Senior Health & Long-Term Care…
…Trends, Interdependencies & Realities

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Introduction

The market for senior health care solutions is accelerating rapidly and predictably. As pointed out by Fidelity Investments, an estimated $6 trillion was spent globally on health care in 2012! The Senior Healthcare market in the U.S. is being driven to a tipping point by the daily addition of 10,000 seniors to the ranks of the "Medicare eligible."

Large, rapidly growing markets attract innovation and the senior health and long-term care market is no different. To meet the burgeoning needs, best practices are being successfully tested and implemented in the medical and healthcare industries, technology is enabling flexible, cost effective support, and virtually all of the relevant participants are open to better ways to provide health and long-term care to seniors.

The financial services industry, however, has yet to adequately respond. The key segments of the industry (advisors, distributors, insurers, and asset managers) have gone through an expensive learning cycle to better understand the market, but remain ill prepared to adequately address the issues. In many instances, investment and insurance firms have cut options, rather than innovate to address more of the needs.

In all areas, there has been too little focus on the issues surrounding the ***Dependency Gap ™***[1] – the gap between healthy years and total year of life. Specifically, how will one be cared for during the gap and how will that care be financed. We believe this is a critical area for our society and hope this paper will help to focus more attention on these issues and the benefits of different sectors/industries working together to address them.

There is a unique opportunity for better alignment of financial plans, products, services and incentives with medical and healthcare best practices to decrease the *Dependency Gap ™* relative to remaining life expectancy, improve the quality of life for clients and their families, and defuse this ticking "retirement time bomb."

This paper provides a framework to discuss the issues and opportunities surrounding senior health and long-term care. We believe the financial services industry has a responsibility to ensure their clients understand the possible financial and social impacts, and the options to prepare for them. We also believe that there are substantial opportunities for participants in the financial services industry to partner in unique ways with providers in the senior healthcare industry to capture market share, improve clients' healthspan, and to help clients fund their retirement healthcare needs more effectively.

[1] See Appendix – Glossary of Terms

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I. Framing the Issues and Opportunities

The Scope of the Problem

In the past, the health care sector in this country successfully focused on increasing life expectancy. Now we see added focus on healthy years of living, so that people can also lead active, independent lives longer.

Independently, the financial services sector has focused on funding and generating retirement income for an increasing number of years. In the retirement income world, ***lifespan*** and living expenses drive the financial calculations. The overriding question is "Will I outlive my income."

Medical and long-term care, if explicitly addressed at all, are secondary, and the questions posed are different. Instead they are about ***healthspan:*** How long will I (we) be active, engaged and independent? How long will someone have to take care of me if and when I need help? Who will do it, and how much will it cost?

Solving the senior health and long-term care equation is about more than protecting assets and generating income. It is first about minimizing the ***Dependency Gap ™*** between healthspan and lifespan. One way to quantify this gap is to subtract healthy years of life from life expectancy to arrive at the number of years to be funded. Another measure which captures health effects as well is the ***Dependency Ratio ™*** or dependent years divided by total life expectancy.[2] The larger that gap and/or the less prepared to manage chronic illness, the bigger the financial time bomb is for an individual. The collateral damage impacts all of the caregivers as well – particularly the unpaid ones – spouses, children and others.

Across the globe, there are significant differences among countries in lifespan and healthspan, and thus in *Dependency Gap ™.* These differences are even more significant if measured at retirement age vs. at birth. This wide range of differences in global averages is indicative of what one could expect within a single country's population.

Global Age Watch[3] provides healthspan estimates for 195 countries, based on the entire population's life and health expectations at birth. Using these, the average newborn Swede or Spaniard could expect the same *Dependency Gap and Ratio* of 9 years or 11%, and the Slovak is a close parallel at 10 years or 13%. While the three populations are remarkably similar at birth, they diverge radically over time. Using EU data, calculated from age 65 the *Dependency Ratio ™* increases to 24.4% for the Swede, 49.7% for the Spaniard, and 75.5% for the Slovak.[4]

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[2] The "Dependency Ratio" facilitates comparisons over time periods, for different age groups, and across different market segments or populations. See Appendix I for further explanation of these terms.

[3] http://www.helpage.org/global-agewatch/population-ageing-data/

[4] Source: European Health and Life Expectancy Information System (EHLEIS); Eurostat Statistics Database. The European Union (countries that share an economic union and long history) compiled a richer database of comparable data. At age 65, a Swedish male could expect to live18 years, a Spaniard 18.3, and a Slovakian

The 195 countries represented in the Global Age Watch data showcase the a wide range of conditions, Japan has the oldest population, and its *Dependency Gap ™* for newborns is among the lowest at 9 years out of a total life expectancy of 84 years. At the other extreme, in Sierra Leone, the *Dependency Gap ™* at birth is 19 years out of 48 years. In the U.S. the gap for newborns is 10 years out of a total life expectancy of 79 years.[5]

Within each country there is a variety of populations with unique health, social, economic, and age profiles, and the U.S. is no exception. Takeaways from this global perspective include:

- There is a range of "best practices," and paths to increase lifespan and/or healthspan, globally, at a country level, and an individual level. (The life and health expectancies for the US and Cuba are almost identical for men, but the paths and costs to that are radically different)
- It is more important to increase the healthspan than to simply increase the lifespan In fact increasing lifespan without increasing healthspan at least as much or more increases the individual and societal burdens.
- Population growth and its ageing composition are creating a large and expanding market for senior health and long-term care globally. We see it in the US (19.1% are over age 60), we know it is well along in Japan[6] (31.6% are over age 60), and that it is just getting underway in earnest in China (13.3% are over age 60). Large and growing markets of this size attract attention and innovation to create a wide variety of solutions. Most are incremental, others, however, are potentially paradigm shifts.
- Globally, *Dependency Ratios ™*' range from a low of 10% up to 40%. For OECD countries the range is a somewhat narrower 10% to 18.9%. One should expect a range of *Dependency Gaps ™* for different populations within a country, some of which will be lower than even the best country average.
- Solving the growing senior health funding crisis will entail a spectrum of choices and approaches ranging from reducing the need for care, to changing the way care is delivered, to developing "products' to help cover the cost of care. Each will have associated financial and social implications

Extending 'healthspan' and shrinking the Dependency Gap ™ is essential to the ultimate quality of life for seniors and their families. There is a growing focus in the medical and care sectors on changing their care delivery approaches, and among large employers on adjusting their benefits and "wellness" packages.

