Summer 2005

Milliman insight

Medical Malpractice and Tort Reform

Providing Retirement Benefits for an Active, Older Population

The Impact of Longer Life Expectancy

Medicare Prescription Drug Benefits: A New Reality is Upon Us

The Global Marketplace

Shedding Light on Complex Issues

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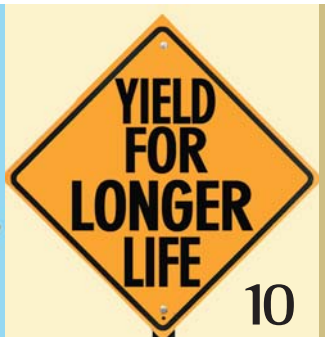

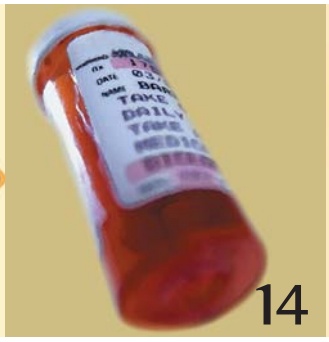

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Message from Milliman CEO Pat Grannan

Welcome to the first issue of *Milliman Insight*. Our purpose in creating this magazine is to share our knowledge on topics of broad interest to our clients and other friends. We hope you enjoy reading it.

Some of the topics selected for this issue are the subjects of controversy and debates, the outcomes of which will have major socio-economic ramifications. We believe Milliman's wealth of experience and expertise in these topic areas can bring depth, clarity, and context to the debates, adding a voice of insight and reason.

The topics we have chosen for this issue focus on:

- The current crisis in the US medical malpractice system and a look at realistic tort reform options, which must start with a thorough and unbiased examination of the root causes of the current problems.
- The national debate over US Social Security reform, against the backdrop of sweeping changes our consultants anticipate in the retirement process over the coming years.
- Developing a strategic response to the US Medicare Prescription Drug Improvement and Modernization Act of 2003, focusing specifically on the use of Prescription Drug Plans to meet the challenges of Medicare Part D.
- The socioeconomic impact of populations living longer lives, and the significant implications for products and services offered by life insurance companies.
- A look at several common challenges faced by our multinational clients as they seek to capitalize on a global presence while serving the needs of local markets and employees with differing cultures and regulatory systems.

We hope you find this information helpful, and we encourage you to contact your Milliman consultants or Pam Cone (**pamela.cone@milliman.com**) with your thoughts on these articles. Pam would also welcome your suggestions of topics to address in future issues.

Pat Grannan

Medical Malpractice and Tort Reform

Non-economic damage caps: an imperfect solution, but a start

Actuaries use historical data to make objective assessments of future risks. Milliman property & casualty consultants have studied medical malpractice and related tort reform efforts for decades – long enough to track the ebb and flow of several major industry crises. It is clear that the current system needs considerable reform. In our view, that includes changes well beyond the scope of the current debate. In terms of sheer impact, the current MedMal system is eroding affordable healthcare. It is a problem that affects everyone. We need a thorough examination of the root causes of our current crisis – an examination that begins without agendas and requires honest evaluation of the data in hand.

Despite claims to the contrary on both sides of the debate, there is an abundance of factual data regarding MedMal claims. The National Practitioner Data Bank, for example, is a public resource with data in excruciating detail on every reported physician malpractice claim from the last 10 years. One need not be an actuary to draw some reasonable conclusions.

What does the mass of data tell us? For one thing, despite the clear need for reform, the means to that end are more complicated than any single solution.

A Troubled System Nationwide

Tort litigators have been the primary beneficiaries of a system that encourages windfall awards and, in some celebrated instances, profiteering. Unless otherwise regulated, litigators often collect a 30% contingency fee or more on malpractice awards. To be sure, the largest awards are infrequent, requiring an average of up to seven years of litigation in many states. Litigators gamble on the occasional big payoff – much like a blackjack player "doubling down" when dealt the right hand.

Meanwhile, smaller claims – those under $150,000 – are frequently viewed as not profitable for litigators to take to court, regardless of the harm that occurred and the likelihood of eventual adjudication. Most of these claims are settled out of court. Rather than affording equal protection to all people, the current system most often rewards extreme claimants. That, in turn, can net a multi-million-dollar award for the successful litigating attorney.

Extreme cases also play better in the courtroom. Medical malpractice cases are often beyond the comprehension of average jurors, who may lack the technical expertise required to determine actual fault. Verdicts are often rendered emotionally rather than logically, and justice is not always served. In fact, panels of malpractice experts with a better grasp of what constitutes fault often rule differently than juries.

Of course, the current system, however flawed, has been around for years. So why the debate now? The reasons extend beyond politics. For several years healthcare costs have outpaced inflation due, at least

in part, to the increasingly expensive technology required for certain procedures. Meanwhile, rapidly increasing claim awards have threatened the adequacy of insurance reserves, resulting in insolvencies that force insurers out of the malpractice business. Those that remain have been forced to raise malpractice premiums, the cost of which is borne by doctors and hospitals, especially those in high-risk fields such as OB/GYN and neurosurgery.

It doesn't help that malpractice payments to plaintiffs have escalated at a rate in excess of inflation, according to the Data Bank. The rise in claim severity has directly affected premiums.

This adds up to a financially crippling situation for healthcare providers and a bitter irony for consumers: tort law, which is supposed to uphold a public good is, in this case, perpetuating a public ill.

California as the Model

The available empirical data provides a guide for how to begin reforming the system. California has been both praised and lambasted for its landmark 1975 legislation, the California Medical Injury Compensation Reform Act (MICRA). MICRA mandates a $250,000 cap on non-economic damage awards. It also assigns lawyer contingency fees on a sliding scale depending on the size of an award; lawyers collect 40% of the first $50,000, 33⅓% of the next $50,000, 25% of the next $500,000, and 15% of anything that exceeds $600,000.

