Hiding in Plain Sight

Social and Demographic Trends That Will Exacerbate the Impact of Alzheimer's

A Nationwide Commitment to a Cure Can Help Avert Coming Crises

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Commissioned by UsAgainstAlzheimer's

merica is a moving target in the face of the looming dementia and Alzheimer's epidemics.² As a nation and as a people, the United States is constantly changing: demographically, socially, economically, technologically. These changes have big consequences for these epidemics—some for the better, others for the worse.

We know, for example, that the impact of these epidemics stands to be much greater in the decades immediately ahead—barring any dramatic medical breakthroughs—because, like most other countries around the world today, we are a greying society: the age-specific prevalence of dementia and Alzheimer's tends to increase sharply for older persons. While we have enjoyed tremendous progress in health care, education, and economic growth over the past century, we also enter the 21st Century "grayer" than we have ever previously been—and on track to get grayer still.

Today an estimated five-plus million Americans 65 or older are thought to be living with Alzheimer's,³ with another 15 million family members and friends providing unpaid care for them and individuals suffering from other forms of dementia.⁴ And we know that Alzheimer's discriminates: an estimated 62 percent of Alzheimer's senior 65+ victims are women, due in part to differentials in longevity⁵—and for reasons still not fully understood, African Americans and Latinos (evergrowing segments of our population) are two and one-and-ahalf times, respectively, more likely to develop Alzheimer's than their Caucasian counterparts.⁶

There is no cure for Alzheimer's as yet, and the death rates from Alzheimer's continue to increase thus, according to The Centers for Disease Control and Prevention (CDC), while deaths from heart disease have decreased by 14% since 2000, deaths from Alzheimer's have increased by 89%.⁷ And much worse looks to be in store. Without a means of prevention, a cure or disease-modifying treatment, all of which have been elusive, current estimates suggest that the U.S. is on course to a population of nearly 14 million Alzheimer's afflicted 65+ seniors by the year 2050—nearly three times as many as today.⁸

Demographic techniques allow us to project with great confidence that the population of older Americans—those at highest risk of Alzheimer's—is set to increase markedly in the coming decades, both in absolute numbers and as a proportion of our total population. Population aging is one big—and highly predictable—social trend that demographers and epidemiologists have been following very carefully. We know the entirely predictable ways this trend will be exposing our nation, our families, and our fellow citizens to dramatically increased risks, stresses, and costs in the foreseeable future.

There are other major and highly changes underway that affect our ability to cope with the coming Alzheimer's epidemic, some for the better, some for the worse.

On the positive side of the ledger, medical/life science progress and technological innovation stand to reduce our vulnerability to these epidemics and their consequences (though by exactly how much remains as yet unclear). Other big national trends that clearly increase our overall capability to cope with the epidemic would include the continuing aggregate surge in private wealth-holdings, and the steady increase in overall educational attainment levels in the United States.⁹

But a surprising number of major social trends in modern America appear to have direct—and distinctly adverse—implications for our capacity to cope in the years ahead. The trends to which I refer stand to limit, or even reduce, the availability and affordability of care and treatment for a critical fraction of our growing number of people at risk of—or living with—dementia and Alzheimer's. Critical here are two broad categories of trends: 1) changes in family structure and living arrangements, and 2) adverse patterns in wealth accumulation for many groups within our country—trends that are predictably are increasing America's vulnerabilities in the face of the dementia and Alzheimer's epidemics.

Irrespective of how affluent our society in toto may be in the years ahead, we have a mounting national crisis on our hands. When a growing share of our society proves to be less capable of meeting these arduous personal demands, their personal problems will perforce become national or public problems—and therefore government policy problems. We will then end up with inescapable implications for budgetary outlays, taxes, and public debts in this chain of impacts.

Already, as we shall see, the share of Americans living in homes that use means tested-government benefits and disability benefits is high and rising. Barring only a dramatic change in the prognosis for the Alzheimer's epidemic, the collision between the expected number of Alzheimer's patients and the pre-existing increases in dependence for a growing share of our society can only augur ill for America and Americans.

The major social trends we address below are hardly secrets for all of them have been widely discussed in the public square, in academia, and in policy circles. For some reason, though, it seems that we have not yet managed to "connect the dots"

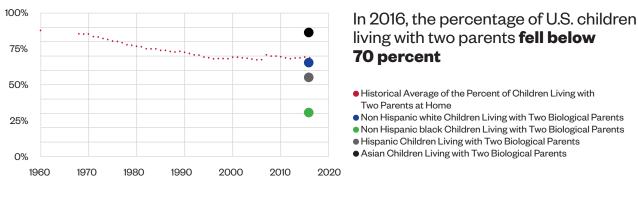


FIGURE 1. PERCENT OF CHILDREN LIVING WITH TWO PARENTS AT HOME U.S., 1960-2016

Source: U.S. Census Bureau, 2016; Federal Interagency Forum on Child and Family Statistics, 2016

between the trends in question—all worrisome in their own right—and their implications for our national ability to cope with the coming Alzheimer's wave.

When we reflect upon these trends, in the light of the epidemic, the issue immediately becomes clear. We need to consider the ways in which our nation is actually becoming less prepared to meet the burdens that dementia and Alzheimer's threaten to impose than has been commonly assumed. And if an unexpected number of individuals, families, and communities do indeed find themselves in crisis as a result of unexpected vulnerabilities in the face of Alzheimer's, we should take it as a given that our country's public budgets-at the federal, state and local level-will be in Alzheimer's-induced crises too. Simply put: where we have under-estimated social vulnerabilities to the epidemic, we have certainly underestimated the public costs and consequences of the epidemic as well. Only a clear commitment to finding a cure or disease altering treatment for this horrendous disease will change this trajectory of gathering financial devastation.

