表7　健康評価の指標

1．住民の健康
- 健康度　・生活満足度　・疾病の発生率、有病率
- ライフスタイルについての知識、行動、意識、態度

2．地域社会の健康
- 自主活動グループの数
- ボランティア活動への参加
- 地域活動への参加意識
- 地域への愛着度
- 地域支援リーダーなどの人的資源
- 教育、学習（予防と健康）

3．環境の健康
- 自然環境の整備（緑地、水質、大気など）
- 生活環境の整備（ごみの排出、リサイクル、バリアフリー化）

4．危機管理体制の整備
- 災害危機対策（天災、人災）
- バイオテロリズム対策
- 感染症対策

## E．むすび

本研究は、21世紀に顕著になると予想される都市健康問題の中で、特にマイノリティの公衆衛生、保健、医療、福祉サービスに関する施策研究である。特にマイノリティに関しては、少数民族、少数市民という狭義の解釈でなく、都市健康問題における弱者とも言える小児、女性、高齢者、身障者などに対する保健・医療・福祉サービスについて調査研究を行い、その結果をもとに施策の考察と提案を試みたものである。社会変革の激しい大都市の抱える問題は、人口の集中、都市環境の変化、少子高齢化社会の抱える疾病問題、生活習慣に関連する疾患の増加、都市大災害にもとづく健康障害などについて検討することを中心とした。社会変革と健康問題ならびに生活習慣病対策についての施策提案を行い、さらに保健・医療・福祉サービスへの具体施策としての知的クラスター環境づくりについて考察した。

生活習慣病に関する保健・医療サービスにとって基本的問題は、住民およびその地域を含めた健康知識の向上にある。図21に示すごとく、健康管理、診療システムの改善、地域の防疫、予防を目的としたサービスネットワークシステムの構築が必要であり、この三者の連携、協働、迅速性に、住民意識の向上と具体的施策の実行、その評価を確立することである。そのために生活習慣病教育・学習システムの構築と行政的施策改革を要する。

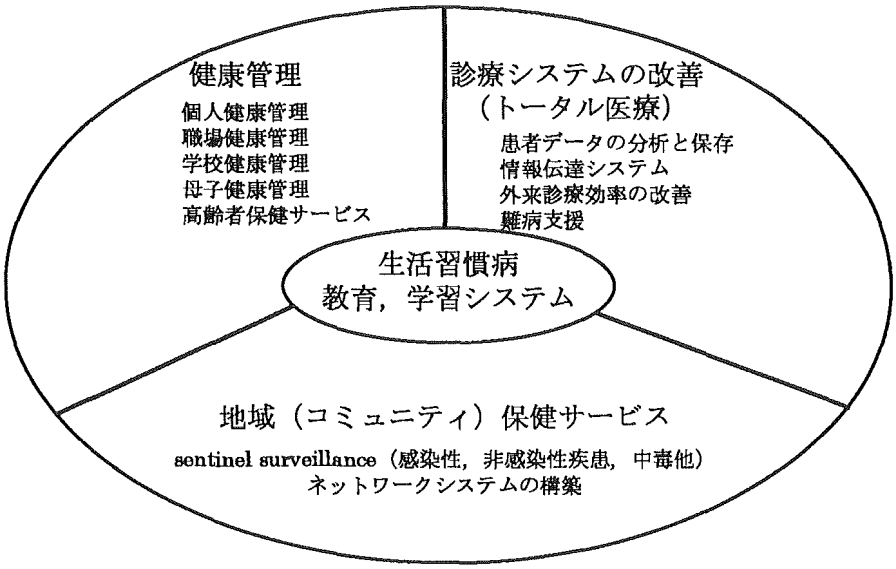


図21　生活習慣病に関する保健・医療サービスと教育・学習システムとの相関

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## F．健康危険情報

住民検診、アンケート調査に関しては、倫理委員会の指示にもとづいて実施した。

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# 研　究　結　果

# 糖尿病未治療並びに治療中断患者の把握とその対策

片上　祐子、礒元　伸一、三好　泰平、
神谷　利助、三好　勝彦（神戸市保健所）
坪井　修平（園田学園女子大学、元神戸市保健所）

## 1．はじめに

今日、日本をはじめ、先進国では急速な少子・高齢化の進行を背景に、「健康寿命」をいかに長く維持するかという、予防の観点に立った生活習慣病対策の充実が重要となっている。