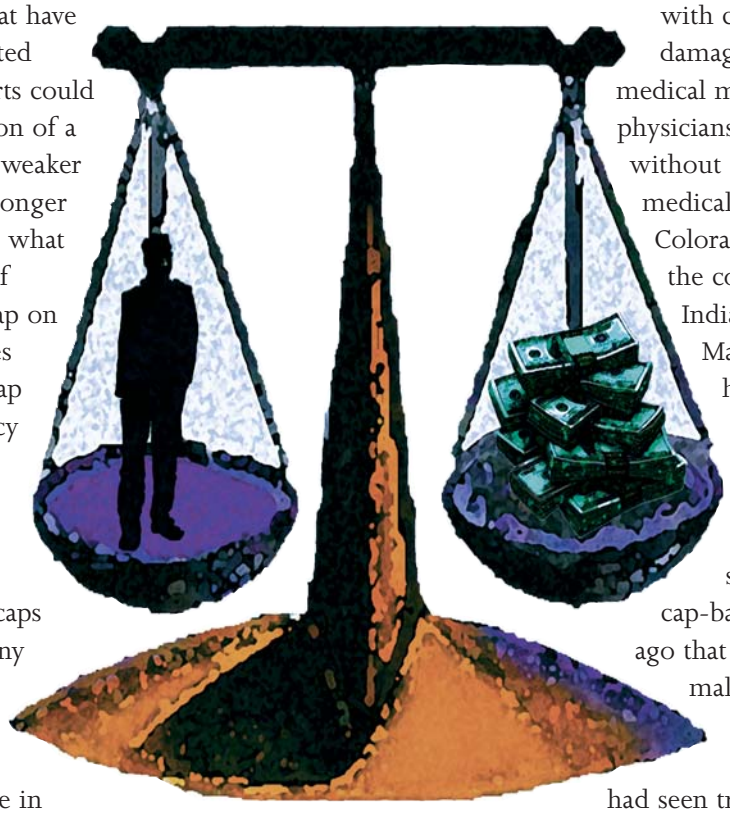
According to the Rand Corporation, MICRA's non-economic caps have reduced awards in California by 30%. Meanwhile, fee limits have reduced litigators' invoices by 46%. The diminished take by lawyers has offset the impact that reduced awards have had on plaintiffs, with plaintiff recoveries reduced by only 22% of pre-MICRA levels. Some plaintiffs have suffered from MICRA, though not as severely as they might, thanks to limits on attorney fees.

With so many examples of successful cap-based reform, it's no wonder the President has made $250,000 non-economic caps the centerpiece of his tort reform agenda; it is the easiest case to make. But these caps should not mistakenly be defined as some silver bullet that might diffuse the medical malpractice crisis.

Meanwhile, claim severity in California has stabilized, which has allowed the state to maintain insurance premiums that are significantly lower than other states, especially compared with states with densely populated urban areas.

Nationwide Solution?

The debate becomes increasingly complicated at the national level. States that have successfully implemented reforms fear their efforts could be diluted by imposition of a federal law. Couldn't a weaker federal law trump a stronger state law? For instance, what happens in California if Congress institutes a cap on non-economic damages without instituting a cap on attorney contingency fees? If a federal law is focused narrowly on non-economic caps, as now seems possible, it might erode MICRA's caps on contingency fees. Any preexisting state reform that falls outside the scope of federal reform could be in jeopardy. A fundamental tension over states rights is the elephant in the room that no one at the federal level seems willing to talk about. But any discussion of state versus federal regulation could easily spill over into a conversation about the role of the federal government in insurance reform – a conversation many in Washington would rather avoid. A one-size-fits-all approach could lead to a law that makes matters worse in the states that have already advanced the furthest.



The federal role is further complicated by a lack of actionable evidence. No one has performed a national actuarial evaluation. A nationwide study would require 50 smaller studies to account for the nuances in every state. Without true national data, we fall back on anecdotal examples of successful state reform – oftentimes an apples-to-oranges comparison.

The Case for Caps

According to Milliman's research, large states with caps on non-economic damages have below-average medical malpractice loss costs for physicians, while large states without caps have the highest medical malpractice costs. Colorado's losses are 69% of the countrywide average; Indiana's are 86%; Maryland's are 64% – all have instituted caps.

Meanwhile, another big state has emerged as a major success story. Texas instituted cap-based reforms two years ago that have helped reduce malpractice premiums. Major malpractice insurers in Texas that had seen triple-digit rate increases between 1999 and 2003 have now reduced rates by as much as 30% in 2005, as they try to keep up with a market that is once again competitive. There were only four malpractice insurers left in Texas in 2002; now there are 39, according to the Texas Department of Insurance.

Reforms in Mississippi and Nevada have resulted in similar success stories. Meanwhile, states without caps consistently log malpractice costs that are well above the national average.

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$250,000 non-economic caps the centerpiece of his tort reform agenda; it is the easiest case to make. But these caps should not mistakenly be defined as some silver bullet that might diffuse the medical malpractice crisis.

Maryland enacted caps several years ago, resulting in a substantial decrease in medical malpractice losses – 64% of the countrywide average in 2003. Even with those reforms in place, however, the situation remains in flux. Insurers in Maryland proposed a 33% premium increase in 2005, attributable to the relatively high caps currently in effect. The state legislature recently responded by overriding a gubernatorial veto to institute a liability fund that will tax HMO customers and subsidize malpractice premiums. This controversial approach underscores a larger issue: malpractice reform requires more than one band-aid.

And what to do about states that claim no crisis? The Washington State insurance commissioner's office released a study in March that demonstrated a gradual trend over the last 10 years: only a 4% annual increase in the amount paid to injured patients and a 6% annual increase in the cost of defending doctors. Even as Washington voters prepare to weigh in on non-economic caps in November, the insurance commissioner's office has sought other means of controlling costs – including an investigation into Washington's largest malpractices insurer that resulted in $1.3 million in refunds. Washington State has not requested federal help on MedMal reform.

The Long Road Ahead

Generally speaking, non-economic caps are the most expedient solution available, but other questions remain that go to the root of the MedMal issue. Can litigators be prevented from "venue shopping"– bringing claims to counties where reforms are slow and awards are high? A recent federal "class action" law is a step in that direction. But why should compensation depend upon the place in which a claimant is injured? How do we reconcile the complications of malpractice litigation with a non-expert jury system? Is there a way to streamline the litigation process, particularly in states that currently have seven-year lags? Where do contingency fee caps fit into the national dialogue? How can state reforms coexist with federal ambitions?

Politicians on the state and federal level have begun the long process of addressing these questions. The aforementioned federal class action law limits venue shopping. Reform initiatives continue on the state level, with many states moving to restrict venue choices, enforce strict requirements for expert witnesses, and develop pretrial mediation processes. Some states may summon the political wherewithal to enact these changes – indeed, the heightened national focus on medical malpractice may have contributed to recent reforms in Georgia. After three years of infighting by state lawmakers, Georgia's Senate passed a bill that was hastily signed by Governor Sonny Perdue. The bill institutes $350,000 caps and includes a number of other doctor-friendly reforms: penalties for frivolous lawsuits, liability limits for emergency room doctors, and criteria for expert witnesses, to name a few of the provisions.

But even as some states find new leverage, others continue to struggle. Ohio and Illinois, for example, saw their reform efforts fail in 2004. Is more federal help on the way? That is hard to say. It remains to be seen whether or not the country has the stomach to continue the medical malpractice debate beyond the current cap discussion.

We have only begun the long process toward systemic overhaul. If the nation is willing to look at the issue squarely, in full possession of the facts, perhaps an emotional debate can result in meaningful reform that will benefit every American.

Providing Retirement Benefits for an Active, Older Population

Reinventing Retirement

Fundamental changes, both demographic and strategic, are reshaping the retirement landscape in the United States. But one fact should remain clear from the start. For the vast majority of Americans who retire after a lifetime of work, Social Security will remain an integral part of their plans and aspirations. Amid the raised voices and hyperbole that seems to define the national "debate" over Social Security reform, there is certainly a need for more light and less heat. For those who attempt to understand the complicated issues surrounding retirement, let alone Social Security, each argument is challenged; every claim is immediately offset by a counter-claim. The ferocity of the Social Security debate in recent months appears to be fueled, ultimately, by the ebb and flow of relative financial and political strength.