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just 13.9. The dependency gap (unhealthy years) for the Swede were 4.4 years or 24.4% of his remaining years, for the Spaniard it was 9.1 years or 49.7%, and for the Slovak it was 10.5 years or 75.5%

[5] The gap would loom larger if we use data about expectations for 65 year olds as in the EU data.

[6] In 2012 Japan was the only country where over 30% of the population was over 60. In 2050 Japan is projected to have 41.5% of its population over 60. By 2050, there will be 64 countries with over 30% of their populations over 60.

However, there is much less awareness in the financial services sector of these trends and the evolving dynamics across relevant industries and for different populations. Even with a reduction of the Dependency Gap ™, demographic trends will continue to drive up its total cost, and financial products and services must keep up. A better understanding is essential to the ability to provide financial planning advice to clients, build a business based on that advice, and select products and services to successfully implement the advice.

The Depth of the Problem

Some of the ***most difficult personal, family and financial discussions*** are about aging and long-term care. It is fraught with complexity, uncertainty, miscommunication, and change. The result is often procrastination or denial. Ironically this is in the face of the predictable wave of growing need for elder health and long-term care services that are 'demographically baked in.'

DSG consumer research, conducted jointly with Matthew Greenwald & Associates, highlights ***consumer disconnects***. Six of the top ten retiree concerns (from a list of 25 choices) relate to elder health care. Of these, four relate specifically to long-term care. While a major "issue," the research also highlights how much the same respondents were in denial about their own probability of needing nursing care, and how unrealistic their funding expectations were.

This echoes another ***disconnect in financial service distribution channels***. Separate DSG research has repeatedly pinpointed a gap between Advisors recognition of the pressing need to address elder health care with clients, and how unprepared they are to do it.

Advisors aren't alone in being unprepared for the discussion. Compounding the problem, parents and children often don't communicate their expectations and intentions about who will provide care, what it could entail, and possible consequences.

The insurance industry is unprepared. Insurance companies are actively reassessing their long-term care products - if they should continue them and what features and benefits to include, and at what cost. Two decades ago, the industry offered simple nursing home policies. Today, as community and home based alternatives grow, the market requires more flexible policies – in terms of benefits, as well as how they are offered, underwritten, and funded.

The ***medical and nursing care establishments are also changing*** along multiple fronts. There is increased focus on preventing and mitigating the impact of declining health (as well as curing ills), where and how to deliver long-term care (in communities and homes), and how to approach end of life care (normal supportive aid, palliative, and hospice care) – all while their business and funding models are also changing.

Federal and state governments are not prepared to help. Already they have toughened eligibility requirements for Medicaid and taken steps to shift more and more of the long term care burden from institutions to families and individuals. The Affordable Care Act and Supreme Court decision create additional uncertainty – along with opportunity. The

reality is that budgetary constraints necessitate intense focus on costs and more effective solutions.

In the face of this, there is a clear and substantial financial requirement. The solutions will involve individuals, their families and communities, their financial and medical advisors, the investment, insurance, medical and care industries, and multiple levels of government. In each circle and across industries, solutions start with communication and dialogue to stay abreast of changing circumstances that can impede or facilitate solutions.

For individuals the discussion with their financial advisor, if there is a discussion at all, too often jumps to 'a financial number,' shortcutting and undermining critical dialogue needed to fully understand the range of potential issues and their implications for clients and their families.

What's In "The Number"?

Simply using a large number to jumpstart a conversation about senior health and long-term care, which may be needed at some point in the future, can produce a financial shock that is more likely instill paralysis or denial than open a path to solutions.

While it is a convenient way for financial institutions and advisors to make a point forcefully, it is usually generated using a model or calculator that depends on a relatively few, simple answers to basic questions. More often than not, it is generated by an online tool that may offer educational information, but rarely offers enough dialogue, if any.

One good example of a tool kit that helps to frame the financial question is the Federal Long Term Care Insurance Program. Using their calculator[7] Federal employees can quickly find expected costs based their location and test a variety of scenarios. (These cost projections exclude important items such as non-custodial medical care costs and insurance[8].) Using the model, a policy for a single person in Philadelphia with no limit on total years of coverage, a $250 per day benefit, no inflation protection, and a 90 day exclusion period, results in a "number" that seems both thorough and authoritative.

Long-term Healthcare Costs

	Annual Rate	Years of care	Total Cost	Cost in 10 years @ 4.7%
Home Health Care	$29,640	2	$59,280	
Assisted Living	$38,664	1	$38,664	
Nursing Home	$94,900	2	$189,800	
			$287,744	$440,361

[7] Calculators from the Federal Long Term Care Insurance Program are at: https://www.ltcfeds.com/ltcWeb/do/assessing_your_needs/costofcare?action=costofcare

[8] For example, according to HealthView Services (http://apps.hvsfinancial.com/hvadvisor/), the typical annual medical costs for a 65 year old male in good health is $4,014. With poor health, (high blood pressure, diabetes, cardiovascular disease, and cancer) the estimate rises to $7,612.

