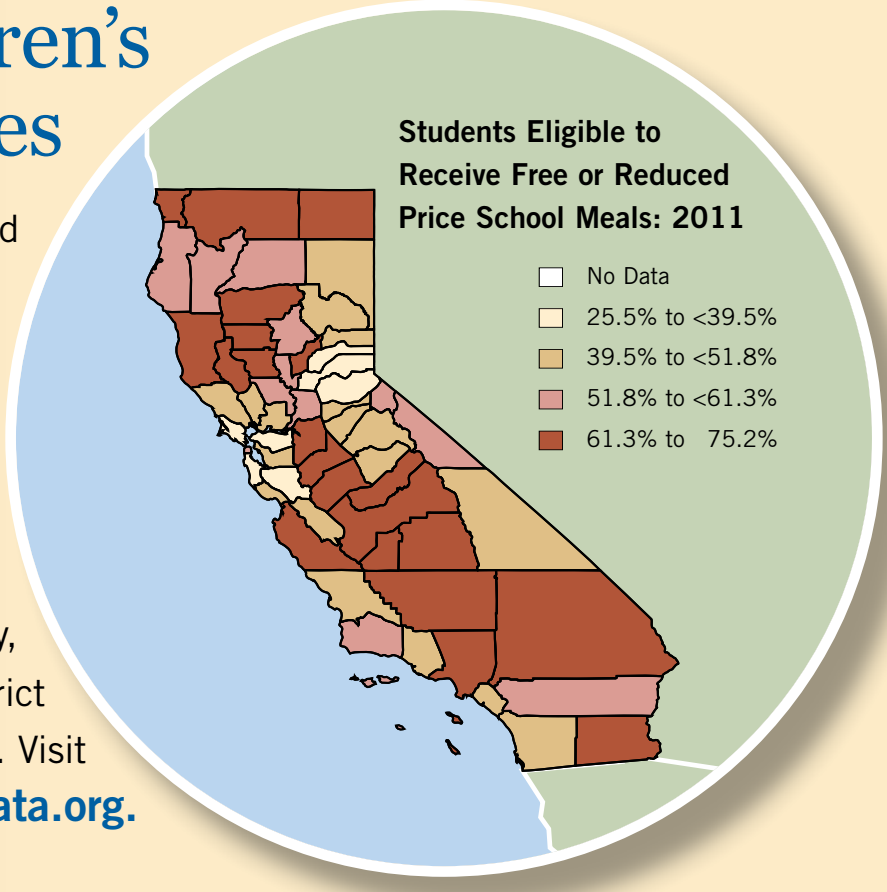

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The SCAN Foundation Presents

10 THINGS YOU SHOULD KNOW

ABOUT AGING WITH DIGNITY AND INDEPENDENCE

Aging with dignity and independence is the ability to live life to its fullest in the place you call home, regardless of age, illness, or disability.

1. Most of us will need a little bit of help to get by as we get older.
2. Most of us are not prepared to pay for care.
3. Supportive services can be really expensive.

This free publication, **"Ten Things You Should Know About Aging with Dignity and Independence"** comes with five steps you can take to be ready in case you or someone you love needs help.

Visit us at www.TheSCANFoundation.org to download this free publication.

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