It is no secret that Milliman's Employee Benefits consultants are, among other things, very much in the retirement business. We have a professional interest and a point of view on the issues related to retirement. Also, it should be noted, in the ranks of our consultants, every political allegiance is represented. Still, we would like to offer some observations about the fundamental issues and the changes we anticipate in the retirement process. Where appropriate, we will offer thoughts on Social Security and the important role we believe it will continue to play for most Americans. Of course, at all times we offer grateful acknowledgement to philosopher Yogi Berra who famously observed, "It's tough to make predictions, especially about the future."

Longevity is a Big Factor

These days, Americans are living longer – in many instances, a lot longer. As our Milliman colleagues in the life insurance practice have noted, the ranks of our centenarians are swelling dramatically. We're healthier, though problems remain, especially with chronic and lifestyle-related diseases such as obesity, elevated cholesterol and diabetes. And we're working ever later in life, oftentimes in exciting, productive occupations, some of which we seem to be inventing on the fly. One byproduct of our longer lives and generally healthier lifestyles is a distinct shift in the way many of us view the prospect of retirement and our golden years. It looks to us like, once again, the so-called

One byproduct of our longer lives and generally healthier lifestyles is a distinct shift in the way many of us view the prospect of retirement and our golden years. It looks to us like, once again, the so-called Baby Boom Generation is about to confound the conventional wisdom.

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Not unlike the coming generation of retirees, the very notion of "retirement" is something of a modern concept born in the 20th century and enabled by corporate pensions and government programs like Social Security and Medicare. Prior to the last century, most Americans worked until they died or became disabled. Leisure time was only for the wealthy.

The thinking for the last few generations of Americans has been that a person spent the first 20 or so years of life being educated or trained for work. The next 40 years were spent on work itself, and the remainder was devoted to a life of leisure, free of work with the "sunset years" seen as an entitlement or reward for a job well done.

Today, the concept of retirement is being radically overhauled. This redefinition is evident in the hopes, dreams, plans, and attitudes of those poised not on the edge of traditional retirement but, rather, on the precipice of unexpectedly long remaining lifetimes and careers. They are the 76 million people born between 1946 and 1964 and known as the Baby Boomers.

A Changing Work Ethic

Boomers clearly intend to work longer. Over the course of their careers most will work for a far larger total number of employers than any previous generation. Many Boomers will wind up their employment days working for themselves. Recent surveys by AARP and others confirm that up to 80% of respondents intend to work well into their 70s. In one recent survey, conducted by Merrill Lynch, of 3,448 US adults between the ages of 40 and 58, only 17% said they intended to stop working altogether, while 43% said they planned to continue working part time, and 13% indicated they wanted to start their own business.

Financial need is also a motivation: 83% of respondents in the Merrill survey said they planned to continue working to attain financial security. According to an advertising supplement published recently in *The Sunday New York Times Magazine* entitled, "Can I Afford my Retirement Dream?" working longer postpones drawing down savings and retirement accounts and increases eventual Social Security payouts. In our view, people working longer and more productively are likely to have a decidedly beneficial impact on the gross domestic product. It is not unlikely, given all of these changes, that the eligibility age for Social Security benefits – a highly charged topic politically – will be pushed further into the future, toward age 70 or even beyond.

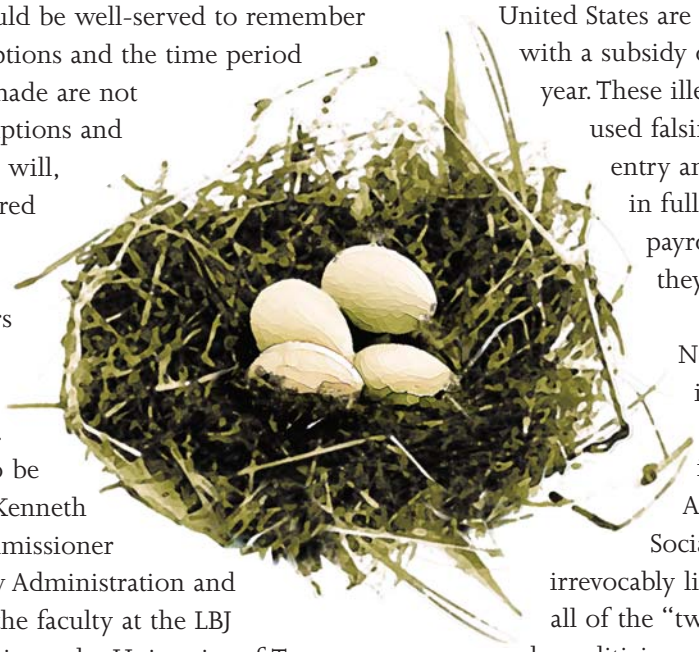
The Debate Rages

Perhaps this is an appropriate point at which to step a bit deeper into the highly emotional Social Security minefield. Yes, based on current provisions of Social Security law, the system would eventually outstrip its ability to provide benefits at today's levels, beginning in approximately 2018, when benefits taken out of the system begin to exceed payroll tax contributions. But that presupposes no

We can strengthen Social Security, AARP says, by making small adjustments, just as we've done in the past and by recognizing the current economic reality, whatever that turns out to be.

fundamental changes; that people will retire as they have for the past few generations. As we have just noted, many Boomers say they will retire later, perhaps much later, if at all. And that could mean profound changes for retirement in general and Social Security, in particular.

Parties interested in Social Security, retirees and politicians alike, would be well-served to remember that actuarial assumptions and the time period for which they are made are not absolutes. The assumptions and resulting projections will, ultimately, be measured against experience. According to the AARP, when Boomers ultimately begin to retire, it will put a strain on the system. "But it isn't going to be Armageddon," says Kenneth S. Apfel, former commissioner of the Social Security Administration and current member of the faculty at the LBJ School of Public Affairs at the University of Texas at Austin.



We can strengthen Social Security, AARP says, by making small adjustments, just as we've done in the past, and by recognizing the current economic reality, whatever that turns out to be. Despite some very vocal protests and hand-wringing, we believe compromise adjustments are likely, and they will most likely include raising the cap on wages subject to Social Security (currently workers are taxed on income up to $90,000) and investing part of the Social Security surplus in other vehicles that earn greater returns than Treasury securities. Whether the new investments are made by individuals for their own accounts or collectively remains to be determined.

It is also worth noting that Social Security funding levels have always been something of a moving target. As just one example, current contributions from payroll taxes are supported to a surprising degree by money that, technically at least, only comes in but never goes out. According to a recent report by *The New York Times*, the estimated 7 million or so illegal immigrant workers in the United States are now providing the system with a subsidy of as much as $7 billion per year. These illegal workers, most of whom used falsified documents to gain entry and employment, often work in fulltime jobs and are subject to payroll withholding taxes. But they never apply for benefits.