Changes in American Family Structure and U.S. Living Arrangements

In testimony before the U.S. Congress Joint Economic Committee (JEC) earlier this year, Professor Robert D. Putnam of Harvard University warned that the current "conventional wisdom" critically underestimates the care requirements for the coming generation of older Americans:

... one unrecognized part of the problem is that boomers (from the generation that brought us Bowling Alone) will almost certainly require substantially more paid eldercare per person than their parents' generation... the burden on paid, institutionalized care will rise sharply above current expectations, not simply because there are more boomers (for which current projections already account), but because proportionally more of them will need paid, institutionalized care (for which current projections do not account).¹⁰

In Putnam's admittedly rough estimate, something like twice as large a share of those in the 65-plus population who require care from others would have to rely on formal, institutional care by 2030 compared to today: about 50 percent in 2030 vs. about 25 percent today. If his assessment proves correct, or close to correct, this would presage a dramatically greater increase in public outlays for elderly care over the next 13 years than policy (and advocacy) circles currently contemplate.

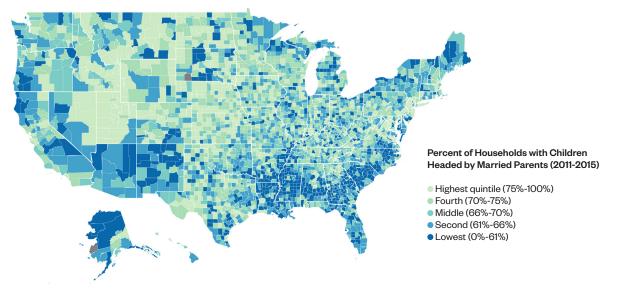
Putnam—widely acclaimed for his work on "social capital"—perhaps not surprisingly framed this envisioned radical drop-off in informally-supplied elder care in terms of declining social capital. But a number of the specific factors he focused on, such as the decline in marriage and childbearing for the Boomer generation, can be viewed through a demographic lens. We can further widen the aperture on that lens by considering not only the particular trends Putnam mentioned, but other changes in family structure and living arrangements that look to be unexpectedly increasing vulnerabilities to the Alzheimer's epidemic in the decades ahead.

1. The Decline of the Two-Parent Family

Although it may be politically incorrect in some quarters to acknowledge as much, the plain truth is that U.S. family structure has frayed markedly over the postwar

FIGURE 2. FATHERLESS AMERICA: THE MAP

Percent of households with children headed by married parents by county 2011-2015



Source: Joint Economic Committee (JEC) derived from U.S Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

era. In 1960, just over five percent of America's newborns were reportedly born outside marriage;¹¹ by 2015, the corresponding fraction was 40 percent.¹² By 2015, in fact, 29 percent of non-Hispanic white babies were born outside of marriage—a higher proportion than the one in four for African American babies in the early 1960s that prompted Daniel Patrick Moynihan to wrote his famous 1965 treatise warning of the crisis in the black family.¹³ Marriage is far less common today than in earlier postwar decades, most notably among those of traditional ages for forming families and raising children. In 1965, for example, 85 percent of U.S. civilian non-institutionalized men 25 to 54 years of age identified themselves as married; fifty years later, in 2015, the corresponding share was nearly 30 percentage points lower, just 56 percent.¹⁴ Some portion of the intervening increase in never-married men may have tracked with an increase in childlessness-but only some. U.S. Census Bureau data analysis for the year 2004 noted that the average number of own children reported by adult men was 20 percent lower than the number reported by adult women—a discrepancy possibly explained, in the words of the authors, by "underreporting in the survey or men not knowing about their offspring."15

By 2016, according to U.S. Census Bureau data, fewer than 70 percent of U.S. children under 18 years of age were living with two parents, and fewer than 60 percent were living with two

married biological or adoptive parents (see Figure 1). About 27 percent were living with just one parent most (typically, a non-cohabiting mother), while the remainder—nearly 4 percent—were living in arrangements that included neither their mother nor their father.¹⁶ If we assume such patterns hold in most affluent Westernized societies today, we would be mistaken. Of the 26 OECD countries for which comparable data are available, the U.S. ranked 25th in 2014 for percentage of children under 15 in two-parent homes (above only Denmark), and had the second-highest share of children in homes with neither parent (again behind only Denmark).¹⁷

The terrain of what we might call "single-parent America" these days is by no means uniform, as a county-level map prepared by the staff of the JEC demonstrates (see Figure 2). That map differentiates localities according to the percentage of married parents living with children in the years 2011-15. Note that the most severely affected areas do not necessarily conform to conventional stereotypes. If many counties in the heavily African-American Deep South stand out for their low levels of married, two-parent homes, the same is true for nearly lily-white northern Maine, for rural Michigan, and for counties along the West Coast and around the heavily Hispanic Southwest. "Fatherless America" is today a reality among virtually all ethnicities in our country today.

Why bring up this particular aspect of contemporary U.S. family structure in a brief on the Alzheimer's epidemic? It is worth mentioning because this may have a direct bearing on unexpected vulnerabilities in the decades ahead. Three points in particular are worth keeping in mind in this regard.

First: The single-parent family places extraordinary pressure on lone parents who are also caregivers for an older parent, especially those living with Alzheimer's. These burdens disproportionately fall on women—and on ethnic minorities. In the year 2016, of the 27 percent of all children living with a lone parent, 24 percent were living with a mother in a one-parent home. Of all Hispanic children, 25 percent live in a female-parent home, and another four percent with just a father. And over half (52 percent) of non-Hispanic black children were living with a lone mother, and another 4 percent lived with lone fathers.

Second: Single-parent families tend to be financially disadvantaged by comparison with two parent families all other things being equal. Professors Robert I. Lerman of American University and W. Bradford Wilcox of the University of Virginia have presented research suggesting that there is a "marriage premium" in terms of additional expected income in contemporary America for men and women alike, regardless of age, ethnicity, or education level.¹⁸ In general, parents in intact families are able to accumulate greater resources and make more providential financial preparations for their old age.

Finally: There is the incalculable but by no means unimportant question of children's perceived obligation to help with aging parents, and how such bonds of duty may be affected by modalities of family structure. There are a great many more absentee parents (disproportionately but not exclusively men) in the generation now approaching retirement than in those that came before them—and by all indications, the proportion of absentee parents in the rising cohorts behind them may be greater still.

