

In an ancient Greek fable, Eos, the beautiful goddess of the dawn, falls deeply in love with the warrior Tithonius. Distraught over his mortality, she goes to Zeus's chamber to request a special favor: She wants to love Tithonius until the end of time and begs Zeus to grant her lover immortality. "Are you certain that is what you want for him?" Zeus challenges. "Yes," Eos responds.

As Eos leaves Zeus's chamber, she realizes in shock that she forgot to ask that Tithonius also remain eternally young and healthy. With each passing year, she looks on with horror as he grows older and sicker. His skin withers and becomes cancerous. His organs rot, and his brain grows feeble. As the decades pass, Tithonius' aging body becomes increasingly frail, yet he cannot die. Ultimately, the once-proud warrior is reduced to a collection of pained, foul, and broken bones — but he continues to live forever.

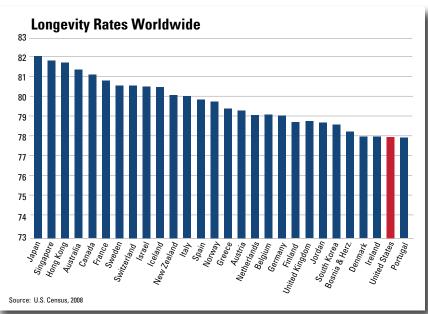
Tithonius' story is a fitting allegory for what is occurring in our health care system today. Until recently, most people died swiftly and relatively young of infectious diseases, accidents, or in childbirth. During the past century, however, health care breakthroughs have eliminated many of those threats. The death rate from tuberculosis, one of the leading causes of premature death a century ago, has been reduced by more than 99 percent. Measles and streptococcal infections have been transformed from killers into childhood annovances. Pneumonia and influenza are no longer fatal by themselves. Whooping cough and syphilis, once major epidemic diseases, now kill fewer than 1 in 200,000 people. Typhoid and diphtheria no longer kill Americans at all.1

At the beginning of the 20th century, the overwhelming majority of deaths were due to infectious diseases while by the end these caused fewer than 4 percent. As a result of these advances, we are creating — for the first time in history — a mass population of long-lived men and women. But what kind of long life have we created? Although we've managed to prolong the lifespan, we have done far too little to prolong the health span. One century ago, the average adult spent only 1 percent of his or her life in a morbid or ill state; today's average adult will spend more than 10 percent of his or her life sick. While in the 20th century we added 29 years to the average life expectancy, for too many older adults the later years are a time of illness, pain, disability, and suffering.

Health and Longevity: B-

According to information from the U.S. Census Bureau's International Database, 49 countries can boast a higher life expectancy than the U.S., ranging from Andorra, to Japan, New Zealand to South Korea.²

Our relatively mediocre rating is not because of inadequate funding.³ Each year the U.S. devotes an increasing percentage of its resources to health care. In 1960, health care expenditures were 5.2 percent of the gross domestic product (GDP); by 1990 they had more than doubled to 12.2 percent of the GDP. At 13.5 percent in 1996 (about twice that of Japan), health care spending in the United States passed the trillion-dollar mark for the first time. In 2010, health care spending in the U.S. was estimated at 17.6 percent of the GDP. A recent report from the Executive Office of the President's Council of Economic Advisors notes that if current trends continue, health care could consume an unmanageable 21.4 percent of the GDP by the year 2020, 28 percent by 2030, and 34 percent by the year 2040. Tithonius' revenge threatens not only our personal happiness, but our national economy as well.



Demography is Destiny: The Age Wave Changes Everything

As we might expect, a disproportionate share of these resources is spent on trying to treat the diseases of our aging population. In fact, according to data from the Centers for Disease Control and Prevention's (CDC) National Center for Health Statistics, the roughly 13 percent of our population aged 65 and over accounts for some 27 percent of all doctor's office visits, 38 percent of all hospital stays, and 45 percent of in-hospital days of care.⁴

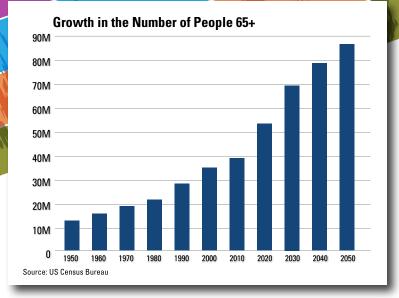
Our health care challenge is, without a doubt, a demographically driven phenomenon. And this challenge will steadily spiral upward with the aging of the boomer generation.

¹ The World Almanac and Book of Facts 1998

² U.S Census Bureau: International Data Base; Central Intelligence Agency: The World Factbook

³ Centers for Medicare & Medicaid Services: National Health Expenditure Data; Executive Office of the President, Council of Economic Advisors: The Economic Case for Health Care Reform (June 2009)

⁴ Health Statistics. Health, United States, 2010: With Special Feature on Death and Dying. (Centers for Disease Control and Prevention's National Center for Health Statistics 2011); CDC/NCHS data chart 2009--Number of days of care for discharges from short-stay hospitals, by ICD-9-CM code of first-listed diagnosis, sex, age, and geographic region: United States



In 1946, America experienced a demographic quake that would last 18 years. After dropping for centuries, from nearly seven births per woman in the late 1700s to 2.1 in the 1930s, the U.S. birth rate rose to 3.8 in a postwar fertility boom that produced 76 million children — nearly one third of the U.S. population — between 1946 and 1964. What began as a baby boom is now rising up into an "age wave" destined to crash across society's shores — transforming everything in its path.

When the leading edge of the baby boom first arrived, America and its institutions were entirely unprepared. Waiting lists developed at hospitals across the country; facilities and staff were inadequate; and in some hospitals, hallways were used as labor rooms. Similarly, apartments and homes didn't have enough bedrooms for rapidly expanding families; there was a shortage of baby food and diapers; and department stores couldn't keep enough toys in stock to meet the multiplying demand. When the boomers took their first steps, the shoe, photo, and Band-Aid industries skyrocketed. Similarly, sales of tricycles, Slinkies, and Hula Hoops exploded as the marketplace was flooded with products for kids.

The boomers have dominated American culture for six decades. Every time they've taken a step, the spotlight of the media has swiveled to illuminate them. The massive numbers of this cohort have amplified the importance of whatever experiences they've had at each new moment in their lives. Just as surely as they learned to use a baby bottle, they learned to read, to play records, to buy cars, to vote, to buy and remodel homes, and to invest in the stock market.

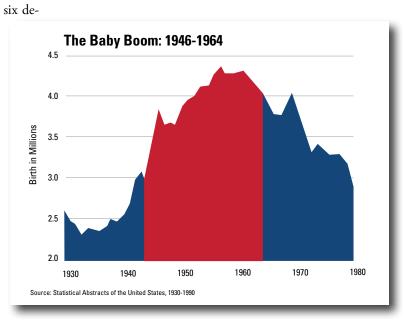
When boomers reach any stage of life, the issues that concern them, whether financial, interpersonal, or even hormonal, become the dominant social, political, and marketplace themes of the time. And, as we have repeatedly seen, boomers don't just populate existing life stages or consumer trends, they transform them.

Some examples:

- Boomers didn't just eat food they transformed the snack, restaurant, and supermarket industries.
- Boomers didn't just wear clothes they transformed the fashion industry.
- Boomers didn't just buy cars they transformed the auto industry.
- They didn't just date they transformed sex roles and practices.
- They didn't just go to work they transformed the workplace.
- They didn't just get married they transformed relationships and the institution of the family.
- They didn't just borrow money they transformed the debt market.
- They didn't just go to the doctor they transformed health care.
- They didn't just use computers—they transformed technology and its role in our lives.
- They didn't just invest in stocks they transformed the investment marketplace.

Whereas the 20th century belonged to the young, the 21st century will be ruled by the old — the "new old." Are we prepared? Our nation is on the brink of unprecedented social and political challenges that pose new questions, requiring a host of new solutions:

Can our country afford to have tens of millions of us living to 80? Or to 100?



- What will be the impact of four- or five-generation families?
- Are we prepared to spend more years and dollars caring for our aging parents than for our children?
- With breakthroughs in longevity, at what age should we be considered "old" and therefore eligible to retire and receive old-age benefits?
- Will existing entitlement programs survive long enough for young generations to reap even part of what they have been paying in?
- Can our current health care system handle the onslaught of chronic degenerative diseases, such as Alzheimer's?
- How will we come to terms with "right-to-a good-death" issues?