However, the large number of variables and limitations are clear if probed. Some variables are straightforward, such as whether the solution is for one person or a couple. (The calculator provides care and insurance costs for an individual rather than a couple.)

Some variables simply can't be known, such as when, how much care, what kind of care, and how long a person or couple will need care. For that matter, there is an implicit assumption that a person will be in the two thirds of the population who will, in fact, need long-term care.[9]

While the numbers seem precise, the annual cost of "Home Health Care" in the model defaults to 6 hours of care for 5 days a week. Research consistently shows a strong preference for aging in place. In that scenario, if 24x7 care is needed, then the annual cost mushrooms to $165,984 – unless there are changes in the way custodial and monitoring services are delivered and consumed in the home.

Even assuming progressively more 'efficient'[10] care delivery systems (home, to assisted living, to nursing home), the calculator estimates the cost 10 years out, when the need is likely higher, will exceed $440K. In contrast, the mean family net worth of retired heads of households was $485.3K in 2010[11]. Over the intervening 10 years, people are likely to have drawn income from their portfolios, while medical and nursing care costs continue to escalate. Consequently, at the point they need care; the cost may easily outstrip their net worth – triggering the financial time bomb in their retirement portfolio.

Often people put off calculating 'the number' until they are closer to 65 and need to focus on Medicare. Many wrongly assume that Medicare covers custodial care and don't understand what qualifying for Medicaid actually entails. Faulty assumptions and delay can compound the annual cost[12] of traditional long-term care insurance enough to take the option off the table.

While delay may not alter the ultimate cost, it does shift the financial burden later into the retirement years and puts additional demands on a retirement portfolio. That elevates the potential for "sequence of returns risk" (similar to reverse dollar cost averaging) that retirees endured in 2008 to 2011.

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[9] The CDC National Center for Health Statistics' National Nursing Home Survey:2004 Overview provides information for the nursing home component of the long-term care system including length of stay, payment sources and diagnoses: http://www.cdc.gov/nchs/data/series/sr_13/sr13_167.pdf

[10] It is important to note that an 'efficient' process does not necessarily lead to an effective outcome

[11] Changes in US Family Finances from 2007 to 2010: Evidence from the Survey of Consumer Finances, Federal Reserve Bulletin, June 2012, Vol 98, No 2.
http://www.federalreserve.gov/pubs/bulletin/2012/pdf/scf12.pdf

[12] Using the scenario above, starting at age 55 yields an annual premium is $1,522, if one starts at age 65 it is $3,069, and if start is delayed until age 70 it rises to $4,544. Add 5% inflation protection and the annual cost for a 65 year old is even greater.

The "number" (and often financial advice or products) typically ignores: first, the single most important source of care (the family); second, the growing preference for community and home based settings in place of institutional ones; third, the rapid expansion of support for longer, better, independent living; and fourth, the ability to manage and minimize the gap between one's healthspan and lifespan .

Using a model and number, by themselves, is not a substitute for starting a broader conversation much earlier. It is only a single point along the way to understanding all the variables, forming a plan, and putting it in motion. It lacks the deeper conversation about where, why, and how and for whom long-term care might be required, along with alternate paths and repercussions for the family.

II. Multiple Dialogues Are Necessary

The need for long-term care could be sudden, due to an accident or a stroke, or more likely a gradual age related onset of chronic illnesses. Many variables are largely uncontrollable, but some are. The uncertainty makes it more difficult to determine who the caregiver will be. Will it be paid medical or custodial care, will it be volunteers or family members or, most likely, some combination of the above? Will it be at their home, in a continuing care community, in a child's home, in an assisted living or nursing home? With multiple dialogues and forethought, individuals can exercise some control and undertake some contingency planning.

Many different people including family members, health care providers, attorneys and financial advisors may be involved in aspects of these dialogues. Some should start as early as the 40's with frequent, in-depth dialog by the 60's. From an advisor's perspective, it is not difficult to envisions circumstances where avoiding a dialogue would conflict with a fiduciary duty.

Individuals can exercise control to prolong independent living, plan and prepare for dependent living, and be clear about end of life preferences. Examples include taking preventive care steps to maintain physical and mental health, finding housing and support situations to live independently longer, or putting Advanced Directives in place – all require dialogues.

The medical and care establishments, in varying degrees, are adapting to a model that encourages individuals to take steps to increase their wellness and healthspan. The recently passed PPACA has facets that encourage programs that reward results based outcomes, solicit patient feedback, and deploy electronic health records systems – all of which enable consumers to initiate better conversations about their healthcare.

At some point there may be a dialogue about differential pricing and benefits for a variety of insurances based on the steps individuals take to improve their healthspan relative to their lifespan. Hospital systems are already recognizing the possibilities and are branching out into health insurance.[13] A logical next step might include access to a long-term care policy tailored to client/patients who take steps to monitor and improve their health more effectively. Employers and health insurers might take additional steps to build on their wellness incentives by offering access to more affordable long-term care post 65 to individuals who manage their health better pre 65. With conversation the choices can improve and multiply.

Dialogues between the individual and their family is the starting point, but need to take place on multiple levels to identify and communicate "best practices" and to keep pace with a tsunami of change washing through all of the inter-related disciplines that affect senior and long-term care choices and implementation.

[13] Wall Street Journal, Hospital Systems Branch Out As Insurers, Dec 17, 2012, p B1

III. Care

Informal Care Networks
From any perspective, the informal care givers (family and community) have historically had the dominant role in providing long-term care to the elderly, either by providing care at no charge, or paying for assistance privately.