Innovative new research modeling the future trajectory of kinship networks for the United States suggests that there will be a greater proportion of seniors in coming decades with no living spouse or children. The research conducted by Professor Ashton Verdery of Pennsylvania State University and his colleagues further concludes that support for and transfers to elderly parents from their children may decline in relative terms on the basis of what we might call the purely demographic effects of shrinking kinship networks, and the geographic effects of declining proximity of children.¹⁹

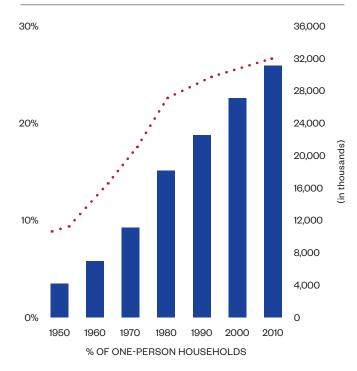


FIGURE 3. THE HISTORIC RISE OF LIVING ALONE: 1960-2010

Source: Rose M. Kreider and Jonathan Vespa, 2014, "The Historic Rise of One-Person Households: 1850-2010," SEHSD Working Paper No. 2014-19, April 25, 2014.

But such work does not—cannot—address an additional and critical question: how durable will the bonds of filial duty prove to be for children of elderly parents living with dementia or Alzheimer's in the decades to come? How in particular will this affect the growing ranks of adult children raised in fatherless (and motherless) America? It is possible that committing to long-term assistance for a needy and failing parent may be a more complicated choice for adult children from more complicated family backgrounds.

2. The Rise of "Live-Alone Seniors"

As Dr. Joseph Chamie, former director of the UN Population Division, pointed out earlier this year,²⁰ the proportion of single-person households—one person living on his or her own—has grown steadily all around the world over the postwar era. The United States is no exception to this trend. As Figure 3 shows, in 1950, single person homes accounted for just under 10 percent of all households. By 2010, the proportion was nearly 27 percent—almost three times the share 60 years earlier.²¹ Thus the single-person household has been America's fastest growing family type for well over two generations—increasing over that period by an annual average of 3.3 percent while overall households were increasing by 1.6 percent a year.

By all indications, America's one-person households are set to continue to grow at a more rapid tempo than either total households or total population in the decades ahead. The rise of the one-person household speaks to a powerful "revealed preference"—and not just in the United States, although of course here as well. As work by Professor Eric Klinenberg of New York University (among others) has indicated, people of all incomes, ethnicities, genders, and ages appear to be attracted to the freedom, autonomy, and other benefits that come with living by oneself.²²

As expected, older Americans are far more likely to live in one-person homes than people of any other age. In 2010, persons 65 and older accounted for 13 percent of America's total population,²³ but for 35 percent of all single-person homes.²⁴ In 2010, when 27 percent of all households were one person households, about 45 percent of households headed by someone 65 or older were single person homes (see Figure 4). Moreover, the older Americans are, the more likely they are to be living alone. By the reckoning of Drs. Rose Kreider and Jonathan Vespa of the U.S Census Bureau, householders 65 to 74 years of age are thr.ee times as likely to be in one person homes as the national average—and householders 75 or older are roughly five times as likely to be maintaining one-person homes.²⁵

In 1960, roughly three million seniors in America were living alone; half a century later, the total was over 10 million a tempo two and a half times as fast as the growth of the general population over the past half-century. The best expert demographic projections currently suggest that the live-alone senior population is on course to continue to outpace overall national population growth in America over the next several decades.

The most sophisticated research currently available on the outlook for U.S. household formation and household composition is arguably that produced by Professor Yi Zeng, of Duke and Peking Universities, progenitor of the ProFamy

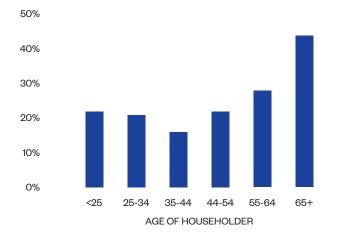
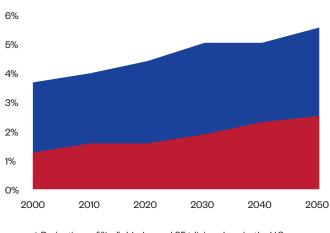


FIGURE 4. PERCENT OF SINGLE-PERSON HOUSEHOLDS BY AGE OF HOUSEHOLDER, 2010

Source: U.S. Census Bureau, Current Population Survey, Annual and Social Economic Supplements, 2010

The oldest Americans are the ones **most likely to be living by themselves**

FIGURE 5. PERSONS 65+ AND 80+ LIVING ALONE AS A PERCENT OF TOTAL U.S. POPULATION: 2000-2050



Projections of % of elderly aged 65+ living alone in the U.S.
Projections of elderly aged 80+ living alone in the U.S.

Source: Zeng, Yi et al. Household and living arrangement projections: The extended cohort-component method and application to the U.S. and China, Springer Science + Business Media Dordrecht, 2014

Such projected trends look to be on a collision course with the gathering Alzheimer's epidemic

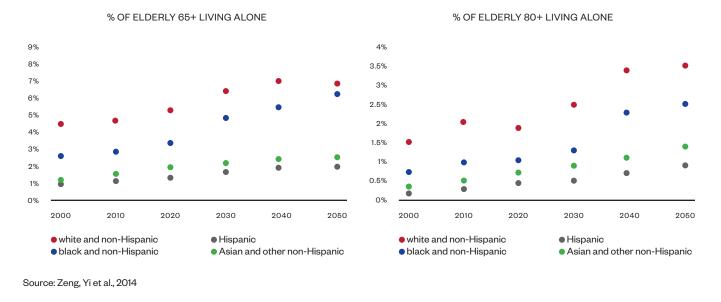


FIGURE 6. RACIAL DIFFERENTIALS OF HOUSEHOLDS AND LIVING ARRANGEMENTS BASED ON THE MEDIUM PROJECTION

demographic projection model, and his colleagues.²⁶ Zeng and his colleagues have generated detailed projections for U.S. household trends out to the year 2050 (understanding that projections become increasingly conjectural as they extend further into the future) (see Figures 5 and 6 and Tables 1 and 2).