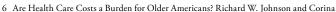
On January 1, 2011, the first baby boomer turned 65. Now that members of this youth-oriented generation are migrating into Medicare territory — the panic alarm button has been hit. And for good reason.

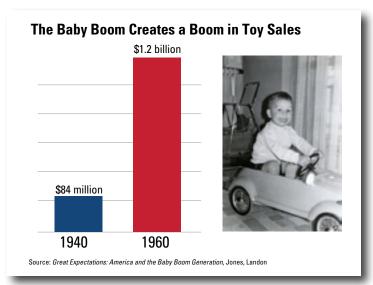
How Can We Possibly Pay for All This?

On the eve of the New Deal, all levels of government spent roughly \$1 a year on health care for the average older American. By 1965, when Medicare was launched, the figure had risen to roughly \$100 per year (\$692.63 in 2010 dollars). A 2010 report from the Henry J. Kaiser Family Foundation shows that since its inception, per capita Medicare spending has multiplied more than 80 times, to an average of \$8,344 per beneficiary. As we will see, however, these expenditures are wildly misdirected.

The true costs of aging-related health care go far beyond government entitlements. Medicare only covers about 50 percent of a typical elder's health care costs and doesn't even reimburse for many of the expenses associated with either disease prevention or long-term care. Medicare will cover the high cost of a quadruple bypass, but generally will not reimburse for inexpensive services to help prevent heart disease through proper nutrition and other changes in lifestyle. And while Medicare is quick to cover most hospital costs, it only covers a fraction of home-based care. In addition to public funding, older people themselves pay premiums for supplemental insurance, cost-share, and deductibles, and for such items as uncovered services and devices as well as prescription drugs, all of which cost some \$3,000 a year on average and can go up to \$5,000 or more, according to a report from the Urban Institute. And even though







nearly two thirds of elders will need long-term care at some point in their lives, with the average extended nursing-home stay of three years, which for a semi-private room can cost more than \$200,000,⁷ Medicare pays for only about 20 percent of such services. Aging can be very expensive!⁸

Misguided Medicare

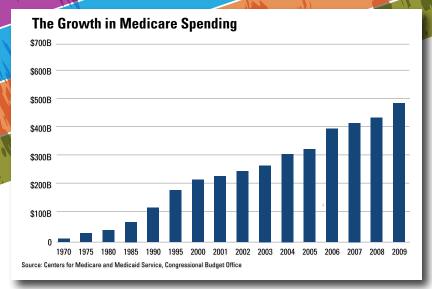
A very big part of the problem lies in the fact that we now have the wrong health care system for our new aging-related needs. Over the past century, we have built an approach to health care that is excellent at diagnosing, treating, and reimbursing the kinds of acute illnesses that beset infants, children, and young adults. Ironically, the successful advances in medical diagnostics, pharmaceuticals, surgical techniques, and nutrition have eliminated many of the problems that once caused people to die young, enabling millions of men and women to live longer lives with chronic conditions. We have produced legions of long-lived elders who struggle with exactly those health problems — heart disease, cancer, Alzheimer's, stroke, diabetes, arthritis, osteoporosis — that modern health care is ill-prepared to handle.

Our scientific research priorities are misaligned with the diseases of aging; health care professionals are not skilled in geriatric medicine; our financing mechanisms do not emphasize the prevention or cost-effective treatment of age-related illnesses; our long-term care services are undeveloped and fragmented; care at home — which often isn't even included in the health care continuum — is the obvious missing link in an aging-related health care system; and our discomfort with the dying process is creating a tragic and costly conundrum. Medicare is based on an acute-care model most appropriate for the young. We are spending enormous sums of money on the wrong things and, not surprisingly, the results are both mediocre and costly.

Mommaerts brief series #26 (2009)

⁷ America's Senior Choice (website) Long Term Care article: http://www.americassenior-choice.com/longterm.html; National Clearinghouse for Long-Term Care Information, Cost of Long-Term Care (Modified 10/22/2008)

⁸ National Clearinghouse for Long-Term Care Information, Overview (Modified 5/12/2010)



Unless We Course-Correct, There's a Health Care Train Wreck in Our Future

Why am I so concerned — even frightened — about how our system handles our elders? Because I have seen the future, and you can see it, too. Don't go to the NASA exhibit in Washington, DC, to Epcot in Orlando, or to the AgeLab at MIT. To see the future, visit your local nursing home. Take a walk around. Look at the residents.

While who we will be at 70 or 90 can sometimes be seen on tennis courts or golf courses or in friendly McDonald's ads, many of the elder versions of ourselves lie suffering in long-term

care establishments. After you've witnessed the enfeeblement and dementia of the elder residents, take a close look at the personal photographs that sit on their night tables. You'll notice that when they were your age, they looked a lot like you do now. They were attractive, loving adults surrounded by family members and friends — just like in the pictures you might have taken last summer. Somewhere in the later years of their extended lives, however, they succumbed to diseases that nobody cared enough about to prevent, cure, or humanely care for.

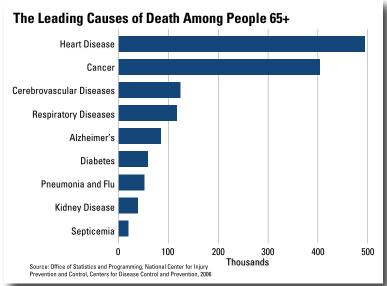
According to the CDC, 86 percent of the 65+ population have one or more chronic disease, 56 percent have two or more, and 42 percent of Medicare enrollees have problems that limit their ability to perform one or more activities of daily living (ADLs).

The more troublesome challenges ahead, however, are largely due to the rising incidence of the often untreatable diseases among the oldest old. Although some of today's 85+ population are fit and independent, the dementia rate at this stage in life has reached a horrifying 47 percent. In 1900, there were only 122,000 people aged 85+ in the United States. In 1900, there were 4.2 million (as many as there

were total Americans in 1800), representing an increase of 3,300 percent. In 2010, there were nearly 6 million.

The cost of our unpreparedness for the health impacts of the age wave is already staggering:¹¹

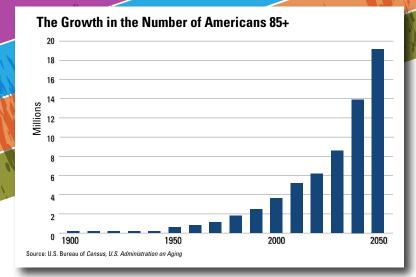
- Heart disease accounts for more adult deaths than all other causes. ¹² Cardiovascular disease cost our nation an estimated \$503 billion in direct and indirect costs in 2010. About one in three men and one in three women suffer from some form of cardiovascular disease, such as angina, arteriosclerosis, congestive heart failure, and stroke.
- About 78 percent of all cancers are diagnosed in Americans 55 and older, and 54 percent of cancer patients are 65+. The National Institutes of Health (NIH) estimates that 2010 cancer costs were \$263.8 billion, accounting for 8.5 percent of the total economic cost of illness in the United States. While the overall risk increases with age, some types, such as prostate cancer, are particularly predatory among older adults.
- Strokes are the third leading cause of death, and those who survive are usually left disabled.¹⁴ Strokes are the leading cause of disability in adults in the U.S. Strokes



- 11 National Center for Health Statistics. Health, United States, 2009: With Special Feature on Medical Technology, (2010)
- 12 Heart Disease & Stroke Statistics, American Heart Association (2010 update); Women and Heart Disease Fact Sheet, Centers for Disease Control and Prevention; Heart Disease in Men, Centers for Disease Control and Prevention; Cardiovascular Disease Cost, 2009: American Heart Association (2009); Heart Disease and Stroke Prevention Addressing the Nation's Leading Killers: At A Glance 2011, National Center for Chronic Disease Prevention and Health Promotion (Updated July 21, 2010)
- 13 Cancer Facts & Figures 2010, American Cancer Society (2010); National Heart, Lung and Blood Institute , (2009 Fact Book)
- 14 Stroke Statistics, The University Hospital, University of Medicine & Dentistry of New Jersey; Stroke in Michigan, Michigan Department of Community Health, (July 2006); Heart Disease and Stroke Statistics, American Heart Association (2007 Update)

⁹ Alzheimer's Disease Facts and Figures, Alzheimer's Association (2010); Alzheimer's Association, Alzheimer's Disease Risk Factors (Updated 6/7/2011); Mayo Clinic, Alzheimer's Disease March 31, 2011

¹⁰ United Nations, Department of Economic and Social Affairs, Population Division, World Population Prospects: The 2008 Revision, New York (2009)



alone result in health care costs of some \$63 billion annually.