No, the Social Security system is not irrevocably doomed to failure, taking down with it millions of hard-working Americans. Nor is today's Social Security system irrevocably linked in perpetuity to any or all of the "tweaks" or "fixes" proffered by politicians, economists, journalists, and ordinary citizens. If private investment accounts, in some shape or form, become reality, they could be enormously helpful to younger workers at the lower end of the economic spectrum. A *Washington Post* article noted that in 2002, the latest year for which government figures are available, over 60 million working Americans between the ages of 25 and 64 reported incomes below $25,000. Not surprisingly, most of those say they have no pension expectations beyond Social Security. For the youngest among them, especially, history would argue that an investment in the capital markets would, over 20 or 30 years, out-perform traditional government bond yields. For those who are older with lower incomes, such "ownership" investments could, in a shorter time frame, prove disastrous.

Still, the simple fact remains, Social Security is an imperfect system, and no one has offered a perfect solution to repair or replace it. No one has yet presented a "reform" plan that works equally well for everyone. And no one is likely to do so.

In Search of a Safe Haven

For those fortunate enough to enjoy pension retirement benefits augmented by Social Security, it would seem the future is much safer. But here, too, uncertainty reigns. The traditional defined benefit pension plan is under intense pressure in many quarters. Enhanced 401(k) plans or cash balance pensions are simultaneously hailed as the flexible "win-win" future of corporate benefit plans, or reviled in lawsuits alleging age discrimination or the underpayment of lump sums. Where traditional DB plans often calculate benefits by multiplying years of service by salary, under the new formula, employee pensions grow each year by a percentage of pay, plus interest. Was the old system unsustainable? Is the new methodology better? Is there a hybrid plan in the offing? Whom to believe?

At Milliman, we believe our clients are best served by a professional, thorough examination of the facts and clear-eyed consideration of all available options. The years since the stock market bubble burst have been sobering and, hopefully, instructive to most people. We think the uncertainty of those years has created tremendous, pent-up demand for new retirement solutions. The emerging innovations and options for a well-grounded retirement are exciting and demanding.

That is the challenge for Milliman consultants; to develop the next generation of workable, sustainable retirement plans to meet the specific needs of our clients as they face staffing requirements and other competitive challenges that were unimaginable just a few years ago.

We anticipate that the lines of demarcation between traditional defined benefit and defined contribution plans will become further blurred. Final pay-related benefits as we now know them, with traditional time-of-service caps, may not accommodate the kind of worker our clients need or who will be available. Companies will be forced to adjust or redesign their plans to attract and retain an older workforce. This will probably include an increasing number of part-time Boomers who are experts in their field but perhaps interested in a shorter work week at the end of their careers. We think they will probably demand a benefits package that reflects their needs, perhaps swapping maternity or some disability benefits for long-term care coverage.

Here are a few of the other retirement plan features that merit consideration:

- Cash balance plans with pay credits that increase with age and/or service.
- Participant-directed investment credits under a cash balance plan.
- Final "average pay" minimum benefits targeted towards mid- or late-career hires.
- Partial annuitization options to provide guaranteed income during retirement, plus the flexibility of partial lump sum withdrawals.
- Transfers from 401(k) plans to DB plans for an annuity option.
- Phased retirement options to allow draw down of pension benefits during a reduced work period at the end of a career.
- Increased access for participants to benefit planning and projection tools to allow them to develop more flexible schedules of pension payments during partial retirement periods.
- Flexible financial arrangements to allow retirees to fund medical benefits during retirement.

And that's just for starters. It promises to be a fascinating transition.

THE IMPACT OF Longer Life Expectancy: *Implications for the Life Insurance Industry*

The statistics on longevity and lengthening mortality tables tell a compelling story; older people are living longer than ever before due to advances in medical care, scientific breakthroughs, and healthier lifestyles that embrace physical exercise and improved nutrition.

While this might seem to be nothing but good news, the implications of this trend could have a profound and widespread impact on government social programs (such as Social Security and Medicare in the United States), the health of the economy, and the way we live our lives as we age. This trend may also represent real opportunities for innovators in the life insurance industry who devise new products to fit a changing market profile, but formidable challenges to those life companies that fail to adapt.

In a recently released annual report, the National Center for Health Statistics said that the average life expectancy for Americans had risen to a record 77.6 years. The report noted that, while women had a longer life expectancy – 80.1 years, or 5.3 years more than men – the gap was closing. Among nations, Japan is the longevity leader with Japanese women averaging a lifespan of 85 years.

In the year 2000, adults over 65 – the age commonly associated with retirement – numbered 35 million and made up 12.4% of the total US population. With increased longevity, the size of that age group will double by the year 2030 to 70 million and will make up 20% of the total US population. Projections of a large population of centenarians in the not-too-distant future are common. By the year 2050, Japan is expected to have close to 300,000 citizens aged 100 years or older, while China is projected to have nearly half a million centenarians by the middle of the century. According to the US Census Bureau's estimates issued five years ago, the population of centenarians in this country is projected to number 834,000 by 2050!

A Divergence in Views

Demographers and social biologists continue to debate just how the trend of older individuals living to later ages, which is a relatively recent phenomenon, can continue. In an article published in the *Journal Science* ("Broken Limits to Life Expectancy," May, 2002, page 1029), Jim Oeppen and James W. Vaupel observed that life expectancy from birth has steadily increased by three months per year for a period of 160 years in what they described as an "extraordinary constancy of human achievement." The authors warned that public policies needed to be based on a best-case scenario for continuing improvements in longevity: "Given the extraordinary rise in best-practice life expectancy and the demonstrated near-sightedness of expert vision, the central forecast (of mortality rates) should be based on the long-term trend of sustained progress in reducing mortality."

In an essay critiquing the debate ("The Great Debate on the Outlook for Human Longevity"), Jacob S. Siegel warned that we should expect the unexpected: "…projection of past trends cannot allow for the

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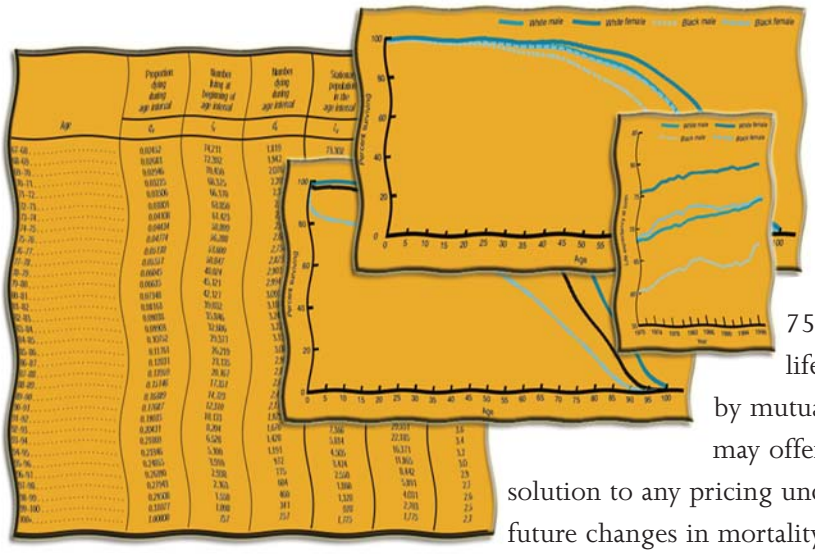
emergence of new factors, the turning points, and the unexpected future changes that are sure to occur. Our considerable experience with population projections should remind us that overconfidence with any doctrinaire position can be risky.... Twenty years ago, we could not have predicted the AIDS epidemic, the obesity epidemic, and the reemergence of old infectious diseases that are occurring today. Surprises will not stop occurring; trends in mortality, as in fertility, may decelerate sharply, accelerate sharply, or even change direction. Unexpected influences can emerge that make our complex technical manipulations and demographic logic ineffective as predictors of the future."