According to the "median" projections of Zeng et al.:

- The share of total U.S. population comprised of seniors 65 and older living alone would rise to nearly five percent by 2030—one of every 21 Americans.
- By 2030, nearly two percent of the entire U.S. population—one person in 56—would be 80 years of age or older, and living alone.
- By 2040, over two percent of the U.S. population—every 45th American—would be a member of the "oldest-old" cohort living by him or herself.

And, according to these projections, ethnicity matters. Among non-Hispanic whites and non-Hispanic blacks the share of older persons living by themselves looks to be especially high. In these "median" projections, one in 15 African Americans would be a live-alone 65+ senior by 2030, and one in 38 whites would be a live-alone 80+ senior. Regional differences also matter. By 2030, nearly seven percent of Maine's population—over one in 15—would be a 65+ senior living alone; and every 43rd Iowan would by 80 or older, living by themselves.

Many have become accustomed to thinking of the United States as an increasingly grey society. However, we tend to be unaware that our society is increasingly comprised of live-alone seniors, and profound and far-reaching ramifications of this major trend. The rise of live-alone seniors-especially those among the oldest-old—may in many ways be a good thing in terms of their overall contentment and independence. But it also incontestably makes for new vulnerabilities for those older Americans who are on their own but find themselves beset by challenges that compromise their capacity to live independently. (Such limitations to independence extend far beyond the risks of Alzheimer's, incidentally.) On a national basis-and even more so, for particular localities-the rise of the live-alone senior may expose societies and communities to greater (possibly, considerably greater) familial, health service, and budgetary stresses than currently anticipated.

"Broke America": Unfavorable New Patterns of Wealth Accumulation in the U.S.

Although the United States is awash in private wealth at the national level—average private wealth holdings today would exceed \$1 million for a notional family for four—this is hardly true on an individual, case-by-case basis. Amazingly, perhaps shockingly, there is evidence that a very large number of Americans live in home with no net wealth at all, and that

TABLE 1: PROJECTIONS OF ELDERLY AGE 65+ LIVING ALONE IN THE U.S. IN TOP 10 STATES, 2030 V. 2050

State	2030
Maine	6.82%
North Dakota	6.62%
Montana	6.47%
Vermont	6.26%
Florida	6.15%
South Dakota	5.91%
lowa	5.84%
Missouri	5.82%
West Virginia	5.82%
New Hampshire	5.73%
National Average	4.82%
State	2050
North Dakota	7.97%
Maine	7.96%
Montana	7.91%
Vermont	7.26%
lowa	7.04%
Minnesota	6.86%
South Dakota	6.82%
Florida	6.68%
New Mexico	6.55%
	···
New Hampshire	6.54%

Source: Zeng, Yi et al., 2014

such homes may comprise a growing share of all American households. Needless to say, personal wealth expands all sorts of options for individuals and families—and lack of wealth conversely constrains options and capabilities. Whatever else may be said of them, dementia and Alzheimer's are extraordinarily expensive afflictions for those who require formal long-term care. While relatively few Americans and their families may be in a position to finance long term care entirely out of their own pockets, an alarmingly large number of households appear to have no net wealth which with to finance such care at all. And an even larger number appear to have only meager resources at their disposal (net wealth of less than \$25,000). For people and families in this financial situation—a group much larger than generally recognized—the risk of Alzheimer's could easily mean the

TABLE 2: PROJECTIONS OF ELDERLY AGE 80+ LIVING ALONE IN THE U.S. IN TOP 10 STATES, 2030 V. 2050

State	2030
Maine	2.65%
North Dakota	2.35%
lowa	2.34%
Vermont	2.33%
Montana	2.32%
Florida	2.28%
Minnesota	2.22%
Nebraska	2.21%
South Dakota	2.15%
Pennsylvania	2.13%
Pennsylvania National Average	2.13% 1.77%
-	
-	
National Average	1.77%
National Average State Maine Minnesota	1.77% 2050
National Average State Maine	1.77% 2050 3.87%
National Average State Maine Minnesota	1.77% 2050 3.87% 3.64%
National Average State Maine Minnesota North Dakota	1.77% 2050 3.87% 3.64% 3.38%
National Average State Maine Minnesota North Dakota Iowa Montana Vermont	1.77% 2050 3.87% 3.64% 3.38% 3.30%
National Average State Maine Minnesota North Dakota Iowa Montana	1.77% 2050 3.87% 3.64% 3.38% 3.30% 3.29%
National Average State Maine Minnesota North Dakota Iowa Montana Vermont	1.77% 2050 3.87% 3.64% 3.38% 3.30% 3.30% 3.29% 3.15%
National Average State Maine Minnesota North Dakota Iowa Montana Vermont New Hampshire	1.77% 2050 3.87% 3.64% 3.38% 3.30% 3.30% 3.29% 3.15% 3.15%
National Average State Maine Minnesota North Dakota Iowa Montana Vermont New Hampshire South Dakota	1.77% 2050 3.87% 3.64% 3.38% 3.30% 3.30% 3.29% 3.15% 3.15% 3.06%

Source: Zeng, Yi et al., 2014

rapid exhaustion of all net worth, and the assumption by public programs of subsequent costs of care and treatment.

Living standards are generally rising in modern America, and there is good reason to believe that material deprivation has dramatically declined since the advent of the War on Poverty in the 1960s. It is true that the "poverty rate" records distressingly little progress over the past 50 years (12.7 percent of total population counted below the official "poverty line" of 2016, as against 14.7 percent in 1966.²⁷) But as economists and public policy researchers widely understand, the "poverty rate" is a measure with serious built-in flaws: the most fundamental being its focus on annual reported income rather than spending power (consumption).²⁸ Professors Bruce D. Meyer of the University of Chicago and James X.