- About one quarter of Americans have some type of musculoskeletal disorder, such as arthritis, which affects some 20 million seniors, or osteoporosis and low bone mass, which is currently estimated to affect over 35 million women over age 50 and about 17 million men, and leads to more than 300,000 hip fractures each year. For 2010, the estimated direct and indirect costs of all musculoskeletal diseases were \$155.7 billion.
- Today, an estimated 5.3 million Americans, and 5.1 million aged 65 and over suffer from Alzheimer's disease.¹⁶ The annual costs of Alzheimer's and other dementias in 2010 are estimated to be more than \$170 billion and rising swiftly.

Alzheimer's: Elderly AIDS

In old-age homes and retirement communities, I have often heard Alzheimer's referred to as "elderly AIDS." This disease, one of the most prevalent among the very old, could become the sinkhole into which the 21st century falls. Although non-infectious, Alzheimer's is a degenerative disorder that steadily robs its victims of memory and judgment, leaves patients unable to carry out the most basic functions on their own, and ultimately destroys the brain. Alzheimer's seldom occurs before middle age, but after age 65 its likelihood doubles about every five years — and past the age of 85, the incidence is a terrifying one in two! Currently, Alzheimer's is 100 percent incurable — and strikes people down regardless of their gender, lifestyle, or education level. Alzheimer's will not be beaten by doing crossword puzzles or by exercising regularly: it will be beaten in the lab.

15 The Burden of Musculoskeletal Diseases in the United States (2008); Prevalence Report, National Osteoporosis Foundation; National Heart, Lung and Blood Institute, (2009 Fact Book); Arthritis-Related Statistics, Centers for Disease Control and Prevention (Updated 10/20/2010); National Osteoporosis Foundation, Fast Facts (2006)

16 Alzheimer's Disease Facts and Figures, Alzheimer's Association (2010), (2011); Changing the Trajectory of Alzheimer's Disease, Alzheimer's Association press release (May 2010)

17 Alzheimer's Disease Facts and Figures, Alzheimer's Association (2010); Alzheimer's Association, Alzheimer's Disease Risk Factors (updated 6/7/2011); Mayo Clinic, Alzheimer's Disease (March 31, 2011)

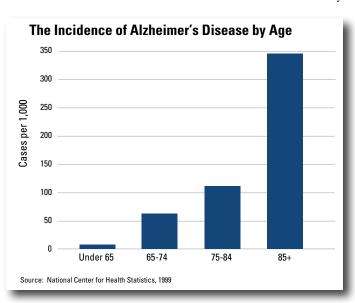
When I was around 30 years old I collaborated on a book with Dr. Jonas Salk. One evening over dinner, he shared with me the fact that during the 1940s America was terrorized by the spread of polio. Many well-intentioned people felt that the solution was to ramp up the iron-lung industry. Salk disagreed 100 percent. He felt that what we really needed to do was wipe the disease out! And luckily for the world, he had his scientific breakthrough in 1953. We must do the same thing with Alzheimer's.

Already, American families spend \$172 billion per year from personal savings and in taxes through Medicare and Medicaid to care for those with Alzheimer's. Given the growth in these costs due to

baby boomer aging, in 10 years, generations of Americans will experience immeasurable suffering and spend over \$2 trillion per year on Alzheimer's care, while research on promising treatments will receive under \$5 billion during that same period of time. For America's political leadership to allow this situation to remain unaddressed is, at best, penny-wise and pound-foolish, and, at worst, an abdication of their responsibility to the American people.

Compare that strategy to the one our country undertook to attack HIV/AIDS. It took roughly 10 years of sustained investment (roughly \$30 billion) starting in the mid-1980s to lead to synergistic antiretroviral therapies that by the mid-1990s turned HIV from a terminal to manageable disease. Deaths and the suffering associated with AIDS plummeted from 50,000 in 1995 to 15,000 in 2007. And while the pathologies of AIDS and Alzheimer's surely differ, the effect of sustained research funding is the same: it creates exponential research progress and this scientific compounding leads to major breakthroughs. Today, NIH funding for HIV/AIDS research is roughly \$3 billion a year, compared to Alzheimer's funding of only \$470 million.

Without advances in the battle against Alzheimer's, breakthroughs that postpone or eliminate heart disease, cancer, strokes, diabetes, or other terminal illnesses will inadvertently





be creating longer-lived but demented men and women. Unless a cure or treatment is found in our lifetimes, it is estimated that 15 million boomers and generation Xers will be stricken with "elderly AIDS" by the middle of this century. And where the average duration of Alzheimer's before death is currently 8 to 10 years, improvements in other areas of medicine could wind up extending this to 15 to 20 years.

AIDS activists were a key reason America's political leadership committed to increased and sustained funding for HIV/AIDs research. If we care about our own futures and the futures of our families, it is imperative that we commit the talent, energy, and financial resources needed to treat and, if possible, eliminate the debilitating diseases of late life. Unless we intervene, and soon, the horrors of Alzheimer's, heart disease, cancer, stroke, osteoporosis, and arthritis, with all their pain, suffering, and expense, will be our legacy.

Curing, Caring, Connecting: The Five-Part Solution

Yesterday's health care system is badly out-matched when squaring off with today's and tomorrow's demographically-driven problems. Additional funding alone will not solve the problems. Rather, by redirecting the priorities and resources of this system, we could be producing much healthier elders and greater longevity — and for a lower cost than we are now spending.

If we are to solve these problems before reaching an era of crushing chronic-disease pandemics, we must:

- Commit greater attention and resources to the scientific research required to cure, delay or, if possible, eliminate the diseases of aging.
- Provide the academic training and continuing education to

ensure that health care professionals are fully competent at meeting the needs of our aging population.

- Make disease prevention and self-care a national priority.
- Wherever possible, shift our focus to home-based care: the missing link.
- Establish a more humane, respectful, and cost-effective approach to death and dying.

Solution #1: Promote Scientific Research Needed to Delay or Eliminate the Diseases of Aging

As we age, the risks for many disorders — from arthritis to cancer to heart disease — increase.¹⁹ What if we could compress the various diseases of old age into the shortest possible time at the very end of life? An emerging vision in the global scientific community posits that the goal of research should be to delay or prevent aging-related diseases rather than find ways to treat them after the fact with expensive therapies and technologies. If we could postpone or prevent any of the painful, costly diseases of old age, millions of older men and women would look, feel, and act years younger and trillions of dollars could ultimately be saved.

To envision an aging process freed of protracted disease, gerontologists like to refer to Oliver Wendell Holmes's 1858 poem, "The Deacon's Masterpiece," in which he describes the creation of a "Wonderful One-Hoss Shay" that remained vital and sturdy for one hundred years and a day — and then disintegrated all at once:

Have you heard of the wonderful one-hoss shay, That was built in such a logical way It ran a hundred years to a day...

Now in building of chaises, I tell you what, There is always somewhere a weakest spot,— In hub, tire, felloe, in spring or thill, In panel, or crossbar, or floor, or sill, In screw, bolt, thoroughbrace,—lurking still, Find it somewhere you must and will,— Above or below, or within or without,— And that's the reason, beyond a doubt, A chaise breaks down, but doesn't wear out....

So the Deacon inquired of the village folk Where he could find the strongest oak, That couldn't be split nor bent nor broke,—

¹⁹ Arthritis Risk Factors, Centers for Disease Control and Prevention, (August 2010; National Institute on Aging (updated August 6, 2009)

That was for spokes and floor and sills; He sent for lancewood to make the thills; The crossbars were ash, from the straightest trees; The panels of white-wood, that cuts like cheese, But lasts like iron for things like these...

Colts grew horses, beards turned gray, Deacon and deaconess dropped away...

There are traces of age in the one-hoss shay, A general flavor of mild decay...
All at once the horse stood still...
Then something decidedly like a spill,—
And the parson was sitting upon a rock...

—What do you think the parson found, When he got up and stared around? The poor old chaise in a heap or mound, As if it had been to the mill and ground! You see, of course, if you're not a dunce, How it went to pieces all at once,—All at once, and nothing first,—Just as bubbles do when they burst.