Still, it seems safe to say the data today almost certainly point to a large and growing population of older people.

A Significant Challenge

The shifts in aging patterns present a significant challenge to Milliman and the life insurance industry. There is a growing need to develop revised working models for human mortality along with insurance products that fit the new paradigm of aging, but that task will not be easy.

A case in point is fully underwritten life insurance at ages above 65, a market niche beginning to gain momentum. Over a number of years, the industry has gained some confidence in insuring the older-aged sector by writing final expense insurance and pre-need insurance. While the industry seems closer to general agreement on rate-setting for these policies with face values in the $5,000 to $30,000 range, that is not at all the case with fully underwritten business, particularly for the policies with face amounts in excess of $1 million that are being written today. Some companies are offering fully underwritten life insurance to policyholders above age 75. Participating life insurance sold by mutual companies may offer a possible solution to any pricing uncertainty, since future changes in mortality will be reflected in dividends.

Support for Long-Term Care

Of course, not everyone who grows older remains healthy. Some seniors will have increased needs for financial support to fund long-term healthcare. Depending upon one's point of view, the situation could be dire.

Longer expected lifetimes for seniors increase the likelihood of living with chronic conditions associated with aging; 43% of seniors will require some long-term care, and 9% can expect to spend five years or more in a nursing home, according to Milliman healthcare actuaries. With the cost of a semi-private room in a nursing home approaching $58,000 annually in current dollars, some seniors will be hard pressed to pay. A long-standing

Clearly, there is a critical role for Milliman actuaries in this unfolding drama. We must become increasingly attuned to the implications of advances in medical care, scientific discovery, and major societal shifts. Actuaries are certain to become more involved in developing a new generation of models of aging, and perhaps there is a role for actuaries as a bridge between demographers and social biologists.

question is whether lifetimes can be lengthened without an attendant increase in morbidity. Put another way, can the healthy lifetime of individuals be increased significantly, or will longer life spans result in, or be the result of, lengthening the period of relatively poor health often preceding death? The answer has cultural implications as well as significant financial consequences for life and health insurers.

Implications for the Life Insurance Industry

The confluence of these socioeconomic scenarios suggests that the life insurance industry needs to seriously consider shifting its product mix and adopt a creative stance going forward in the development of products and services to meet the changing needs of its customers. At one time, life insurance death benefits represented income replacement for survivors. Today's changing mortality rates call for "insurance for living a longer life"– whether it involves supplementing an active, healthy engaged lifestyle of part-time work, travel, and continuing education or in assisting with long-term care.

The industry has responded with a variety of products aimed at these needs, but not all have been embraced by the market. One example is Single Premium Immediate Annuities (SPIAs), which guarantee a monthly income for life. SPIAs have not caught on for a variety of reasons, including recent low interest rates, but they should become more popular as enhancements and flexible product features are introduced and rates rise.

Up until now, annuities have been purely accumulation products, with little focus on longevity risk, even though all deferred annuities provide for lifetime settlement options that distribute accumulated funds. In the future, these products are likely to become more flexible and adaptable to changing circumstances. Enhanced products might include variable accounts, indexing, and commuted (or cash) values for immediate annuities. Some products in the market today are still premised on retirement at age 65 and pay a fixed benefit from that age onward, with some flexibility (e.g., survivor benefits)

A more appropriate product design, in light of increased longevity, accommodates payment of an annuity at any age, including later in life – perhaps around age 75. This product design could also provide some form of benefit in case of severe disability, permitting the annuity to kick in earlier. During the age period 65-75, the individual could work, perhaps part time, and draw down savings. The annuity benefit would then start at age 75 at a relatively low level and ramp up. In essence, as the person's capacity to work declines and personal savings are drawn down, the annuity benefit increases.

There is ample room for careful but far-reaching innovation. For example, there might be a one-time liquidity feature, under which the annuitant could receive a lump sum payment in case of emergency needs, or the amount of the annual benefit could have some flexibility with the annuitant able to draw down funds within a prescribed range. Some payout annuities feature periodic benefit boosts if the annuitant becomes disabled or confined to a nursing home.

A growing product line is so-called Combination Life Products, which are life insurance contracts

combined with long-term care or disability income embedded in the contract.

A New Mindset Is Required

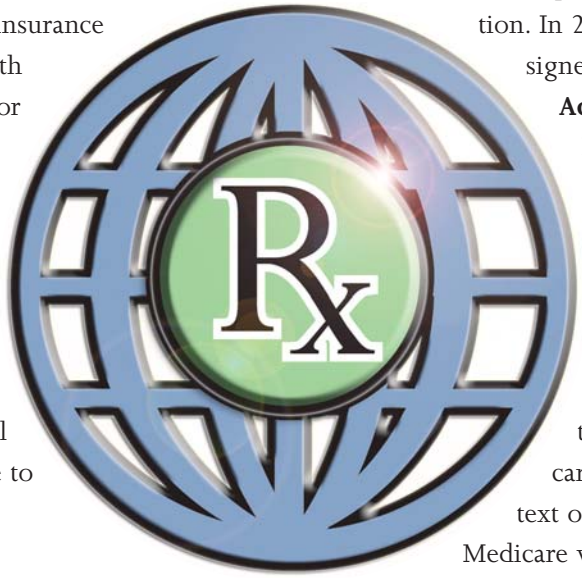
Although some companies have begun to study this growing market seriously, few have undergone a fundamental mindset change about new products for an aging population. Many observers believe that life industry leaders should be hastening the development of test products now, given the predictability of the social and financial changes on a very near horizon.

Clearly, there is a critical role for Milliman actuaries in this unfolding drama. We must become increasingly attuned to the implications of advances in medical care, scientific discovery, and major societal shifts. Actuaries are certain to become more involved in developing a new generation of models of aging, and perhaps there is a role for actuaries as a bridge between demographers and social biologists. A broad range of significant trends – such as the frightening increase in obesity and its negative impact on lifespan likely to occur in the next 10 to 50 years – must be factored into our thinking if next-generation scenario testing is to be reliable and fully credible. In addition to the role of scenario testing models in pricing products and reserving, they will also be useful in the marketing process to give buyers of life insurance products a better understanding of personal risk management.