The National Care Planning Council (NCPC) research indicates that just 16% of long-term care services are covered by the government[14]. The other 84% are provided free of charge by family caregivers or paid for by families. The NCPC estimates that in 2005 roughly 71% of all long-term care, 17,400,943,000 hours, were provided in the home by family. Using an $18 per hour rate[15], typical for home health aids, this equates to $312.2 billion in equivalent costs.

In a 2004 Congressional Budget Office study[16], the CBO stated on average 92% of impaired elderly people relied on both informal (unpaid) and paid helpers. In fact, 64.3% relied exclusively on unpaid. However, as the impairment level rises, so does the proportion of paid help. The percentage that can rely on solely on unpaid help decreases from 78.3% for the least impaired to 41.4% for the most impaired.

Equally clear, these "free" caregiver(s) will likely be under stress as a consequence of the trade-offs they must make in their own lives to be available to provide care. The National Association of Caregivers reports that caregivers experiencing extreme stress have been shown to age prematurely. In fact, the level of stress can take as much as 10 years off a caregiver's life.

The most common tactic for controlling out of pocket costs of long-term care is increased reliance on an informal network of family and community. Anything which enables unpaid, family and community, networks to provide higher levels of help more easily over longer periods of time helps to control out-of-pocket costs and may reduce stress.

Care Givers – Who Are They?
The dialogue is not simply about how an individual will pay for their long-term care, it is also about what it will mean to the people around them, that they care most about, if they can't pay.

Over the 19 years ending in 2009, per capita spending (excluding informal, free care assistance) for home health care rose 416% vs. 209% for nursing homes and continuing

[14] National Care Planning Council, Guide to Long Term Care Planning – Long Term Care Insurance, Thomas Day (http://www.longtermcarelink.net/a13information_guide.htm)
[15] Current rates of $19 and $20 per hour would apply based on the 2011 MetLife Mature Market Institute's "Market Survey of Long Term Care Costs. (https://www.metlife.com/assets/cao/mmi/publications/studies/2011/mmi-market-survey-nursing-home-assisted-living-adult-day-services-costs.pdf)
[16] Congressional Budget Office, Financing Long-Term Care for the Elderly, April 2004. https://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/54xx/doc5400/04-26-longtermcare.pdf

care retirement communities.[17] As the role of home health care increases, the reliance on informal, free, family caregivers also increases.

National Care Planning Council research indicates that, "the typical caregiver is a daughter, age 46, with a full-time job, providing 18 hours per week for one or more of her parents. They report estimates that "these people lose about $660,000 in wage wealth"…and on average, 'provide assistance for 4.5 years." Based on National Long Term Care Survey data up to 1999[18] we get a fuller picture of who provides care. On average there was a pool of five potential caregivers. They are typically family members 84% of whom were spouses or children. Of the total caregiver pool, the burden usually fell to only one.

In the case of married couples, 61% of the spouses of disabled people were their caregivers, and of these 53% were over 75 themselves. An unanswered question is who takes care of the surviving spouse?

Also 15.8% of children of disabled people provided care. Of these, 59.8% were married, 12.7% were over 65 themselves, 35.3% were living in the same home as the disabled person (another 29.2% lived within 10 miles), and 18.4% had children under 15.

Daughters made up 63.8% of the children caregivers. To say it alters the course of their lives is understatement. Not surprisingly, they are typical buyers of Long-Term Care insurance themselves.[19]

With the decreasing size of families, delayed child bearing, splintering impact of divorce, increase of women in the work force, and greater geographic dispersion of families, the available pool of "free" caregivers is shrinking significantly.

The additional burden on a primary caregiver can ratchet up appreciably, with consequences to them and the family. More discussion over more time can help care recipients and care givers assimilate, plan for, and react to the changing conditions around them – and importantly help avoid passing on the equivalent of a "negative legacy" to spouses or children.

[17] 2012 Statistical Abstract from the US Census Bureau, Table 137, Health Consumption Expenditures – per Capita Spending by Type Expenditure and Source of Funds: 1990 to 2009.
[18] Staying the Course: Trends in Family Caregiving, Spillman and Black, November 2005 provides analysis of who provides care based on the 1994 and 1999 waves of the National Long-Term Care Survey. http://infoassist.panpha.org/docushare/dsweb/Get/Document-13628/Staying%20the%20Course.pdf
[19] Consumer Study: Understanding Long-Term Care Buyers – Hearts & Minds, Mutual of Omaha, 2012.

Care Receivers[20] – How Their Care Is Changing

Seniors are healthier and learning ways to live independently longer, effectively increasing their healthspan. Over the 20 years ended in 2004, disability rates decreased 17%. Fewer limitations on ADLs[21], particularly Instrumental ADLs (activities of daily living which let individuals live independently in communities) were largely responsible. The decline coincides with adoption of technologies ranging from direct deposit of social security checks, to online shopping at Amazon, to monitoring medication usage. *Technology will continue to help with IADLs. Achieving improvements in Basic ADLs (basic activities such bathing, eating, and personal hygiene) is more difficult to address with technology.*

Over the past 15 years, institutional use has declined by 37%. Likely causes include more stringent Medicaid nursing home eligibility requirements, as well as regulatory and legal impediments to changing nursing home culture from "residential institutions – like asylums" to more competitive ones "based in a belief in person-centered care."[22] *It is unlikely the trend away from institutional care will reverse soon in the face of budgetary constraints at the Federal and State levels.*

Between 1999 and 2004, residents with disabilities in assisted living facilities increased 74%. The "assisted living" model is in some ways a hybrid of both institutional and community based service models. *It is provoking a competitive response from the nursing homes that can respond, to become more client-centric. It is also giving rise to a variety of new approaches along a continuum from independent living to full time care and ultimately to hospice care. The choices today are vastly larger and better than just a decade ago.*

As alternatives such as assisted living and home care models have grown over the past 20 years, spousal support has become a more important care component. The increase of surviving couples, who can provide help for each other for more years, has helped raise the proportion of elderly with two or more ADLs living in these communities from 57.5% to 69.5%.