It's unlikely that, like Holmes's perfectly built carriage, we will ever be able to condense the disease process to the final days of life. Yet consensus is emerging among leading medical researchers that vigorous efforts in both the public and private sectors could lead to breakthroughs in the bio-sciences which would allow us to conquer at least some of the age-related diseases and thereby produce long-lived and healthy elders.

For example, it is estimated that postponing the onset of Alzheimer's disease by five years would reduce the incidence of this disease by an amazing 50 percent and cause half of all the nursing-home beds in America to empty.

Insufficient Funding Will Produce a Dark Tomorrow

The meager dollars that have been committed to battle the diseases of aging, however, will definitely not be enough to finish the job in our lifetimes. It is estimated that men and women over 65 already consume at least a third of all health care, approximately \$800 billion. Yet in 2010 the NIH spent only about 11 percent of its \$31 billion research budget for aging-related research and less than a third of this 11 percent went to the National Institute on Aging. Most of the funds for aging research came through other NIH institutes and research centers

20 The Rising Burden of Health Spending on Seniors, by Liqun Liu, Andrew J. Rettenmaier and Zijun Wang, National Center for Policy Analysis, (February, 1, 2007); Centers for Medicare & Medicaid Services: National Health Expenditure Data, NHE Fact Sheet (2009, last modified June 2011); U.S. Health Care Costs, by Eric Kimbuende, Usha Ranji, Janet Lundy, and Alina Salganicoff, Kaiser Family Foundation. (Updated: March 2010); NIH Budget, National Institutes of Health, (Reviewed May 23, 2011); Health Spending Rises in 2008, but at Slower Rate, by Robert Pear, The New York Times, (January 4, 2010); Despite Aging Baby Boomers, N.I.H. Devotes Only 11 Percent to Elderly Studies, by Milt Freudenheim, The New York Times, (June 28, 2010)

(there are 27 total institutes and research centers).²¹ The bottom line: for every dollar that we spend treating the chronic diseases of aging, we spend less than a penny trying to prevent them. This short-term orientation is both expensive and foolish.

The explanation for these lopsided commitments is sociologic and political as well as economic. As a keynote speaker at both the 1995 and 2005 White House Conferences on Aging, I was dismayed to learn that most of the powerful senior lobbying groups would prefer that nearly all available health care-related tax dollars go to helping them receive more services today. Numerous outspoken seniors at the conferences argued — to a very positive reaction from a majority of the delegates — that they'd rather keep the funding aimed at current entitlements from which they will personally benefit, rather than investing in "unknown" future breakthroughs that might occur beyond their lifetimes. Correspondingly, politicians have learned that it's much easier to garner votes by promising short-term benefits than by emphasizing longer-term — and somewhat uncertain — outcomes. The tragedy is, if such political shortsightedness continues our futures will be ruined by epidemics of chronic diseases that we could have prevented.

In May 1961, President John F. Kennedy looked to the sky and stated, "I believe this nation should commit itself, before this decade is out, to landing a man on the moon and returning him safely to earth." Remember how we mobilized all of our science and energy to realize that dream eight years later? Remember how all the excitement — fed from everyone from high school science teachers to the media — aided its realization?

Similarly, in order to avert the chronic disease epidemics looming in our future, we must establish an overarching, long-term commitment to replacing unhealthy aging with healthy aging and invest the resources — human and capital — needed to realize this goal, before the threat becomes a reality and we drown in our own short-sightedness.

Solution #2: Needed: Competent, Aging-Ready Health Care Professionals

A 2006 study in the journal *Age and Ageing* reported that more than half of all medical schools in the United Kingdom had a department of geriatrics.²² Here in the U.S., among more than 130 MD or DO granting institutions, there are only 13 full departments of geriatrics, including: Mount Sinai School of Medicine in New York, the Donald W. Reynolds Institute on Aging at the University of Arkansas for Medical Sciences, and the University of Oklahoma College of Medicine. Instead, most schools offer some type of section, division, or institute method for training doctors in elder care. However, while a

²¹ Health Spending Rises in 2008, but at Slower Rate, by Robert Pear, The New York Times, (January 4, 2010); Despite Aging Baby Boomers, N.I.H. Devotes Only 11 Percent to Elderly Studies, by Milt Freudenheim, The New York Times, (June 28, 2010); NIH Devotes Only 11% of Budget to Elderly Studies, Editorial Staff, Retirement Income Journal, (June 30, 2010)

²² Survey of training in geriatric medicine in UK undergraduate medical schools, by Lisa Bartram, Peter Crome, Adrian McGrath, et al, Oxford Journals, Medicine, Age and Ageing, Volume35, Issue5, Pp. 533-535 (September 2006); Association of American Medical Colleges; Association of Directors of Geriatric Academic Programs, Academic Geriatric Programs (ADGAP) in Allopathic Medical Schools 2008-2009 (ADGAP) Database Project, 2008)

Yesterday's health care system is badly out-matched when squaring off with today's and tomorrow's demographically-driven problems.

2008 report showed that 85 percent of medical schools offered an elective course in geriatrics, only 2.4 percent of students took a course on the topic.

Although hard to imagine today, before the boomers came along, pediatrics was not considered a valid subspecialty of medicine. As this boom becomes an age wave, we'd all benefit if geriatrics came alive — and soon! Geriatric medicine is not new, but rather has been hovering at the margins of medicine for a century. The term "geriatrics" was actually coined at the beginning of the 20th century by Austrian-born physician Ignatz L. Nascher, who practiced medicine in New York City. By Nascher's definition, geriatrics concerns itself with the "preventive, therapeutic, and research aspects of aging-related diseases and conditions." Geriatrics has evolved during this century to encompass the complex needs of older patients, and today there is a strong emphasis on maintaining functional independence, even in the presence of chronic diseases. Yet in closed-door Age Wave focus groups with physicians, I have repeatedly heard doctors lament the high incidence of what they embarrassingly call "do-overs." Regardless of how well-intentioned they might be, because of limited geriatric training, physicians make millions of mistakes: misdiagnoses, inappropriate surgeries, and complications due to mismanaged polypharmacy. Then, when the outcomes are poor, physicians have to "do over" their intervention strategy and hope for better results. All of these errors, no matter how good the intentions behind them, take their toll — physically, socially, and economically.

If we are to clean up this mess, geriatric competencies are absolutely required — across the board. According to the Alliance for Aging Research, a bipartisan, not-for-profit organization in Washington, D.C., "If access to geriatrics-oriented physicians and health care personnel were more widely available, more older people would benefit from improved health status, enhanced personal independence, and a substantially lower rate of institutionalization." The late Dr. Robert Butler, founding

director of the National Institutes on Aging and Pulitzer Prizewinning author of *Why Survive?: Growing Old in America*, strongly agreed: "The result would be a much healthier population of older Americans; dramatically lowered medical, social service, and long-term care costs; and, as a result, a more vital, financially secure 21st century."

With the coming age wave, we should be preparing armies of "aging-ready" health care professionals.23 We are not. The American Medical Association (AMA) states that there are more than 814,000 licensed physicians in our country. But according to the American Geriatrics Society Geriatrics Workforce Policy Center (AGSGWPC) there are currently only about 7,000 board-certified geriatricians and 1,700 board- certified geriatric psychiatrists — less than 2 percent. According to the Alliance for Aging Research, the projected need for geriatricians is 36,000 by 2030. Age Wave research has repeatedly uncovered some of the reasons why doctors avoid geriatrics. In focus groups and private discussions, many comment that it's not glamorous work and it's not a path to riches. In fact, it's one of the lowest-paying medical specialties. Many also complain that they don't particularly like treating old people and would prefer to spend their time with younger, more attractive patients. I've repeatedly heard this referred to as the YAVIS syndrome: doctors prefer seeing patients who are young, attractive, verbal, intelligent, and single. Houston — we have a problem.

Considering all of this, you might be stunned to learn that of some 100,000 medical residencies that Medicare has helped to support, only 405 residents were in geriatrics in the academic year 2009-2010.²⁴ While Medicare spent nearly \$10 billion in graduate medical education costs in 2009, only a tiny fraction of those dollars were directed toward the education of physicians who focus on the health care needs of older adults. This is insane.