TABLE 3. NO HOUSEHOLD WEALTH: PERCENT WITH ZERO OR LESS NET WORTH

United States, 1991 vs. 2013

	10.01	0010
	1991	2013
Total	13%	17%
Race and Hispanic Origin of Householder		
white alone, not Hispanic	10%	14%
black alone	29%	31%
Hispanic origin (any race)	23%	24%
Age of Householder		
Less than 35 years	23%	32%
35 to 44 years	12%	21%
45 to 54 years	9%	16%
55 to 64 years	7%	12%
65 years and over	6%	6%
.65 to 69 years	7%	7%
.70 to 74 years	5%	6%
.75 and over	6%	6%
Highest Level of Educational Attainment in	n the Household	
No high school diploma	17%	28%
High school graduate only	12%	18%
Some college, no degree	12%	21%
Associate's degree	n/a	19%
Bachelor's degree	9%	14%
Graduate or professional degree	n/a	10%
Housing Tenure		
Owner	3%	6%
Renter	33%	36%

TABLE 4. PERCENTAGE OF U.S. HOUSEHOLDS WITH LOW NET WORTH 2013

Estimates for Selected Groups

	% Zero or less	% Under \$25K
Total United States	17%	37%
Race and Hispanic Origin of Householder:		
white alone, not Hispanic	14%	29%
black alone	31%	59%
Hispanic origin (any race)	24%	57%
Age of Householder:		
Less than 35 years	32%	65%
35 to 44 years	21%	43%
45 to 54 years	16%	33%
55 to 64 years	12%	27%
65 years and over	6%	20%
.65 to 69 years	7%	22%
.70 to 74 years	6%	19%
.75 and over	6%	19%
Highest Level of Educational Attainment i	n the Household:	
No high school diploma	28%	65%
High school graduate only	18%	46%
Some college, no degree	21%	46%
Associate's degree	19%	38%
Bachelor's degree	14%	27%
Graduate or professional degree	10%	17%
Housing Tenure:		
Owner	6%	15%
Renter	36%	77%

Source: U.S. Census Bureau

According to the U.S. Census Bureau, the share of U.S. households with zero net worth has been rising and for almost all subgroups, too Source: U.S. Census Bureau

Sullivan of the University of Notre Dame have demonstrated that "consumption poverty" (annual consumption of goods and services whose total value would fall below the official "poverty line") has dropped dramatically and steadily in the United States over recent decades. By their latest estimate, consumption poverty has dropped from over 16 percent to just 3 percent of the total U.S. population between 1972 and 2016.²⁹ Per capita consumption (a proxy for standards of living) appears to have risen appreciably in postwar America for people of all ages, ethnicities, educational backgrounds, and even income levels.

Paradoxically, however, this general increase in material prosperity—and the extraordinary explosion of aggregate wealth-holdings already noted—somehow do not seem to have translated into any general measure of what we might call the "financial fitness" of American households as a whole. The poor state of financial preparedness characteristic of the typical American household was illuminated in the Federal Reserve's latest (2016) report on the economic wellbeing of U.S. households.³⁰ In a survey prepared for that report, respondents were asked, "How would you pay for a hypothetical emergency expense that cost \$400?"

Just over half (54 percent) report that they could fairly easily handle such an expense, paying for it entirely using cash, money currently in their checking/savings account, or on a credit card that they would pay in full at their next statement (collectively referred to here as "cash or its functional equivalent"). The remaining 46 percent indicate that such an expense would be more challenging to handle and that they either could not pay the expense or would borrow or sell something to do so...³¹

Preparations for a sudden financial emergency, to be sure, are different from financial planning for retirement and other arrangements through which individuals and families attempt to build assets and net wealth. A sudden expense tests a household's liquidity, rather than its net worth. Even so, the weaknesses reported for this hypothetical "stress test" are consonant with the remarkably high proportion of U.S. households today with low—or no—net worth. (see Tables 3 and 4)

The Census Bureau's Survey of Income and Program Participation (SIPP), regularly estimates the net worth of U.S. households. In estimating these individual and family balance sheets, the Census Bureau weighed debts and liabilities (mortgages, auto loans, credit card balances, etc.)³² against assets (housing value, checking and banking accounts, stocks and bonds, personal retirement accounts, equity in motor vehicles, etc.). In its most recent assessment, for the year 2013, it concluded that over one-sixth of all U.S. households had a net worth of zero or less. According to this same survey, 37 percent of U.S. households had a net worth of less than \$25,000.

This finding may seem bizarre—so troubling that some readers may question whether it is some sort of survey error, or statistical artefact. But the SIPP survey results basically track with the other major government survey on national wealth, the Federal Reserve's Survey of Consumer Finance (SCF). For the year 2013, the two surveys' estimates on median net worth for U.S. households were almost identical (\$80,000 for SIPP, \$81,000 for SCF).³³ SIPP, unlike SCF, is not designed to estimate wealth for high-net-worth families so it cannot get accurate estimates for the wealth of the rich and the super-rich: but for those in the middle or the income scale or lower down, the survey's approach is useful.

There is also the matter of interpretation of these SIPP results—net worth as a calculated remainder of current assets minus current debt. Should we really be concerned about "zero or negative net worth" for, say, a newly minted Ph.D. with thousands of dollars of educational debt? Probably not, given what we know about life-cycle income trajectories. And, it is true, that some people with zero net worth have considerable access to additional credit. But, this is far from the norm for people with zero net worth—we should not be chasing exceptional "zebras" when there is a herd of ordinary "horses" to bear in mind.

Still, we must ask, is it plausible to imagine that, during this extraordinary overall surge in wealth in America, some groups might have been left behind—or even retrogressed? Unfortunately, yes, and here are a few of the major trends that track with, corroborate, and/or help to explain this.