The gender gap widens more with age, despite overall improvements in chronic disability rates. Over 20 years disability rates for men dropped relatively faster (24%), than rates for women (12%). *However, because husbands tend to be older than their wives and die at earlier ages, their wives face a high probability of living a number of years, without a spousal caregiver, and with chronic disabilities. Without sufficient planning more women will receive long-term care in a less than desirable setting.*

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[20] The AARP Public Policy Institute identified 7 trends affecting elders, particularly those with disabilities. More Older People with Disabilities Living in the Community: Trends from the National Long-Term Care Survey, 1984 – 2004, Redfoot and Houser, September 2010. http://assets.aarp.org/rgcenter/ppi/ltc/2010-08-disability.pdf

[21] A concise definition and list can be found at: http://www.seniorplanningservices.com/files/Santa-Barbara-ADL-IADL-Checklist.pdf

[22] The Atlantic, May 2012, How to Fix Nursing Homes, Marshall Kapp http://www.theatlantic.com/health/archive/2012/05/how-to-fix-nursing-homes/257153/

IV. Potential Paths to Manage & Mitigate the Burdens

As noted above, the "number" generally ignores the rapid development of support for longer, better, independent living.

Many of the important catalysts to enable better, longer, independent living are cutting edge technology, but more often are existing technology applied differently.[23] *Technology opens up new possibilities with both pros and cons. "**Information**" technology, for example, is helping to better manage the quality and cost of delivering care more flexibly. "**Mechanical**" technology opens up opportunities for extended higher quality of life with less need for human assistance. "**Mobile**" and "**Communication**" technologies reduce the constraints of time and distance.*

*"**Medical" technology, on the other hand, involves intricate human biological systems that evolved millions of years.** These are complex mechanisms and defenses, that react to internal, interpersonal, and environmental stimuli. There are numerous examples of unintended consequences of well intentioned medical beliefs and interventions.*[24] *While it opens up possibilities for extending lifespan and/or healthspan, it also opens up the potential to simply change fatal diseases into chronic diseases.*

No technology operates in a vacuum. They operate and evolve in a marketplace with needs and demands. They operate in a budgetary environment, in a political environment, and in a legal framework. Any or all of these can accelerate or retard how quickly or effectively it is applied.

For Individuals

Technology has already driven a significant reduction in IADL limitations – primarily by enabling individual elders to better control more of their environment as noted above, and obtain more independence for themselves. Not only is it changing retail distribution in ways that literally bring retail stores into their homes, it has helped The NCPC, Genworth subsidiary CareScout, AARP and others put information at seniors' fingertips to locate local help and obtain care services.

More recently, as one example, the Qualcomm Foundation[25] announced the Qualcomm Tricorder *x* Prize. The goal is a mobile platform that will enable people to diagnose a set of 15 conditions without relying on a doctor or nurse. More the 230 teams from over 30 countries are competing for the $10 million prize. While there are technological obstacles, the barriers from FDA regulations and the medical profession may be more difficult to surmount. The potential for cost control in identifying health problems early and

[23] See also Appendix I Technology Adoption Rates

[24] Antifragile – Things That Gain From Disorder, by Nassim Nicholas Taleb, and Taking The Medicine: A Short History of Medicine's Beautiful Idea, and Our Difficulty Swallowing It, by Druin Burch contain numerous examples of the unique issues confronting medical technology and offer insights into understanding the probabilities of success in applying it.

[25] The Economist Technology Quarterly, December 1, 2012, *The dream of the medical tricorder*, p12

monitoring ongoing health conditions is significant. With the proliferation of smart phone technology much of the requisite technology may already be deployed[26],

Budget and market issues are also driving and financially incenting consumers to take more responsibility and engage in their own health care earlier. CDHPs and HSAs[27] in the workplace have already spurred consumers, prior to retiring, to look at their own health care differently. Employers, particularly larger ones have put the spotlight on Wellness Programs. (Two thirds of large employers already offer financial incentives.)

For Family Caregivers

Technology helps improve the lives of both family caregivers and their parents.[28] Simple communications technologies such as Skype and familiarity with social networks are already helping seniors stay engaged with more of their geographically dispersed families and friends. (Engagement correlates strongly with longer healthspan.)

Sophisticated personal and home sensors coupled with medical dispensers, have the potential to reduce the time, stress, and cost for primary care givers, while enabling longer independent living.

It is not difficult to envision a situation where the primary caregiver isn't also the primary conduit and translator of care and medical information for others in the family. eCaring already provides a simple information tool that is a step in that direction for caregivers, either paid or unpaid. On the medical front, according to a survey by the Mercer unit of Marsh & McLennan 15% of very large employers already use some form of telemedicine and 39% are considering it[29].

Communications and mobile technology can spread the load across more members of a family and make it easier to interact; both have the potential to reduce stress on family caregivers – who contribute their support at no charge.

For Care Communities

The same approaches above also offer Care Communities opportunities to operate more efficiently and effectively. They offer the possibility to achieve some of the economies of an "institutional" setting, without constricting personal choice, preferences, space and dignity.