While there is debate among leaders in this field as to whether we need the 30,000+ geriatric specialists that would be comparable to the number of pediatric specialists, there is strong agreement that the average health care professional will need an assortment of basic skills in diagnosing, treating, and managing the often complex care of elderly patients. However, it is a sobering fact that most primary-care physicians have received little or no continuing education in geriatrics. Current and future physicians are not the only health care professionals lacking in geriatric skills. The same holds true in nursing, allied health, and pharmacology.

²³ AMA DoctorFinder: https://extapps.ama-assn.org/doctorfinder/recaptcha.jsp; American Geriatrics Society Geriatrics Workforce Policy Center (AGSGWPC), (March 2010); Alliance For Aging Research's (AFAR) Demand Better Training for Your Healthcare Provider!, (Spring 2002)

²⁴ Accreditation Council for Graduate Medical Education: Number of Accredited Programs and On-Duty Residents for the Academic Year (2009-2010); Health Reform, Primary Care, and Graduate Medical Education, NEJM, (July 21, 2010); Report to the Congress: Aligning Incentives in Medicare, Medicare Payment Advisory Commission (June 2010); Strong Medicine for America, American Academy of Family Physicians, Graduate Medical Education Recommendations, (July 2011)

Considering that the average health care professional will spend at least 30 minutes out of every working hour with adults aged 50+, allowing them to practice with so few relevant skills is virtually criminal. In essence, we are funding a health care system for an aging society, but we are neglecting to train our health professionals to work effectively with its patients. If we required physicians, nurses, and other health professionals to attain basic geriatric competencies in order to be eligible for reimbursement, geriatric skills would swiftly improve, mistakes and do-overs would shrink, and we'd have better-cared-for elders at a far lower cost. This is something we must do.

Solution #3: Make Disease Prevention and Self-care a National Priority.

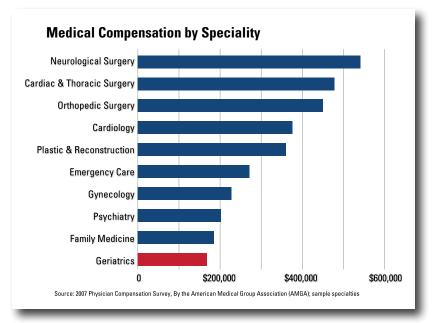
A man goes to spend a peaceful day sitting beside a beautiful yet turbulent river. As he unfolds

his blanket and sets out a picnic lunch, he notices that the current is carrying along someone who is crying out for help. The observer quickly dives into the river, fights the current, seizes the victim, and swims him back to safety. Exhausted, the two men collapse on the riverbank; after a while the near-drowned man revives, thanks his savior, and goes on his way.

The picnicker then dries off and prepares to enjoy his lunch. Before he can take a bite, he hears a piercing cry coming from the river: This time a woman is being pulled down by the current, just like the man before her. The Good Samaritan once again jumps in and with great effort pulls the woman to safety. Afterward, she is so depleted from her ordeal that he shares some of his sandwich with her. She thanks him and leaves.

This same event occurs again and again throughout the afternoon until at last the picnicker finds himself without food, exhausted, and certainly much the worse for wear after pulling so many drowning victims from the river. As the sun sets, he sits back to reflect on the incredible deeds he's been called upon to perform and wonders whether he'll be needed every day to rescue more of these drowning men and women. Only then does he glance around and notice that there's been somebody upstream pushing everyone in.

One of the seldom-discussed problems with our health care system is that on the way to maturity and old age, many men and women simply take very poor care of themselves. Of course, unhealthy behaviors are not unique to the elderly, but the older we get the more problematic they are. The lack of proper self-care ultimately hurts our elders and their families — and hurts our economy. For example, according to the CDC, only 38.5 percent of men and 31.1 percent of women aged 65-74, and only



23 percent of men and 14 percent of women aged 75+ exercise regularly.²⁵ And approximately two thirds of those 65 and older are overweight or obese.²⁶ To add insult to injury, roughly half of the elderly don't regularly comply with their medication regimens and more than 8 percent of the elderly still smoke.²⁷

Recent research has consistently shown that we can dramatically influence our health as we age by conscientious self-care. According to the CDC, more than 50 percent of our potential for lifelong health is determined by our personal behaviors. In his book *Successful Aging*, Dr. John Rowe, former professor of geriatrics at Harvard Medical School, argues, "It's not just a matter of playing the genetic cards you're dealt. We have the power to shape our own lives. The reality is a much more optimistic scenario than if it were just a matter of picking the right parents." Rowe's views are echoed by Dr. Walter Bortz, in *Dare to Be 100*: "No drug in current or prospective use holds as much promise for sustained health as a lifetime program of physical exercise and proper nutrition."

Regular exercise, proper nutrition, stress management, injury prevention, proper use of medication, quitting smoking, and the appropriate use of health care services can definitely help keep your body disease free longer. It has been repeatedly proven that maintaining a healthy lifestyle can reduce heart disease, hypertension, non-insulin-dependent diabetes mellitus,

²⁵ Get Moving! Exercise can Enhance and Extend Your Life, Administration on Aging, Dept. of Health & Human Services, (Modified 8/17/2001)

²⁶ Staying Fit: Majority of Older Adults Struggle with Weight, by Lara Salahi, Good Morning America, ABC News Medical Unit (June 23, 2010); Prevalence and Trends in Obesity Among US Adults, 1999-2008, Katherine M. Flegal, PhD, et al, JAMA, Volume, 303(3):235-241, (January 13, 2010); Being Obese, Weight Gain During and After Middle Age Associated With Increased Risk of Diabetes Among Older Adults, JAMA News Release, (June 22,2010)

²⁷ Medication Adherence Among Older Adults, by L.R. Chia, E.A. Schlenk, Jacob J. Dunbar, Effect of personal and cultural beliefs on medication adherence in the elderly. Drugs & Aging, 23:191-202, (2006); Promoting Medication Adherence in Older Adults ... and the Rest of Us, by Barbara Kocerek, Diabetes Spectrum vol. 22 no. 2 80-84, (March 20, 2009); Enhancing Prescription Medicine Adherence: A National Action Plan, National Council on Patient Information and Education, (August, 2007); The State of Aging and Health in America, (2008/2009); Federal Interagency Forum on Aging-Related Statistics. Older Americans, (March 2008)



colon cancer, and osteoporotic fractures — most of the more common diseases of aging. In addition, healthy behaviors have been shown to increase bone mass and mineral content and lean muscle mass, as well as improving metabolic rate, balance, coordination, strength, elimination efficiency, and heart/stroke volume, and fostering a sense of well-being.

The common response to the age wave by our health care system has been to spend more money on "sick care." A smarter, more humane and cost-effective approach, however, would be to encourage people to adopt healthier lifestyles and actually prevent or postpone many age-related conditions. If we can control at least some portion of our potential for healthy aging, we have a responsibility to do so. This responsibility is not only to ourselves, but to our families, who will serve as our caregivers, to our nation, by helping to avert the "unhealthy aging" crisis it could be facing in the decades ahead, and to the younger generations who will be forced to foot the bills.

The economic impact of linking scientific advances with more responsible self-care would be dramatic. By compressing disease into a shorter time frame at the end of life, like Oliver Wendell Holmes's "One Hoss Shay," we would boost the percentage of life that is healthy and productive and plug the overall drain on the health care system. For example, it is estimated that postponing physical dependency for older Americans by just one month would save the nation \$5 billion in annual health care and custodial costs. Similarly, aggressive management of those at risk for osteoporosis could reduce the rate of hip fractures by 25 percent and save some \$2 billion in annual costs. High blood pressure (which can lead to heart attacks

and strokes) costs the U.S. some \$73 billion a year according to a 2009 Institute of Medicine report, but research published in the March 2010 *Annals of Internal Medicine* suggests that by simply cutting sodium consumption by 10 percent, the U.S. could reduce cardiovascular disease and save \$32.1 billion in medical costs.

As the Nike Folks Say: Just Do It!

As informed as we've all become about the factors that influence our health — thanks to a flood of popular books, articles, websites, blogs, and television shows — too few people take responsibility for their own well-being. With maturity, the real challenge frequently shifts from knowing what to do to doing what you know.

From 1974 to 1979 I served as the co-founder and co-director of the Berkeley, California-based SAGE Project, the nation's first elder-oriented preventative health research project. During that period, I wanted to learn everything I could about "wellness" and "peak performance." I read hundreds of books, and attended dozens of workshops and training programs. During that same period, I wrote my first book, *Bodymind*, which I guess helped me to gain some visibility as a nascent expert on the subject of holistic health. As a result, I was commissioned by the Nightingale-Conant company to produce a six-audiotape set, *The Keys to High Performance Living*, which evolved from my studies, my writing, and the seminars I was then conducting in the U.S. and abroad.