Declining "Work rates" for Men (and Women)

Over the past half-century employment rates for men of all ages have fallen sharply, and work rates for men in "prime working ages" (25-54) have steadily ratcheted upward in the wake of each new recession (see Figure 7). The severity of the 'men without work' problem is widely unappreciated. As of the summer of 2017, despite eight years of continuing recovery from the Great Recession, work rates for prime age men were still lower than they have been in 1940, a year at the tail end of the Great Depression, when overall national unemployment rates were above 14 percent (see Table 5). The long term postwar decline in work for men is one major trend

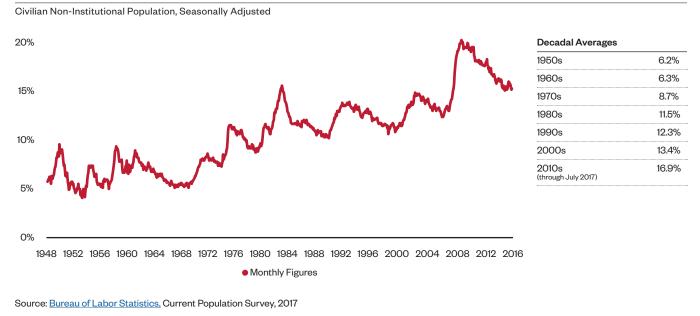


FIGURE 7. PERCENTAGE OF PRIME WORKING AGE (25-54) MEN WITHOUT PAID EMPLOYMENT: UNITED STATES 1948-2017

that helps to explain the failure of many American homes to accumulate wealth over the past several decades. That tendency has been further exacerbated by a parallel decline in work rates for prime age women over the past two decades. After rising steadily from the early postwar years until roughly the year 2000, work rate for prime age women peaked and fell; though they are currently recovering, they are still below their year 2000 historical highs.

Increasing Social Welfare and Disability Dependency

Over the past generation, dependence upon means-tested social welfare benefits and government disability benefits has sharply risen (see Tables 6 and 7). Between 1983 and 2012, for example, the number of American in homes accepting one or more means tested benefit jumped from 42 million to 109 million—which is to say, from 19 percent of our total population to over 35 percent. Rates today appear to be roughly similar to those in 2012. It should come as no surprise that wealth generation has faltered for much of the population at a time when an increasing share of the country is qualifying for benefits conditioned on low or inadequate household resources. Simultaneously, government disability payments have emerged as a key source of financial support for working age men, with nearly three in five prime age men not in the labor force living on disability benefits. Suffice it to say that means tested benefits and disability benefits are generally

TABLE 5. U.S. MALE "WORK RATES": 2017 VS. SELECTED DEPRESSION YEARS

Employment to population ratio (percentage of civilian non-institutional population)

	Men. 20-64	Men, 25-54
August 2017 (BLS, seasonal unadj.)	80.0%	85.1%
1940 (Census)	81.3%	86.4%
1930 (Census)	88.2%*	91.2%*^

* calculated for total enumerated population, not civilian non-institutional population

 2 5-44 population—corresponding male 25/44 work ratio for 2015 would be 85.3 for civilian non-institutional population alone

Sources:

2017 data: <u>Bureau of Labor Statistics, Current Population Study, 2017</u> 1940 data: <u>Source 1; Source 2; Source 3</u> 1930 data: <u>Source 1</u>

TABLE 6. AMERICA'S DECLARATION OF DEPENDENCE

	3rd Qtr., 1983 Number in Millions (%)	3rd Qtr., 2012 Number in Millions (%)	Difference in Number Number in Millions (%)
All People	224.3M (100%)	308.9M (100%)	84.6M (%)
Received Benefits from ≥ Govt. Social Programs	66.5 (29.6%)	152.9 (49.5%)	86.4 (19.9%)
Social Security	31.7 (14.1%)	51.5 (16.7%)	19.8 (2.6%)
Medicare	26.7 (11.9%)	48.2 (15.6%)	21.5 (3.7%)
≥1 Means-Tested Program Benefits	42.1 (18.8%)	109.3 (35.4%)	67.2 (16.6%)
Federal SSI	3.2 (1.4%)	20.4 (6.6%)	17.2 (5.2%)
Food Stamps	18.7 (8.3%)	50.8 (16.5%)	32.1 (8.2%)
AFDC	9.3 (4.2%)	5.4 (1.8%)	-3.9 (-2.4%)
Women, Infants, & Children	2.4 (1.1%)	22.7 (7.3%)	20.3 (6.2%)
Medicaid	17.5 (7.8%)	83.1 (26.9%)	65.6 (19.1%)

Source: U.S. Census Bureau, Survey of Income and Program Participation (SIPP)

TABLE 7. DISABILITY BENEFITS FOR PRIME WORKING AGE MEN 25-54 AND THEIR HOUSEHOLDS:

SIPP Survey, 1985 and 2013 (reported recipients, percent)

Year	Employment status	Prime male disability benefit	Two or more prime male disability benefits	Disability benefit, household level	Two disability benefits, household level
1985	Total	4.2%	0.6%	13.1%	1.9%
1985	Employed	2.0%	0.04%	10.1%	1.1%
1985	Unemployed	4.7%	0.17%	23.7%	2.2%
1985	NILF	38.3%	9.9%	51.9%	13.6%
2013	Total	6.3%	1.1%	14.9%	2.4%
2013	Employed	2.5%	0.1%	10.6%	1.4%
2013	Unemployed	4.3%		21.6%	2.2%
2013	NILF	56.5%	14.1%	66.0%	15.4%

Sources: Price et al. 2016; U.S. Census Bureau, SIPP

modest—and long term dependence on them is not an easy pathway to the accumulation of wealth.