Technology also creates additional possibilities for expanded communities. In the face of high public debt, Japan, with the highest proportion of people over 60 in the world is promoting social interaction to control care cost. Japan is supporting activities and engagement similar to assisted living communities in this country – scaled for a national audience. "The health ministry is tapping the benefits of community supports as a pillar of its 10-year plan for healthy aging. People with limited social networks are prone to isolation and exclusion, and

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[26] "There will be more mobile devices by the end of 2012 than there are people in the world." Employee Benefit News, Sept 1, 2012, *Smartphones take wellness engagement to new levels*, p33

[27] Consumer Driven Health Plans and Health Savings Accounts

[28] Technology Can Take the Weight Off of Long Distance Caregivers, Menack and Cress: http://www.asaging.org/blog/technology-can-take-weight-long-distance-caregivers

[29] Wall Street Journal, *Doctors Move to Webcams*, December 21, 2012, p B1

tend to suffer more from disease…Isolation triggers multiple responses in the body that include heightened activation of the brain's stress systems, increased blood pressure, reduced inflammatory control and immunity, and perturbed sleep...[30]" Each morning there is a national broadcast of breathing and exercise instructions to 28 million seniors organized in local community groups. They have used a basic technology to help organize and engage seniors based on activities ranging from sports teams, to cultural activities, to picking up litter. The findings: People, who are engaged, are more trusting; live longer and have fewer disabilities.

For Doctors
With rapid advances in medical technology, numerous studies have found that an unintended consequence for dying patients was often an unnecessarily prolonged, painful, expensive, and emotionally burdensome experience for both them and their families. It has taken time to assimilate the ethical[31] and legal implications of different treatment choices and to adjust, but that process is underway.

Living Wills and Advanced Directives provide firm, legal guidance for doctors and enable people to get a greater level of control over their end of life. The first form of a Living Will, wasn't proposed until 1969. It was further codified in the Uniform Rights of the Terminally Ill Act in 1985 and 1989 as well as the Patient Self-Determination Act of 1990. Subsequently it has evolved through three generations; with each shifting more control over medical procedures that are technically possible to the patients and families to choose what they believe is desirable.

While dating back to the Crusades, the introduction and legitimization of hospice care in this country is also relatively recent.[32] The approach of Hospice Care is diametrically opposed to the traditional medical approach. It focuses on help improving the end of life, rather than help to hold it off. It offers an alternative choice to heroic end of life procedures that can easily run up five and six figure bills in a matter of days or even hours, while also allowing more leeway in pain management.

For Health Care Delivery:
There is a clear "doctor supply and demand problem" – and substantive changes must occur to address it. The Association of American Medical Colleges predicts a shortfall of 90,000 doctors by 2020 (half primary care doctors) and 130,000 by 2025. Over the next 19 years 10,000 seniors each day will turn 65 (including one third of doctors), substantially increasing the proportion of the population with a high incidence of care intensive, chronic disease. The Physicians Foundation survey[33] offers a bleak assessment from a supply and

[30] Seniors Engaged Pursuing Sports to Culture Living Longer, Bloomberg, Kanoko Matsuyama, Oct 5, 2012: http://www.bloomberg.com/news/2012-10-04/seniors-engaged-pursuing-sports-to-culture-living-longer.html
[31] The Hippocratic Oath originated in the fifth century BC. Ninety-eight percent of American medical students take some form of the oath, creating a deeply ingrained culture for prolonging life with all medical resources at their disposal.
[32] The American Academy of Hospice and Palliative Medicine (AAHPM) wasn't founded until 1988. The American Board of Hospice and Palliative Medicine offered its first certification in 1996.
[33] A survey of America's Physicians: Practice Patterns and Perspectives, A Survey conducted on behalf of The Physicians Foundation by Merritt Hawkins, September, 2012.

morale perspective with physicians seeing 16.6% fewer patients than in 2008 and 77.4% pessimistic about the profession.[34]

There is no single solution to the doctor shortage; training more doctors by itself will not be sufficient. One way to leverage doctors time and reach more people, more flexibly is "telehealth." It has been estimated that 70% of urgent care or primary care can be treated though "telehealth."[35] Simply employing privacy sensitive email systems can leverage doctor's time and increase responsiveness. However, more will be needed including more delegation more to nurses, physical therapists and other direct care providers.

Electronic Health Records (EHRs) are central to sharing information and coordinating care. The concept is 30 years old, but slow to start and expensive to implement. That changed with the HITECH Act of 2009 which provided financial incentives for "meaningful use" starting in 2011 and penalties for ineffective compliance starting in 2015. As a result, by 2011, 57% of office based physicians, and by 2012 87% of hospitals had deployed them.

Information sharing coupled with assistance in delivering specific services, can leverage the entire care team's time. The Center for Technology and Aging identified several productive focus areas for senior care including; medication optimization, remote patient monitoring, assistive technologies, remote training and supervision, disease management, cognitive fitness and assessment technologies, and social networking.[36] There are already numerous initiatives underway. Together, they provide a potential path to cost containment despite the fundamental mismatch between the growing demand for long-term care, the shrinking growth rate of the core labor supply for direct care services (females aged 25-54), and retiree financial resources.

At a National Level

The national focus on health care, while still politically unsettled and messy, has been a catalyst for applying technology across the entire heath care system. It contains, for example, numerous reporting requirements that push large amounts of information into electronic forms where they can be assembled, shared, understood and ultimately used to improve the systems and outcomes. The exchanges called for provide cost transparency. There are provisions for shared savings programs to encourage cooperation among providers to reduce cost and improve Medicare outcomes. Many of these were simply not feasible with the technology of 10 to 15 years ago.

[34] Some experiments, like those with "concierge models" to restrict patient loads and cut dependence on insurance payment processes, may lead to more time with patients and seniors and better primary care and longer independent living. Proctor & Gamble's purchase of MDVIP, a national concierge medical franchise with annual fees starting at $1,500 annually, speaks to the potential for a new approach to primary care.
[35] Employee Benefit News, November 2012, *Telemedicine driver better behavior, lowers cost.*
[36] Center for Technology and Aging, Technologies to Help Older Adults Maintain Independence, July 2009 Briefing Paper: http://www.techandaging.org/briefingpaper.pdf

V. Financial Services Industry – A Work in Progress

While the choices and decisions individuals, family members, and healthcare teams make are fundamental, the financial services industry is a key component of finding financial solutions for the ***Dependency Gap*** ™ and defusing the time bomb embedded in every financial retirement plan.