Because I was also a buyer of Nightingale-Conant programs, I wound up on several of its targeted mailing lists. Whenever a program that matched my customer profile was released, I'd receive a brochure and one of those "customized" offer letters. You can imagine my surprise when, during a particularly stressful and difficult period, I received the following surreal letter from the company's president, Dave Nightingale:

Dear Mr. Ken Dychtwald:

Do you feel that you have lost control of your life? Are you suffering from too much stress? Are you finding it harder and harder to stay on your regular fitness program? Are you struggling to balance your work and family responsibilities? Do you feel that you are not achieving your highest potential?

If so, then Dr. Ken Dychtwald can help you! In his new six-tape program, this well-known expert on high-perfor-

Could Prevent Almost 500,000 Heart Attacks, by Amanda Gardner, HealthDay News, (March 2010); Proposed industry effort to reduce salt in food could save lives, money, SHP/VA study shows, Ruthann Richter, FSI Stanford News, (March 2, 2010); Industry crackdown on salt could save US billions, Reuters, (3/3/2010); Population Strategies to Decrease Sodium Intake and the Burden of Cardiovascular Disease, Crystal M. Smith-Spangler, MD; Jessie L. Juusola, MS; Eva A. Enns, MS; Douglas K. Owens, MD, MS; and Alan M. Garber, MD, PhD, Annals of Internal Medicine, vol. 152 no. 8 481-487 (April 20, 2010)

²⁹ Putting Aging on Hold: Delaying the Diseases of Old Age, Alliance for Aging Research and American Federation for Aging Research (1995); Hip Fracture in Emergency Medicine by Moira Davenport, MD; Chief Editor: Rick Kulkarni, MD, (last updated September 22, 2010); Nation's hip fracture rate could drop 25 percent with aggressive osteoporosis prevention, Kaiser Permanente (November 2, 2009); Kaiser Permanente News Center, (November 2, 2009); Healthy Bone Team halves hip fracture rate, by Annie Hayashi, AAOS Now, (June 2008); Hip Fracture in Seniors, The American Academy of Orthopaedic Surgeons and the American Association of Orthopaedic Surgeons; Medical Management of the Surgical Patient, By Michael F. Lubin, Robert B. Smith, H. Kenneth Walker, Cambridge University Press, (2006); Cutting Salt

mance living will help you to solve all of your problems and take control of your life again.

Although I didn't buy the set, this message from me to me provided a potent, existential wake-up call. After all, when it comes to taking proper care of ourselves, we probably already know what to do; now we have to do it!

Solution #4: Shift Our Focus to Home-Based Care: The Missing Link, Wherever Possible

As our nation ages, our health-care orientation will switch from acute- to long-term care. Today, 80 percent of all long-term care is provided by friends and family members outside of hospitals, nursing homes, and other institutions. This caregiving might involve grocery shopping and housecleaning for a disabled parent several hours a week, or helping a loved one who is recuperating from surgery to bathe and dress several days each week for a few months, or it might even mean providing 24-hour attention to a parent or spouse struggling with Alzheimer's.

Providing care to an older loved one is becoming an increasingly long process. According to a National Family Caregivers Association study, 62 percent of caregivers report that they have been providing care for five or more years.³⁰

Double-Decker Sandwiched Generations: With Women Being Squeezed in the Middle

My wife and I have two children, three living parents, and one stepparent — a total of two children and four parents. This is not unusual for the "sandwiched generation." In fact, the future is going to be filled with double-decker sandwiched generations. As a result, the average 21st-century American will actually spend more years caring for parents than children.

Notwithstanding men's increasing involvement in childrearing and domestic roles, eldercare-giving continues to fall disproportionately on women. Because women outlive men by around five years, all too often the aging wife will care for her husband until his death. Then, exhausted, when she needs help there is no partner to care for her. That's when the adult daughter or daughter-in-law comes in. In fact, the "typical" caregiver is a 45- to 55-year-old woman who works full-time and spends 18 hours per week caring for her 77-year-old mother. About 64 percent of sandwiched caregivers are employed, 52 percent full-time. The contribution of time is not trivial. Nearly 25 percent of caregiving households provide 40+ hours each week of unpaid, informal care to an older family member.

To complicate matters, 41 percent of eldercare-givers have children of their own under the age of 18 living at home. This means that many middle-aged women are raising children while trying to juggle work and eldercare responsibilities.

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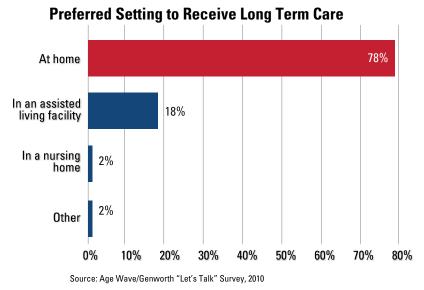
There will soon be a shortage of family caregivers for four reasons:

- Fewer children to provide care. Today's elders had around four children per couple, while boomers have had only two.
- Family members may not live nearby due to increased mobility and relocations.
- Escalating numbers of singles without a spouse to care for them, due to rising divorce rates and widowhood (women outlive men by more than five years).
- Highest rates ever of both middle-aged men and women working. And so, the adult daughter or son might need (or wish) to work.

According to a National Council on Aging/John Hancock survey on long-term care, "Seventy-nine percent of older boomers believe that long-term care is the greatest risk to their standard of living during retirement," but very few are doing anything about it. A key reason is their mistaken belief that long-term care is covered by Medicare or that they can get Medicaid to cover the costs.

Ironically, Medicare was never designed to cover long-term care. Even though the overwhelming majority of elders would prefer to be cared for in their own homes, Medicare will only provide reimbursement for hospital and physician expenses and some limited support for nursing home and home health care. Medicare fully covers just the first 20 days of skilled care; after this, coverage is phased out — ending at 100 days. Even during that time, the amount and type of care financed by the program is restricted to skilled medical care, which most long-term arrangements do not require.

Others believe that they can find ways to shift their costs to Medicaid, an increasingly common strategy that with the coming of the age wave could push this means-tested public assistance program to the brink of bankruptcy. If the middle-class masses continue to draw down Medicaid's limited resources, it will be wiped out.



Long-Term Care Now Touches Nearly Everyone (Even Gerontologists!)

I grew up in the 1950s and '60s in a close-knit, hardworking family. My parents both worked full-time to pay the bills and send my brother and me to college while saving frugally for their own retirement nest egg. Still very much alive at 87 and 90, my mom and dad live in a retirement community in South Florida. I live 3,000 miles away with my wife and kids in California, while my older brother lives in New Jersey, near where we grew up.

Today, my dad has diabetes and heart disease and has been blind for a decade due to macular degeneration. While still sharp as a tack, and ready for a political argument 24/7, he can't drive, read, or handle many of the normal activities of daily living without a full-time aide. My mom — who remains the "heart" of our family — also requires ongoing assistance. She has COPD, which means she must spend three hours a day on a nebulizer. In the past several years, she has also had a heart bypass surgery, a hip replacement, a fractured pelvis, and is grappling with memory loss.

Around a decade ago, when it became obvious that living independently in their home was becoming difficult, my brother and I grew concerned because we saw that age and chronic disease were starting to take a deep toll. However, we were relieved when our dad told us that they were going to activate the benefits of the long-term care insurance policies they had bought years before, to get the extra help they needed so they could continue to live independently.

The good news is they are currently living relatively normal lives in their own home, thanks to the services of their care coordinator as well as the terrific aide who comes to their house six days a week. She helps manage their household, does the grocery shopping, prepares meals, takes them to their various doctors' appointments, cares for them — and generally has allowed them to stay together in their home, just like they always wanted.

As a gerontologist, I know that paying out-of-pocket for eldercare can be very costly. The median cost for home care is \$42,000/year and a private room in a nursing home costs on average \$74,000/year. Some people have to sell all their assets to cover the cost of LTC, and many others become impoverished while paying for LTC expenses.

If not for my parents' LTC policy, my folks (who just celebrated their 69th anniversary!) would most likely be living in some sort of institution, probably a nursing home. And because of their different conditions, they might have been forced into separate facilities. My brother would probably have given up his life in New Jersey to look after them, and my wife and I would probably be paying for their care which by now would have cost nearly \$500,000 — a small fortune.