It is also quite likely that subtle yet important shifts will occur in the distribution of life products. New life products developed specifically for the aging market will of necessity be more complex and require more sophisticated financial planning. On the other hand, inexpensive term products, Single Premium Deferred Annuities, and other simple-return products are already being sold in the retail environment.

From almost any perspective, it is abundantly clear that the changing patterns in life expectancy and longevity will engender some very significant changes in the way life insurance companies do business and in the products and services they offer. The big question is which carriers will lead the way in offering an effective, forward-looking product suite with sufficient appeal to capture a significant share of what promises to be a rapidly expanding sector.

Medicare was signed into law by President Lyndon Johnson on July 30, 1965. For only the second time in nearly four decades, American employers, insurers, health plans, and benefit recipients are confronted with sweeping changes to this program that plays such a significant role in the social fabric of the nation. The addition of a prescription drug benefit to Medicare exclusively through private insurance becomes reality in 2006, with wide-ranging implications for everyone. Milliman consultants are engaged with our clients at every level of implementation as Medicare Part D becomes the law of the land. To understand the impact of this new benefit, it is helpful to understand how we came to this critical juncture.



In 1965, the new Medicare program was designed to provide healthcare coverage to a population of approximately 19 million Americans aged 65 and older. Enacted as a part of Social Security, Medicare would provide coverage to those seniors for the majority of healthcare services that were typically provided at that time. The program is now administered by the Centers for Medicare & Medicaid Services (CMS).

For its first 40 years, traditional Medicare coverage was divided into two distinct categories: Medicare Part A, which applies to hospital costs, and Medicare Part B, under which recipients paid a monthly fee to cover medical costs.

There have been two major adjustments to the Medicare law since its enactment in 1965. In 1988, the **Medicare Catastrophic Coverage Act** included the first limited outpatient prescription drug benefit, but was repealed shortly after implementation. In 2003, President George W. Bush signed the **Medicare Modernization Act (MMA)**, which includes the Medicare prescription drug benefit that becomes effective in January 2006.

Over the past 40 years, technological advances in areas such as surgery, diagnostic testing, and other categories of care were covered within the context of those covered services when Medicare was enacted. In 1965, prescription medicine was not a large component of healthcare spending, and it was excluded from coverage by Medicare. Today, with the intervening changes in technology and the practice of medicine, prescription drugs average approximately 15% of total annual medical costs. Since drugs were not covered by Medicare in the first place, advances in pharmacology never had a logical place to "fit" in the Medicare plan design. As a result, for nearly 40 years, Medicare beneficiaries have paid retail costs for prescription drugs unless they were covered under a retiree medical plan or some discount card program.

The **Medicare Prescription Drug Improvement and Modernization Act of 2003** is the vehicle that adds this evolving technology to covered services under Medicare. Because Medicare had not covered prescription drugs as they became a growing part of the healthcare regimen and cost, instead of seeing a gradual annual increase in the cost of the Medicare program, the introduction of drug coverage for America's seniors comes at a very large cost, along with very high visibility and political infighting. Even with the high price tag, the standard plan design offered by Medicare Part D is much less than comprehensive (it is estimated to cover about 51% of total drug spending by seniors) and coverage is not uniform across all Medicare beneficiaries.

Not only does the new Medicare prescription drug benefit add new coverage to Medicare, the delivery of that benefit differs markedly from the traditional Medicare Part A (hospital services) and Part B (physician services) benefits. The most striking difference lies in the role of the private healthcare industry and employers who already are providing prescription drug coverage to their retirees. Rather than the federal government taking over the delivery of prescription drug coverage to America's seniors, (as was the case with Parts A and B) the private sector will deliver this new program. There is some precedent for the private sector's active role in delivering care to Medicare beneficiaries. The Medicare risk program, now called Medicare Advantage, has worked with health plans across the country to provide private Medicare Part A and B coverage options since the early 1980s.

Since the MMA was passed in 2003, Milliman consultants have assisted clients, including health plans, insurers, pharmacy benefit managers, employers, and prescription drug manufacturers in understanding the MMA and in evaluating their alternatives. Fundamental questions need to be answered, and CMS essentially threw these key decisions into the private sector's lap. Should clients proceed with retiree medical plans? Should they file Medicare Advantage-Prescription Drug plans (MA-PDs)? Should they work to become Prescription Drug Plan (PDP) sponsors?

For most of our clients, the answers to those questions are far from "cut and dried." Real world business concerns hinge on these important decisions. Many have asked, "Will participation hurt our position in the marketplace? What will our competitors do? What are the real costs involved? What about revenue?" Clearly, the complexity of the act has generated a high level of anxiety for our clients, because so much is riding on the outcome, and the time for decision-making is short.

Making the Right Choices

Admittedly, the challenges seem daunting and a misstep could be costly. Clients have concerns on every aspect of Part D, ranging from an education lesson in understanding the law to strategic discussions of the options and issues, or to evaluation and measurement of the risks in participating versus not participating. Still others need help with plan design, formulary development, marketplace assessment and pricing. And that's just from the PDP and MA-PD side of the equation.

Plan sponsors are beginning to realize that they, too, need to do something, and quickly. Milliman consultants are providing education as well as services to help plan sponsors evaluate their options and to file the actuarial attestations that are required if they

Coming to an understanding that prescription drug plans are "doable" requires a thorough understanding of the law and a detailed actuarial analysis of each client's customer base.

want to apply for a 28% tax-free subsidy to offset their retiree drug costs.

Lessons from the Past

Historically, health plans and insurers have found it difficult to turn a profit on any prescription drug plan in which medications are the only benefit, in part because beneficiaries who have the greatest need (and the highest costs) are attracted to these plans. Such adverse selection has doomed many prescription drug plans in the past and is part of the reason the government has not offered prescription drug coverage to Medicare beneficiaries until now.

Recognizing the inherent difficulty in attaining profitability from a prescription drug plan, and seeing the projected costs for the Medicare Part D program, a number of insurers, health plans, PBMs, employers, and pharmaceutical companies initially were reluctant to consider the possibility of developing a PDP under the act.