Given this context, there are vital roles for advisors, distributors, and product providers across the industry. Without a heightened sensitivity to the context and ongoing evolution of solutions, each runs the risk of not serving clients well or losing them.

Advisors
Advisors face a dilemma. On the one side, advisors are often best able to raise the financial issues around long-term care. They can stand apart from the emotions within a family and are able to start a financial conversation children often can't. If they hold themselves out as a financial advisor or financial planner it is part of their job – regardless of whether or not they actively provide the health and long-term care (product) solutions. It constitutes a major portfolio and financial risk. Despite that, many advisors either don't see it as their role, or they are unprepared and uncomfortable bringing the topic up.

At a minimum, financial advisors should be ready to raise questions about the potential impact of large, untimely, withdrawals on a portfolio they manage or advise. Financial planners should also be prepared to help their clients establish their own frameworks for financial and medical choices sooner, so others won't be forced to attempt it for them later. The frameworks may include items such as insurance trusts, living wills and advanced directives. Clear financial and medical frameworks can take numerous potential conflicts of interest off the table for their primary care giver as well.

If advisors aren't able to take the conversation forward, they should be ready to make a referral. They should recognize that the topic will inevitably come up. When their clients have to deal with Medicare, if not sooner, they will face the questions. Advisors, who do not identify the topic and start the dialogue much earlier, allow the range of effective alternatives to narrow, doing a disservice to their clients.

Advisors who avoid being part of the solution are also likely to miss opportunities to build their businesses. There are opportunities to sculpt a practice that addresses the needs of a family. Avoiding the subject increases the chance that the assets they advise will be dissipated by medical and long-term care expenses, and invites the family's enmity.

Distribution Firms
For Distribution Firms, understanding the differences in the range of solutions is key. They need to put in place a strategy, framework and support to bring the right solutions forward, at the right time, and for the appropriate clients. Distribution firms should look across a range of options including; group plans, individual traditional long-term care insurance, asset and insurance linked long-term care solutions, chronic illness riders, various self insurance scenarios, and solutions that rely heavily on unpaid informal care.

Holding out a single solution, without a clear framework, is asking for compliance problems. No solution is universally appropriate; there are simply too many unknowns. Therefore firms should make sure any recommendation is the best possible fit at the time, and that the client has a good understanding of the benefits, limitations, and alternatives. For example, a young married working couple might be best served by a long-term-care group policy from their employer and an HSA. As the couple approaches their 40's, while it is still affordable, a more traditional long-term care insurance policy may be a useful approach. Later and into their 60s, (assuming sufficient assets), an asset linked product based on assets and insurance may be the most viable financial approach. Some may have the wherewithal to self insure, which for them may be the simplest, most economic, and most straightforward approach as long as vehicles are put in place to assure appropriate "control." Still others may not have viable options other than turning to family.

In addition to understanding the wide range of alternatives, distribution firms need to be acutely aware of the trends in product features and pricing as they conduct their ongoing due diligence. Insurance companies and financial firms are learning what works well and what doesn't. Consequently, solutions offered in the market are changing, sometimes rapidly and in significant ways. Knowing in advance what can change and why, enables firms and Advisors to better manage clients' expectations.

Distribution companies that see themselves as an integral part of the community may want to acquaint themselves with eldercare resources that are available locally, and be visible and accessible there. A distribution company that can help caregivers and elder customers connect with local helpers and assistance will set itself apart. Boomers Resource Guide, for example, offers a 'Senior Citizens Guide' in over 10 local markets. Some financial institutions locate branches in retirement homes and assisted living communities, which is another way to serve an affluent, elder segment.

Firms that are serious about delivering advice and assistance will need to segment their customers in order to help their advisors and educate them in advance as well as put the plan in place. The segmentation scheme might go beyond age, income, and assets. It might include age and health of parents, pool of their potential caregivers, where and how they wish to age, steps they have already taken steps both legally and medically.

The demand and pace of change will accelerate as more of the Baby Boom generation ages. The firms that are best at getting and keeping their sales force engaged with this market, are most likely to retain and add clients and assets.

Insurance Companies

Insurance companies must understand how evolving medical and elder care thinking and practices may impact market needs and their costs. Many insurance companies are focused on underwriting to control risk and cost before the sale. Most are using a more comprehensive underwriting process, looking at morbidity and mortality, and some are introducing gender based pricing. Fewer go the next step of working with policy holders on an ongoing basis to reduce risk and cost after the sale.

Current “innovation” typically consists of solving a financial equation. Actuaries calculate the expected costs and when they will be incurred, as best they can, and determine how much to charge to cover cost and make a profit. Looking in the rearview mirror, when actual history points up an error in a calculation, they make adjustments to re-price the policy, remove or restrict a benefit, or withdraw from the market.

Just as with distribution companies, segmenting their markets and customers will be increasingly important. Insurance company segmentation schemes might include employer groups, hospital systems, medical insurance providers, or retirement communities. Expertise in understanding a market segment can be a value added for their distributors and enable them to tailor policies with appropriate benefits and cost structures.

An alternative is to move proactively, as some already do, rather than reactively. There are numerous steps that can encourage better policyholder outcomes and potentially reduce their risks. Steps might include; encouraging policy holders to stay or get engaged, connecting policy holders with resources that help them remain independent longer, providing access to case workers, and providing an annual check-in to see the living situation first hand and make risk reduction recommendations.