My folks say that they purchased their policies for two key reasons: first, so that if they ever needed care, they could receive it at home, and second, so that they wouldn't be a burden on us. While we would do almost anything for them, we are thankful for their proactive decision to purchase their LTC insurance years ago. While I'm not suggesting that everyone should purchase LTC insurance, I do believe that everyone should have a plan for how they're going to be looked after should they needed extended care, and how they're going to pay for it without burdening their family.

While it's easier to avoid this subject than plan for it, families would be wise to talk about long-term care, far before anyone ever needs it. There are three essential topics to discuss with family: (1) what long term care options are most preferred, should they ever be needed, (2) potential roles and responsibilities of different family members for managing care — who would do what? and (3) how long-term care needs would be paid for if they are required. Yet Age Wave research has found that over 90 percent of all Americans have not discussed all three issues with their spouses, adult children, or their own parents.

New Technologies and Care at Home

Over the past several decades, technology companies have rapidly innovated to make almost all aspects of our lives easier, more informed, better connected, and more fun. Yet, though technology in our work, learning, and leisure has become commonplace, leading companies are just beginning to pioneer technologies that make our later years healthier, more independent, and more secure. Recent innovations in both technology systems and infrastructure now can make it possible for older adults — who in prior years would have been forced to move to a hospital, nursing home, or assisted living facility for the care they need — to stay at home. And we're learning that care at home can be far more efficient and cost-effective than institutional care. Yet many insurers and government programs are still slow to recognize and reimburse for technologies that enable older adults to live independently at home.

Companies such as Philips, Humana, Intel, and GE are investing heavily in this new frontier. "This is a race to see who's going to invent 21st-century care services for boomers," says Eric Dishman, health policy director at Intel-GE Care Innovations.



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With interest and added support from her Board, Glenn began the relationship with RCTCLEARN.NET. All involved were pleasantly surprised when they discovered how quickly members were appreciative of another benefit. "The more they used it and the more they saw its value, the more grateful they were in not having to pay for it," said Glenn.

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need — to stay at home.

"Worldwide, there's this enormous market opportunity."

Several key areas of the convergence of technology and care at home include:

- Personal Emergency Response Systems. Adults over age 75 are three times as likely to live alone than younger people. For older adults who live alone and have an injury or serious health problem, timing is everything. Personal emergency response systems (PERS) enable older adults to access help whenever needed and help enable them to live independently, without the need of supervised care. With the push of a button on a necklace or bracelet, they can send an alert to a 24-hour call center through a receiver connected to the home phone line. These systems provide both peace of mind for older adults and their families and timely, lifesaving care. Currently, just 5 percent of older households have personal emergency response systems installed in their homes, and such technology is not usually reimbursed by Medicare.
- Home Monitoring Systems. Personal emergency response systems enable older adults to call for care and support when they need it, while more sophisticated home monitoring systems can track changes in activities and behaviors to make sure nothing out of the ordinary is happening. Motion sensors in hallways and doors record movement patterns and walking speed, while monitors on refrigerators track when and how often they are opened, and send an alert when older adults are not eating properly. Other sensors can detect if a house is too warm or too cold, or if the shower or stove is left on, or a refrigerator or door is left open.
- Medication Adherence. Many older adults suffer degenerating health because they do not take medication properly, and being unable to adhere to medication unsupervised

- accounts for about 40 percent of nursing home admissions. Medication adherence technologies can remind older adults to take their medications or to refill a prescription, and "smart" pill dispensers electronically alert caregivers when pills are taken or forgotten. Reminders can be sent by phone, e-mail, or pager. On some devices, doctors can also change and update medication requirements remotely.
- Telemedicine and telediagnosis. New devices and software can now send information to health care providers to remotely diagnose and monitor older adults from the comfort of their homes through a telephone line, Internet, or wireless connection. This technology provides more costeffective access to services, avoids unnecessary emergency room and clinic visits, and allows for preventative medicine and early intervention. For example, rather than going to a doctor's office, a diabetic can place a blood sample in a home electronic meter and transmit blood glucose values directly to their health care provider. ECG, blood pressure values, pulse oximeter, weight, and other information can be sent to health care providers to monitor health and alert them to potential complications. In addition, rather than expending the time and resources to drive to a patient's home, nurses can also now video conference with older adults to visually assess many dimensions of their health.

"Aging in place is starting to hit a tipping point, but we now need to make it mainstream," says Joseph Coughlin, director of the MIT AgeLab. With an aging population and a dramatic increase in people living with chronic conditions, there will continue to be a growing need to create new models of health care delivery and extend care to the home.

Solution #5: A Humane Approach to Death

Until the 20th century, death was no more strongly associated with old age than it was with any other time of life. In fact, one of the riskiest periods was infancy and early childhood. Many healthy young women died in childbirth, and people of all ages were exposed to fatal infectious diseases and trauma. In addition, dying was an integral part of everyday experience. Children observed it regularly: they saw animals killed for food, and they saw family members die not only of old age but also of disease and accidents. Death, like birth, mostly occurred at home. The deathbed scene was a communal experience shared by family and friends.

Although the phrase has been largely forgotten today, historically, people have referred to the "good death." While the idea is certainly controversial, a "good death" is usually considered to be one that allows a person to: be able to retain some control of what happens, have access to any spiritual or emotional

support required, be able to issue advance directives that ensure wishes are respected, have time to say goodbye to loved ones, and ultimately to die with dignity and a minimum amount of suffering or discomfort.

Nowadays, medical technology makes it possible to sustain human life well beyond the point where death would have occurred in the past. And although studies show that the overwhelming majority of men and women would prefer to die at home, only about 20 percent of deaths occur at home today.³¹ Yet few institutions are oriented to deal with the psychological or spiritual dimensions of the dying process. Humane care of the dying represents a significant — and costly — gap in our health care system. And some doctors, whose job it is to cure, still see the death of a hospitalized patient as a failure.

Extending the dying process in high-tech settings can be a very expensive proposition. Medicare spends about 30 percent of its budget on patients in their last year of life — often when the attempt to prolong life merely means an expensive hospitalized death.³² According to data from a 2010 report, average hospital costs for a stay ending in death were \$23,000 — about 2.7 times higher than for a patient discharged alive, and elderly patients, 65 and older, accounted for 71 percent of the hospital deaths.³³ Medicare patients cost \$20,870 for a stay ending in death.

The Right to Die with Dignity

I'm convinced that the emphasis for dying patients needs to be shifted to "palliative care" — the relief of symptoms, pain control, and provision of emotional and spiritual support for patients and their families. Such treatment requires relatively little apparatus and technology and is far less costly than the procedures currently in place in most hospitals. In fact, if we allowed elderly patients the dignity of dying a "good" and natural death at home supported by family and capable hospice and palliative professionals, we could save tens of billions of dollars each year. Research from Dartmouth suggests that if

31 The Costs of End-of-Life Hospitalizations, 2007, by Yafu Zhao, M.S. and William Encinosa, Ph.D., Agency for Healthcare Research and Quality, (November 2009, revised April 2010); End of Life Curriculum Project, Stanford Medical School; The Cost of Dying, by CBS News, 60 Minutes, (December 3, 2010); New tools help people die at home, not in hospital, by Josephine Marcotty, StafTribune, (March 2010)

years of life, the U.S. could save some \$50 billion a year.³⁴ Perhaps those savings could be used to fund breakthrough Alzheimer's research.

The hospice movement is the most prominent modern exam-

hospitals spent less and kept patients fewer days in their last

The hospice movement is the most prominent modern example of sensitive palliative care for the dying. The term "hospice" was originally used in the Middle Ages to denote a community dedicated to caring for travelers along the way. Derived from the Latin hospes, which is the root of such modern words as "hospital" and "hospitality," the word is used today to describe a way of helping people to complete the journey toward death with comfort and dignity.

The modern hospice movement began in 1967 when Dr. Cecily Saunders founded St. Christopher's Hospice in London. In such settings, the physical environment is arranged to be homelike, filled with plants and light. Patients are allowed to wear their own clothing and surround themselves with their possessions, including furniture they may bring from home. Visiting hours are usually allowed around the clock. Family, friends, and pets are definitely welcomed.