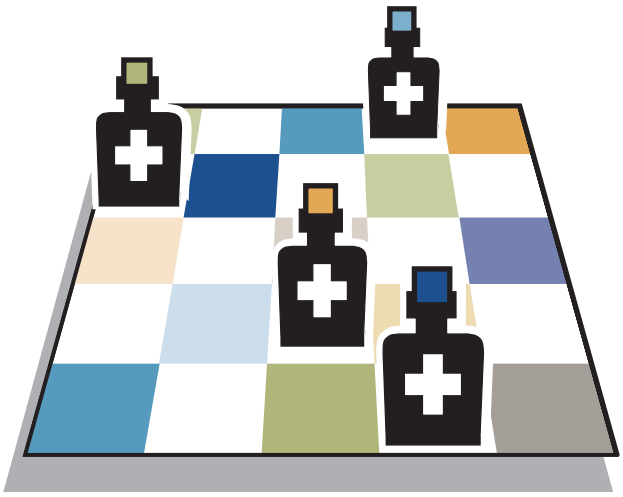
Before the law was passed, it was extremely difficult to determine a premium for a prescription drug plan that would allow an insurer to break even, let alone make a profit. But the MMA requires cost sharing from beneficiaries and from the government to pay part of the cost of the Part D prescription drug plans. As a result of these government subsidies and the cost-sharing provisions, large numbers of Medicare beneficiaries are expected to participate in the program, thus spreading the risk. At the same time, each PDP's rates paid by the federal government will be adjusted to reflect the level of risk it will assume based on the population it will serve. The federal government is reinsuring 80% of all catastrophic claims (i.e., claims for Medicare beneficiaries who have incurred more than $3,600 in out-of-pocket drug spending during 2006), further reducing the risk for PDPs and MA-PDs.

Finally, the federal government has also established risk corridors to reduce a plan's risk if its aggregate drug costs vary from expected by more than 2.5%. These factors mean it will be possible for a plan sponsor to profit if its PDP is developed properly and is actuarially sound. Through extensive modeling and scenario testing, Milliman's PDP and MA-PD clients understand how these factors limit the risks of participating in Part D. We think this will result in a very robust market of plans that will offer prescription drug coverage to Medicare beneficiaries in 2006.

Coming to an understanding that prescription drug plans are "doable" requires a thorough understanding of the law and a detailed actuarial analysis of each client's customer base. At the same time, reaching such conclusions requires an understanding of insurance risk and the effects of adverse selection. It is this combination of experience that must be brought to bear as Medicare Part D widens its embrace on the Medicare population.

The Role of Employers

CMS has made it clear that it does not want to see employers drop the retiree pharmacy coverage that they already provide to their Medicare-eligible



retirees. The government has developed several options for plan sponsors to consider that will help to preserve the former employer/retiree coverage that is now afforded to nearly 10 million of the 42 million total Medicare beneficiaries.

Employers who sponsor pharmacy benefit programs to Medicare-eligible persons (whether retired or still active) must let those persons know whether the coverage they have is "creditable coverage," meaning that it is at least as rich as the standard Medicare Part D benefit. If it is not, and a Medicare beneficiary does not sign up for Part D when he or she is first eligible, he or she will be required to pay a late enrollment penalty of 1% for each month of delay. For example, a person who works until age 70 and then purchases Part D, but whose active plan coverage was not "creditable coverage," will have to pay a 60% surcharge on his or her Part D premium – for life!

Employers who sponsor retiree pharmacy programs also need to decide among several options:

- Apply for a 28% tax-free federal subsidy, which CMS estimates will be worth about $668 per Medicare beneficiary who stays in the employer's plan and does not enroll in Part D;
- Encourage retirees to enroll in Part D and offer a plan that wraps around Part D to provide enhanced coverage, perhaps very similar to the benefits that supplement Medicare Parts A and B today;
- Contract with (or become) a PDP to offer coverage to retirees in an employer-specific plan design; or
- Drop coverage entirely, possibly contributing to retirees' Part D premiums, and have retirees enroll in Part D.

These decisions can be complex. Many employers are just beginning to evaluate them. They must quantify their options, test whether their coverage is "creditable coverage," provide the necessary "actuarial equivalence" test and actuarial attestations if they wish to pursue the 28% subsidy, and develop other Part D guidance. Milliman is assisting many employers with these decisions, either directly or through their insurers or benefit administrators.

What Will the Future Hold?

The Medicare prescription drug benefit will not take effect until 2006. Until then, no one knows exactly what will happen with enrollment in the program (which is voluntary), how efficiently it will work, and what the experience will be. Milliman's expertise, extensive databases, and modeling tools will be tested as experience actually emerges. If history is a reliable measure, the program will continue to evolve and grow over time. As the population ages (see *The Impact of Longer Life Expectancy* article on page 10), more and more Americans will be directly affected by Medicare Part D. It is not that often that we have the opportunity to help shape such a far-reaching, high profile program that affects so many people.

The Global Marketplace

Today's multinational organization faces a challenging dichotomy: How to remain globally competitive without losing focus on the local dynamics that make each market unique.

Certainly the current global business community is more accessible than ever. Thanks to email and the Internet, communicating and sharing information across time zones is much easier than in the past. Pacts such as the European Union and the North American Free Trade Agreement have changed the way companies do business. The term "multinational" is no longer reserved for huge conglomerates, as smaller companies are expanding across borders. Still, the more things change, the more they stay the same. Understanding regional languages and customs remains the minimum ante for doing business in many countries. That's why Milliman expects its consultants to be ambidextrous: capable of juggling local concerns in one hand and global ramifications in the other – with the ability to cross over at a moment's notice.

Our clients around the world currently face many common challenges, regardless of the Milliman practice areas that normally serve them. In particular:

- Populations are aging rapidly, especially in more developed countries. This trend has a broad range of implications for financial security programs and insurance.
- Recent corporate governance lapses have local regulatory authorities pushing for more transparent accounting standards. Accounting bodies are discussing the convergence of all international accounting standards as well. In the longer term, multinational insurance companies and employers will be concerned with fewer sets of accounting rules. In the shorter term, local rules will change, in some cases quite dramatically.
- The spread of multinationals requires local knowledge of cultural and business rules as well as benefits and compensation practices for employees. It also presents a golden opportunity to share knowledge within the worldwide community.

In addition to these common threads, there are many distinct issues facing Milliman's clients in each practice area.

Insurance

Insurance companies were kept busy over the past decade with a steady stream of merger and acquisition activity. Through all of it, an emergent trend is that insurance markets are becoming increasingly global. Populous countries such as India and China are opening their potentially huge insurance markets to foreign competitors. However, along with the new areas of operation come new risks due to volatile economies, currency fluctuations, natural disasters,

political instability. Insurance companies must have the knowledge to assess and quantify these risks, as well as local insight into the regulatory hurdles and cultural barriers arising in different markets.

Insurance companies can normally cope with aging societies by projecting changes in mortality. What is harder to predict is how aging populations will change the demand for insurance products. The need for more income over a longer period in retirement may increase demand for creative savings accumulation products in many countries. There remains much work to be done in terms of designing products and clearing the regulatory path.

Starting in 2005, publicly traded companies in the European Union (EU) must publish financial statements that comply with International Accounting Standards (IAS). Australia will also likely adopt IAS reporting. When these developments are combined with the countries having no local standards that already follow IAS pronouncements, North American accounting bodies will be pressured to conform. Accounting standards will eventually converge, and reporting will be more consistent from country to country. Unfortunately for insurance companies, the IAS have not had a unique standard for insurance contracts. An exposure draft issued last year attracted substantial criticism, particularly with respect to the need for any standard to consistently measure assets and liabilities. This issue will likely touch insurance companies in all countries before fully running its course.