Rising Criminalization

Largely overlooked in our national conversation on mass incarceration has been the all but invisible growth of an enormous 'sentenced' population in our general society men and women not behind bars but with felony convictions in their backgrounds.³⁴ Remarkably, the U.S. government does not regularly collect information about this segment of society—not even figures on its total size. Independent demographic researchers, however, have attempted to estimate the total number of convicted felons in the U.S. over the postwar era. As shown in Figure 8, in 2010 there were nearly 20 million adults in America who had been sentenced to a felony. Extrapolating from this work, we can say that the U.S. sentenced population today would be in excess of 23 million people—and since very roughly speaking about two-and-a-half million adults are behind bars, this would mean that upwards of 20 million men and women (overwhelmingly, men) with felony convictions live in our midst. This would work out to roughly one in eight adult men in the civilian non-institutional population.³⁶ It will suffice to say that the prospects for wealth accumulation for this large and growing group of American may be highly compromised.

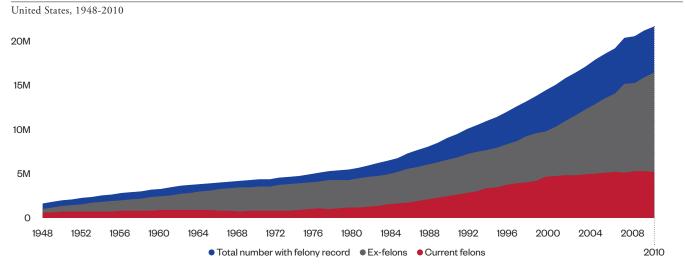


FIGURE 8. ESTIMATED POPULATION OF FELONS AND EX-FELONS:

Source: Shannon et al., "The Growth, Scope, and Spatial Distribution of America's Criminal Class, 1948-2010," Demography, 2017

- There are 32 million black- and Hispanic- headed households in America which account for 25 percent of all U.S. homes and median net worth for all black households was less than \$10,000; over 30 percent of black households had no net wealth, and nearly threefifths had net wealth of less than \$25,000.
- Latinos likewise appear to be exposed to serious vulnerability: their 2103 median household net worth was reportedly just over \$12,000, with nearly a quarter of Hispanic households estimated to have zero or negative net worth and almost three- fifths reportedly having a net worth of under \$25,000.

Three additional indicators of financial vulnerability are worth examining (without regard to ethnicity) since they are powerful predictors of wealth gaps: **1.** Working age households where no one is employed; **2.** Homes receiving means-tested benefits; and **3.** Renter households.

• Nearly 11 million households headed by someone under 65 reported no labor activity for any household member in 2013. The median estimated net worth for such homes was \$10,000. Nearly 30 percent of them were estimated to have a net worth of zero or less, and 56% reportedly had a net worth of under \$25,000.

- The situation was even starker for the over 30 million households accepting means tested government benefits. According to SIPP, median net worth for this group was about \$3400; one third of these households reportedly had no net worth, and over two-thirds had a net worth of under \$25,000.
- Most arresting of all, however, were the reported circumstances of America's 40-plus million renter households. For this group, median estimated wealth in 2013 was just \$2200. 36 percent had an estimated net worth of zero or less, and over three quarters have less than \$25,000 in net worth. If these numbers are accurate, or close to accurate, a very large fraction of America's renters have precious little in the way of financial resources of their own, and are thus precariously positioned in relation to Alzheimer's risks.

TABLE 8. WHO IS BROKE?

Selected U.S. Wealth Statistics for 2013

Characteristic of Household	Total Number of Households (000s)	Percent with Zero or Negative Net Worth	Median Net Worth (2013\$)
Total	124329	17%	\$80,039
White alone, not Hispanic	83863	14%	\$132,483
Black alone	16386	31%	\$9,211
Hispanic origin (any race)	16171	24%	\$12,460
No labor force activity for any household member during the year (HH head under 65)	10853	29%	\$10,040
Means Tested Government Programs:			
None	93392	12%	\$140,789
One or more	30937	33%	\$3,392
Housing Tenure:			
Owner	78597	6%	\$199,557
Renter	43392	36%	\$2,208

Source: U.S. Census Bureau, SIPP

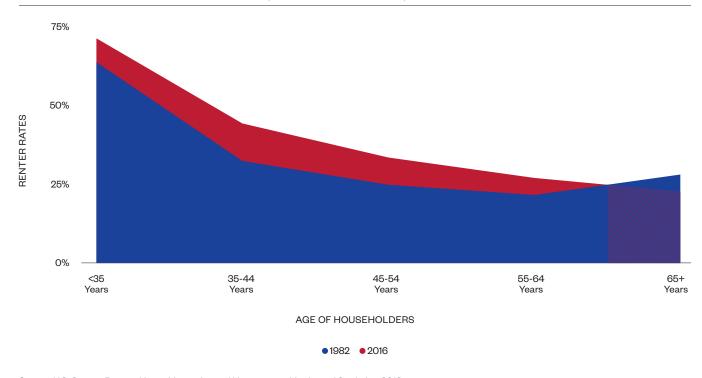


FIGURE 9: RENTER RATES FOR THE UNITED STATES, BY AGE OF HOUSEHOLDER, 1982 VS. 2016

Source: U.S. Census Bureau, House Vacancies and Homeownership, Annual Statistics, 2016

Concluding Observations

o summarize: the fault lines with respect to personal financial preparations for the future appear to be manifold in the U.S. today, with very large segments of the U.S. possessing little net wealth, or none at all. In this respect, the U.S. may be decidedly more poorly prepared for the impending surge in Alzheimer's than we currently appreciate.

There are of course other ongoing trends and current conditions bearing on additional under-examined American vulnerabilities in the face of the looming dementia and Alzheimer's epidemics.³⁶ Our examination of such trends in this paper was by no means intended to be totally comprehensive, much less exhaustive. But the point by now should be clear. We have not begun to think through, systematically and strategically, the manner in which social and economic factors with seemingly little direct connection to those epidemics today might prove to be unforgiving constraints to our capacities to respond to them tomorrow.