Passive vs. Active Euthanasia

Changes in philosophical and religious attitudes, as well as other trends in modern society, are beginning to have an impact on the acceptability of passive euthanasia and even suicide. As originally used in English, "euthanasia" meant a quiet, gentle, or painless death. Passive euthanasia, which is sometimes equated with "letting the patient die," involves withholding a treatment that would prolong life without reversing the course of the underlying disease. Active euthanasia — as popularized by the somewhat creepy Jack Kevorkian — involves, on the other hand, taking some decisive action to hasten a person's death. Suicide refers to a circumstance where an individual takes their own life.

Proponents of "right to die" legislation argue that under certain circumstances humans can no longer continue living with a basic level of quality of life, and that these individuals should be allowed to die peacefully with dignity. Under such circumstances, someone who is considered legally competent to make decisions on their own behalf would be able to request that medical treatment be discontinued and that passive euthanasia take place.

More complex is the case where the individual is no longer conscious or otherwise competent. In such cases, it is suggested that people draw up a "living will" or some form of legally binding advanced directive, preferably while they are in good health, which would absolve their doctors and guardians of all legal liability should they discontinue life support.

³² The Costs of End-of-Life Hospitalizations, 2007, by Yafu Zhao, M.S. and William Encinosa, Ph.D., Agency for Healthcare Research and Quality, (November 2009, revised April 2010); The Economics of Dying, by Arthur Garson Jr, and Carolyn L. Engelhard, Governing, (March 31, 2009)

³³ The Costs of End-of-Life Hospitalizations, 2007, by Yafu Zhao, M.S. and William Encinosa, Ph.D., Agency for Healthcare Research and Quality, (November 2009, revised April 2010)

³⁴ Tracking the Care of Patients with Severe Chronic Illness, by John E. Wennberg, Elliott S. Fisher, David C. Goodman, and Jonathan S. Skinner, The Dartmouth Institute for Health Policy and Clinical Practice, (2008); Chronically Ill Patients Get More Care, Less Quality, Says Latest Dartmouth Atlas, The Dartmouth Institute for Health Policy and Clinical Practice (2008)

The right to die becomes much thornier when it comes to active euthanasia and assisted suicide. While a patient might plead with the physician to administer a fatal injection or perform some other act that would induce death, doctors generally feel that such practice conflicts with traditional medical ethics. Another problem with active euthanasia is that it can be very difficult to guard against potential abuses. Family members of a terminally ill or unconscious patient might find it to their advantage to request that the patient's life be terminated. Even terminally ill persons themselves, by the very nature of their illnesses, might be incapable of making an objective, rational decision. And there is always a risk of patients being helped to die when a remedy is just around the corner.

While philosophers continue to debate assisted suicide, public opinion has grown

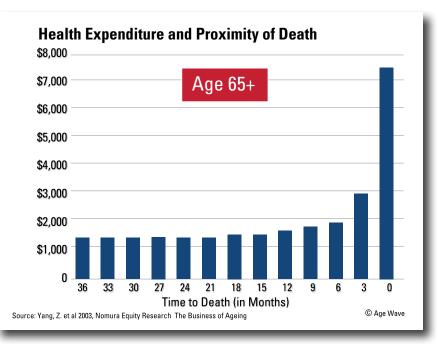
increasingly comfortable with the specific option of passive euthanasia. In 1950, a Gallup poll asked whether, if a person had an incurable disease, doctors should be allowed by law to end the patient's life by some painless means, if requested by the patient and family.³⁵ Some 36 percent of respondents approved. When the question was repeated in 1973, those in favor had increased to 53 percent. By 1996 it had grown to 69 percent, and by 2007 it had reached 71 percent.

In his book The Virtues of Aging, former President Jimmy Carter, a deeply religious man, commented on his personal wishes regarding death:

We can either face death with fear, anguish, and unnecessary distress among those around us or, through faith and courage, confront the inevitable with equanimity, good humor, and peace. When other members of my family realized that they had a terminal illness, the finest medical care was available to them. But each chose to forgo elaborate artificial life-support systems and, with a few friends and family members at their bedside, they died peacefully. All of them retained their lifelong character and their personal dignity. ... Rosalynn and I hope to follow in their footsteps, and we have signed living wills that will preclude the artificial prolongation of our lives.

Many aging Americans would do well to follow the Carters' lead by talking openly with family members about their endof-life wishes and desires and writing down their intentions in a legal living will.

The right for adults to exercise control over the end of own lives is increasingly becoming a subject of open religious and philosophical discussion. I believe that it's a good thing that



we are bringing dying out of the closet ... and while such discussions are difficult, they are enormously valuable. At one end of the spectrum are those who argue that each of us should be allowed to determine the manner and timing of our death, especially in terminal circumstances. At the other end are those who say that it's not a private right to decide whether to live or die, and we have an obligation to prolong life, regardless of suffering. If there's one thing we know about the boomer





generation: they've always preferred to have choices about every aspect of their lives. I forecast that this preference will soon take hold in multiplying discussions and offerings pertaining to how to die with dignity.

It shouldn't come as any surprise that as the world's population ages, there is more and more discussion about end of life issues around the globe. In 2010, *The Economist* Magazine's Economist Intelligence Unit commissioned a very thoughtful global study titled "The Quality of Death." Commissioned by the Singapore-based Lien Foundation, the examination endeavors to set forth the key ingredients of a high-quality, end-of-life experience — a "good death."

According to the report, "Quality of life' is a common phrase. The majority of human endeavors are ostensibly aimed at improving quality of life, whether for the individual or the community. ... But 'quality of death' is another matter. Death, although inevitable, is distressing to contemplate, and in many cultures is taboo." The authors of the study believe that by studying this subject and exploring ways that death is best handled around the world, a more humane and dignified approach to dying can be considered.

By interviewing experts on this subject from throughout the world, the investigators sought to create a "quality of death" index by which 40 nations' health care, religious, and palliative care approaches could be measured. The index is a compilation of four key categories/metrics:

- Basic End-of-Life Health Care Environment
- Availability of End-of-Life Care
- Cost of End-of-Life Care
- Quality of End-of-Life Care

The Challenge Ahead — Healthy Aging

Whether we grow old, sick, frail, and dependent or vital, active, and productive will depend on our ability to dramatically alter the orientation, strategies, skills, and financial incentives of our current health care system. The size of the job is daunting, but the risk of inaction is catastrophic — and we must get started now. Modern health care has lost its way and needs a new vision and sense of purpose.

To summarize, five changes are required to make our health care system aging-ready. We must:

- Commit greater attention and resources to the scientific research required to cure, delay or, if possible, eliminate the diseases of aging.
- Provide the academic training and continuing education to ensure that health care professionals are fully competent at meeting the needs of our aging population.
- Make disease prevention and self-care a national priority.
- Wherever possible, shift our focus to home-based care: the missing link.
- Establish a more humane, respectful, and cost-effective approach to death and dying.

Unless we establish a clear and powerful commitment to aligning key aspects of our scientific research, health care practices, care continuum, and personal lifestyles to promote healthy aging, nearly all of us will live long lives, but many of us will hate it. Tithonius will have his revenge.



About the Author: Ken Dychtwald, Ph.D. is a psychologist and gerontologist and is widely viewed as one of North America's most original thinkers about the social, economic, health care, marketing and workforce implications of the age wave. He is a bestselling author of 16 books including Bodymind, Wellness and Health Promotion for the Elderly, Age Wave: The Challenges and Opportunities of an Aging Society, The Role of the Hospital in an Aging Society, New Directions in Eldercare, Healthy Aging, The Power Years: A User's Guide to the Rest of Your Life, Age Power: How the 21st Century will be

Ruled by the New Old, A New Purpose: Redefining Work, Leisure, Success and Retirement and a children's book about personal transformation in adulthood, Gideon's Dream: A Tale of New Beginnings.

The Founding CEO of Age Wave, a renowned consultancy, Ken has served as a fellow of the World Economic Forum and is the recipient of the distinguished American Society on Aging Award for outstanding national leadership in the field of aging. American Demographics magazine honored him as the single most influential marketer to baby boomers over the past quarter century. His article in The Harvard Business Review, "It's Time to Retire Retirement," was awarded the prestigious McKinsey Award (tying for first place with the legendary Peter Drucker). His acclaimed documentary film "The Boomer Century: 1946-2046" aired more than 2,000 times on PBS channels. For more information about Ken Dychtwald's work, visit www.agewave.com.