In the property and casualty arena, current and emerging mass torts are affecting the finances of the insurance market and will influence future policies. Despite the fact that asbestos litigation dates back more than 30 years, the ultimate cost of claims to businesses and their insurers is constantly increasing as the number of claims and the full effects of asbestos-related diseases become known. Mold-related litigation has gained momentum recently, although the long-term health problems caused by exposure to mold appear to be much less severe than asbestos. Other mass torts such as illnesses due to lead or silica exposure, complications from medical devices, and construction defects pose large financial threats to insurance companies. These problems are not specific to the US, but the US legal system exacerbates their financial impact. Insurers (and reinsurers) around the world will continue to deal with the implications of these and other mass torts for years to come.

In 2003, the European Commission outlined a proposal for a Directive on equal treatment that has potential ramifications for insurance companies operating within the EU. Among other things, the proposal calls for sex-neutral pricing for annuities, life insurance, and auto insurance. To back this up, the proposal references unidentified studies claiming that sex is not the main determining factor in life expectancy or the incidence of car accidents, despite the actuarial profession's contrary statistical evidence. The proposal will likely face opposition from EU member countries.

Employee Benefits

The aging of populations means more pressure on financially strapped pay-as-you-go social security systems. Policy debates in many countries will politically rebalance the needs of retired people against governments' ability to pay benefits and workers' ability to pay taxes. This often means shifting responsibility from governments to employers and individuals. Unfortunately, there is no one-size-fits-all answer for reforming social security programs, as different countries often have varying mixes of government, employer, and individual responsibility for retirement. Also, the term "retirement security" can have different meanings depending on the country or culture. In some cases, a large family is still viewed as the best way of ensuring security in retirement.

Meanwhile, where employer-sponsored retirement plans exist, employers are also shifting more responsibility for retirement to individuals. The trend from defined benefit to defined contribution retirement plans is picking up steam worldwide, even in historically "paternalistic" countries. Employer cost containment, as well as the desire for more flexibility in retirement planning by employees, fuels the trend. Unfortunately for the potential retiree, the ultimate benefits from a defined contribution plan depend heavily upon the amounts contributed over the years and recent investment returns. A recent trend in the US that is just starting to spread to other countries gives plan participants educational tools to help them understand the implications of their contribution and investment choices. Depending on how funds are invested, economic doldrums just prior to retirement may translate to inadequate retirement benefits or altered retirement plans.

As funded pension plans mature in many parts of the world, sophisticated asset/liability modeling will assist in creating investment strategies aimed at smoothing out peaks and valleys in employer contributions and accounting expense.

International accounting standards for employee benefits are far along the path to convergence. In almost all countries with standards, employers disclose assets and liabilities and book expense using similar methodologies. Standards currently differ in how they recognize the expenses associated with unrecognized items such as plan changes or gains and losses due to changes in asset values. The new UK standard (FRS 17) calls for immediate recognition, which tends to make the employee benefits accounting numbers more volatile than in the current US standard (FAS 87). Practitioners in several countries have argued that volatility of results provides a strong deterrent to employers offering defined benefit pension plans. The next revision of the international standard for employee benefits will likely mandate the "immediate recognition" approach, as the champion of the UK standard is now the chair of the IAS Board. It may not be long before this approach migrates to the US and Canada.

As employers seek local knowledge and workers seek better education and working conditions, global employee mobility is increasing. The recent trend in tax treaties negotiated by the US is to grant favorable tax treatment to pensions, often one of the most difficult issues to address when an employee is working outside the home country. Many EU rules encourage the free movement of labor, but pension rules continue to be driven by local taxation. Multinationals operating in several European

countries are hoping for the "holy grail" of pan-European pension plans, allowing coverage of workers in more than one country in a single pension plan. Recent developments in the European Court of Justice may start to dismantle some of the tax barriers inhibiting pan-European pensions. Understand-ing the implications of later taxation can help stimulate thinking on plan design and funding.

Health

Many state-run health systems worldwide are experiencing financial strain. New technologies and drugs, which have helped fuel the increase in the cost of healthcare in the US, are also having an effect overseas. In addition, non-emergency procedures may have waiting lists and well-qualified healthcare professionals are often in short supply. As a result, private health coverage is gaining acceptance in countries with established national health systems, and in some countries has already become an integral part of the healthcare system. Whether the system is public or private, the risk-taking entities are becoming increasingly aware of the importance of forecasting program costs.

Objective analysis of the situation is beneficial, since much of the other input comes from drug companies, healthcare providers, or the political arena. Sound fiscal analysis of financing and coverage alternatives is a useful addition to the debate over resource allocation and budgeting for contingent events. Experience gained in the US healthcare arena may prove useful, but US solutions cannot be simply exported to another country and routinely expected to work. Any solution must begin with a fundamental respect for the historical and cultural aspects inherent in each country's healthcare system. For healthcare, aging populations may translate to increased utilization of services. In the US, the emphasis is often on extending life through whatever means necessary and regardless of cost. Other countries tend to take more of a "quality of life" approach. This philosophy may mean that the latest medical procedure or breakthrough drug is not an appropriate fit everywhere it could be used. Again, local knowledge of cultural issues is invaluable when assessing the financial impact of aging populations.

Disease management programs have had some success in limiting healthcare spending in the US. These programs developed from data analysis showing that as much as 70% of medical costs go toward treating chronic conditions, mostly relating to a few diseases. Program participants are educated about their disease and encouraged to take control of managing their condition. Hopefully, this approach will lead to less medical care in the future, in particular preventing costly emergency treatment. In some cases, government health systems have employed a version of disease management, with common goals being education and lifestyle changes such as smoking cessation or weight loss.

While education and research have helped slow the spread of AIDS, there is still work to be done to fund more research and find a cure. So far, the impact of SARS and avian flu has been contained. With crowded cities and easy international travel, the potential certainly exists for a new epidemic to spread rapidly, severely taxing the healthcare systems in affected countries.

Looking to the Future

Milliman consultants are currently monitoring many interesting developments affecting the global business community. The potential for cross-border work and sharing ideas with actuaries in other countries is huge and expanding. Consultants to the multinational organization of the future must have a broad field of view, with the capacity to see not only the trees, but also the surrounding forest. Having a global perspective is not easy. There is more information to process, and sometimes communications and cultural issues make routine tasks difficult. Those who are capable of making the most of local wisdom while maintaining a global perspective are most likely to emerge as tomorrow's leaders.

Who We Are

Milliman serves the full spectrum of business, financial, government, and union organizations. Founded in 1947 as Milliman & Robertson, we have 32 offices in the United States as well as offices in Bermuda, Hong Kong, London, Madrid, Mexico City, Milan, Munich, São Paulo, Seoul, and Tokyo. Milliman employs approximately 1,850 people, including a professional staff of more than 850 qualified consultants and actuaries. The firm has consulting practices in employee benefits, healthcare, life insurance/financial services, and property & casualty insurance. It is a founding member of Milliman Global, an international organization of consulting firms serving insurance, employee benefits, and healthcare clients worldwide. For further information, visit **www.milliman.com**.

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