Our brief overview suggests that taking into account the 'hiding in plain sight' factors already mentioned in this paper (and perhaps others not mentioned as well) should prompt us to revise our assessment of how well prepared we in America—as individuals, families, communities, and members of a national polity—really are for the coming dementia and Alzheimer's onslaught. The human, economic, fiscal, and political impacts of the epidemics may well be underestimated at the moment. A more careful and comprehensive assessment of our vulnerabilities is of the essence. Let us try to end on an optimistic note. Are there any rays of sunshine in this analysis? Potentially, yes—and this could be a very big yes indeed. For there is a possible "game-changer" on the horizon, and that would be a major research breakthrough with respect to prevention and/or treatment of Alzheimer's.

Although the vast, multi-decade, international investment effort in Alzheimer's research has not generated enough in the way of practical dividends to date, this has the potential to change. And such a change could profoundly alter the realm of the possible. Contemplating our many underappreciated vulnerabilities in the face of the gathering dementia and Alzheimer's epidemics can only underscore the immense scope and scale of benefits we might eventually enjoy from research breakthroughs in this field—and correlatively, the urgency of continuing or even redoubling our commitments to such research efforts. We urgently need a 'game changer'—and significantly increased investment by public and private sources may be our best hope for such a prospect.

Endnotes

- For identification purposes only. Correspondence email: eberstadt@aei.org. The author gratefully acknowledges support from USAgainstAlzheimer's for researching and preparing this paper. Ms. Cecilia Joy Perez of AEI assisted in the preparation of this study; the usual caveats apply.
- 2. In this paper we will be addressing the Alzheimer's and dementia epidemics specifically and refer to both throughout the paper as the Alzheimer's epidcemic. though we recognize that there are additional forms of dementia that pose rising risk to the U.S. population as well. For a succinct background, see Alzheimer's Association, Alzheimer's Disease: Facts and Figures: 2017, (Washington, DC; Alzheimer's Association), pp. 5-7; https://www.alz.org/documents_custom/2017-facts-and-figures.pdf
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- 6. Alzheimer's Disease 2017:Fact and Figures, Loc cit., p. 71.
- Kenneth D. Kochanek, Sherry L. Murphy, Jiaquan Xu, and Betzaida Tejada-Vera, "Deaths: Final Data for 2014", National Vital Statistics Reports, vol. 65, no. 4 (June 30, 2016), https://www.cdc.gov/nchs/data/nvsr/nvsr65/nvsr65_04.pdf
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- Between 2000 and early 2017, for example, private health-9 holdings in America are estimated to have soared by roughly \$50 trillion--a fantastic sum, roughly equal to two times China's current net worth, and vastly exceeding the buildup in U.S. government debt over that same period. All other things being equal, this increase in private wealth self-evidently increases our aggregate national capabilities for coping with future challenges, not least dementia and Alzheimer's. By the same token: America's high and still increasing levels of educational attainment—with roughly 90 percent of adults 25 and older today high school graduates, and nearly 35 percent college grads-suggests increasing capacities and potential for U.S. adults, in both economic and other spheres. Likewise, economic growth enhances our overall national capabilities for dealing with dementia and Alzheimer's by making it easier for our country to finance its national priorities while per capita economic growth has appreciably slowed since the beginning of the new century from its earlier postwar tempo, continuing per capita growth nevertheless will leave us better suited to deal with those challenges in coming years. For data sources, see Board of Governors of the Federal Reserve System (U.S.), Households and Nonprofit Organizations; Net Worth, Level [TNWBSHNO], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/TNWBSHNO, September 21, 2017; U.S. Census Bureau, Educational Attainment in the United States: 2016, https://www.census.gov/ data/tables/2016/demo/education-attainment/cps-detailedtables.html; U.S. Bureau of Economic Analysis, Real gross domestic product per capita [A939RX0Q048SBEA], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred. stlouisfed.org/series/A939RX0Q048SBEA.
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- **17.** OECD, "Living Arrangements of Children," http://www.oecd.org/ els/soc/SF_1_3_Living-arrangements-children.pdf.
- 18. Robert I. Lerman and W. Bradford Wilcox, "For Richer, For Poorer: How Family Structures Economic Success in America," American Enterprise Institute, October, 28, 2014, http://www. aei.org/wp-content/uploads/2014/10/IFS-ForRicherForPoorer-Final_Web.pdf. Only part of this "premium" accrues from twoearner homes: evidence suggests that married men earn more than non-married men as well, both by working more hours and through the accumulating effects of greater long-term involvement in the labor market.

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- **20.** Joseph Chamie, "The Rise of One-Person Households," Inter Press Service, September 21, 2017, http://www.ipsnews. net/2017/02/the-rise-of-one-person-households/.
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- **31.** Ibid. p. 22. Note this finding is actually an improvement on results four years earlier, when fully 50 percent of respondents said they could not easily handle an unexpected \$400 expense.
- **32.** These calculations did not attempt to include the net present value of future social security payments, social welfare benefits, etc.

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- **34.** It is quite possibly true, as American Enterprise Institute's Andrew Biggs and others have argued, NOTE35 that the retirement income outlook for these rising cohorts of seniorsto-be is in reality rather more positive than many current assessments imply. But the provision of income adequacy for ordinary everyday expenses is a different matter from the issue of financial depth-and lack of financial depth exposes individuals and their families to extraordinary vulnerability with the onset of Alzheimer's, given the enormoous and continuing costs of long-term care.
- **35.** For more detail, see Nicholas Eberstadt, Men Without Work: America's Invisible Crisis, (Templeton Press, 2016).
- **36.** These would include: **1.** the emergence of "rural health care deserts" in much or rural America just as the care and health service needs of rural America's already relatively elderly population are set to increase steeply; **2.** the two-decade nationwide rise in mortality for working age non-Hispanic whites—and the especially pronounced increase in death rates for less educated "Anglos"—which not only places additional demands on our stressed national health care system today, but may also indicate that the health prospects of major segments of our rising "pre-senior" cohorts could be more compromised today than currently anticipated; and, **3.** not unrelated to these two issues, the unfolding opioid crisis in American society, whose costs and ramifications are perhaps still not fully accounted for.

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