Medical insurance companies are already moving to more proactive approaches to improve patient outcomes and control increasing costs. They are still learning the “best practices” to organize and accomplish that, but they clearly have enough experience to validate some models. Most long-term care insurance carriers, particularly those serving individuals, have yet to look at those “best practices” for potential synergies. Or, for that matter, identify what opportunities there might be to directly partner with the successful ones.

Long-term care insurance carriers that want to provide innovative, market building solutions would do well to look beyond the structure and constraints of their current policy forms for ways to integrate or incent best practices from the broader health and care giving industries to provide better, more seamless, coordinated service, longer healthspan and independent living – and mitigate the financial burden of ***Dependency Gap*** ™ .

VI. Conclusion

To this point, the financial services industry has yet to adequately respond to the growing Senior Health and Long-Term Care funding crisis. Advisors and distribution firms are ill prepared, and the investment and insurance firms have shrunk the options, rather than innovating to address more of the needs.

The market is growing rapidly and predictably, healthcare best practices are being successfully tested and implemented, technology is enabling flexible cost effective support, and virtually all of the relevant participants are open to better ways to provide health and long-term care to seniors

Currently there is a unique and large opportunity to create and drive a better alignment of financial plans, products, services and incentives with medical and healthcare best practices.

The result can be increased healthspan relative to lifespan, improved quality of life for clients and their families, and greater ability to defuse the "retirement time bomb." Those who look outside the traditional box for solutions will be the industry leaders of the next decade.

Appendix I

Definitions

A number of terms can be used to help frame the global issue of Senior Health & Long-term Care needs:

- **Lifespan** is the number of years a person may (statistically) expect to live. It is measured at different points in time. Discussions here will refer to lifespan measured at birth or at age 65 (a commonly accepted retirement age).

- **Healthspan** is the number of years a person may expect to live independently and able to have an active, engaged (healthy) life. It is also referred to as "healthy years of living." The medical and care industries focus on this measure, and the "wellness programs" that are designed to increase these years.

- ***Dependency Gap™*** is the amount of **time** (years) that a person might expect to be dependent upon others for care due to failing health and multiple chronic conditions. It is essentially lifespan minus health span. The financial services industry implicitly focuses on this measure and the funding it requires to pay for help.

- ***Dependency Ratio™*** is a convenient way to capture and compare *Dependency Gaps™* as well as the quality of the remaining lifespan across countries and different population groups, and to do so over different points in time or at different points in life. It is the expected Dependency Gap divided by the remaining expected Lifespan. A lower the ratio indicates less of remaining life might be unhealthy and dependent. A higher the ratio indicates more of remaining life will require a significant level of assistance.

  It captures the effects of "**wellness**." In two populations with equal life expectancies, one with healthy people will have a lower ratio, while the other with unhealthy people will have a higher ratio.

  Because chronic conditions increase with age, the dependency ratio also increases with age. Thus, ratios for different groups may be similar at birth, but diverge widely by retirement age. The higher the ratio is at retirement, the larger the potential retirement 'time bomb.'

Appendix II

Technology Adoption Rates

For the broad swath of baby-boomers, the adoption rates are significantly higher relative to the retirees who have preceded them. The Pew Internet & American Life Project illustrates the difference.[37]

Technology Adoption Rates, Selected Technologies			
Technology	**Age 50 to 64**	**Age 65+**	**% Difference**
Internet Users	74%	41%	80%
Home Broadband	60%	30%	100%
Buy a Product	76%	56%	36%
Use Social Network	49%	29%	69%
Bank Online	59%	44%	34%
Mobile Internet Use	53%	21%	152%
Smartphone Ownership	34%	13%	162%

Adoption rates are a rapidly moving target; however 50 to 64 year old adoption patterns are far closer to younger groups and likely to continue growing rapidly. Among the prior retirees, those who by 2004 had already used technology to significantly reduce their rates for IADL disabilities have already demonstrated the potential.

[37] The Pew Internet & American Life Project, Digital Differences, April 2012: http://pewinternet.org/Reports/2012/Digital-differences.aspx

About DSG

Since 1989, The Diversified Services Group, Inc. (DSG) has helped financial service firms develop and implement strategies to target, reach and retain profitable markets. Services include consulting, market research, application of best practices and executive development. DSG represents a unique resource to clients combining a financial services focus, senior executive experience and an industry-wide perspective. Each client benefits from our extensive industry experience, knowledge and participation. Every engagement is staffed by a team of DSG principals each of whom has over 25 years of financial services experience including senior management positions in insurance, securities, mutual funds, banking and trust companies.

In addition to specialized expertise in its Bank and Retirment Practices, DSG offers research, executive best practice exchanges, and educational programs to help clients and their firms address the **Senior Health and Long-Term Care needs** in their markets.

About the Author

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As Managing Director, he helped create the Bank Insurance & Securities Association through the merger of two prior associations and drive its dramatic growth from 2003 to 2010. He was also editor-in-chief of the Bank Securities Journal. Immediately prior to joining DSG, Heywood was General Manager and Director of Institutional Markets for Wiesenberger, now a part of Thomson Reuters.

As Vice President with Delaware Group, Heywood worked with the chairman and president on a variety of strategic initiatives. He was a Founding Director of Delaware Management Trust Company, one of the first non-bank trust companies and led the effort to develop the mutual fund industry's first "class of shares" structure. At Delaware, he introduced over 20 mutual funds. In addition he brought to market a variable insurance product line, and successful hybrids of deposit, transaction, credit and securities products.

His career started at the Philadelphia National Bank where he worked across the Commercial, International, and Trust divisions.

Mr. Sloane has a Bachelor of Arts in Economics from Haverford College, and a Masters in Management from The London School of Economics. He has served on marketing and research committees of banking, mutual fund and financial planning associations. In addition he currently serves on the boards of both profit and non profit corporations.