中でも糖尿病は、日本において、1997年の総患者数690万人と高血圧についで第２位を占め、医療費も１兆円を超えている。更に、1998年には新規人工透析導入者、後天的失明の原因疾患の第１位を占めている。

それらの中には住民基本健康診査で、糖尿病の疑いで要医療と判定されても受診しなかったり、受診しても治療中断していた者が数多く含まれている可能性がある。これらの放置者や治療中断者は、合併症のため、生活障害をきたし、健康弱者のマイノリティ集団を形成していくと考えられる。

基本健康診査で糖尿病について要医療と判定された者を対象に行った基礎的調査の結果、未受診、治療中断の理由で、「自覚症状がない」と、「自分でコントロールできる」というものが多かった。自覚症状が無い時期から血糖や糖尿病の合併症の検査が必要であることを理解していない可能性や食事・運動療法についても誤った知識に基づいて、自己流に行っている可能性がある。検診を受け、糖尿病を発見されても、糖尿病に対する理解不足のためにコントロールできないひとの集団は、疾病病態マイノリティを形成しているといえる。

そこで、糖尿病要医療者が、糖尿病の検査や食事・運動療法などの治療について正しく理解し、糖尿病のコントロールができているか調査し、今後の糖尿病要医療者に対する保健医療サービスのあり方について検討した。

## 2．方　　法

平成10年度および11年度神戸市基本健康診査受診者の内、糖尿病について要医療の判定を受けた者（食後３時間以上：血糖値140mg/dl以上；食後３時間未満：血糖値200mg/dl以上）1,481人（男性655人、女性826人）を対象に、平成12年度に自記式郵送法によるアンケートにより、血糖値や体重、生活習慣改善状況等の糖尿病のコントロール状況を調査し、コントロール不良の原因を分析した。

## 3．結　　果

対象者1,481人の内、アンケート返送者680人（男性306人、女性374人）であった。
糖尿病の治療内容は、インスリン治療が４％、経口血糖降下薬が46％で、薬物療法を受けていない者が49％を占めていた。

血液検査は全体では72％が１年に１回以上受けており、インスリン治療を受けている者

では97%が3ヵ月に1回以上、経口血糖降下薬を受けている者では78%が3ヵ月に1回以上、91%が1年に1回以上受けていた。一方、薬物療法を受けていない者では、3ヵ月に1回以上受けている者は28%で、1年に1回以上受けている者は51%であった（図1）。

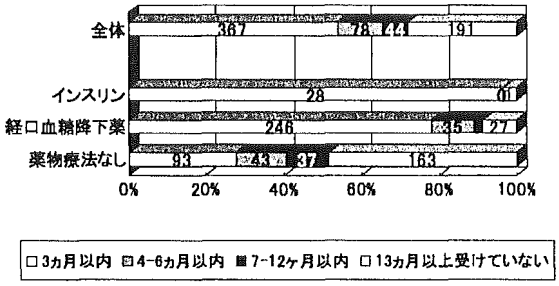


図1．最近の血液検査実施頻度

一番最近の検査は全体では75%が1年以内に受けていた。

検査の種類は血糖値が71%で最も多く、血糖値を日本糖尿病学会の「糖尿病治療ガイド2000」に基づく評価で、コントロール「不可（空腹時140mg/dl以上；随時200mg/dl以上）」あるいは血糖値不明が53%あった。

血糖値の判定が「不可」のうち、自己判定も「不良」は31%のみで、自己判定が「まあまあから非常に良い」が47%、「わからない」又は未回答が23%あった（図2）。

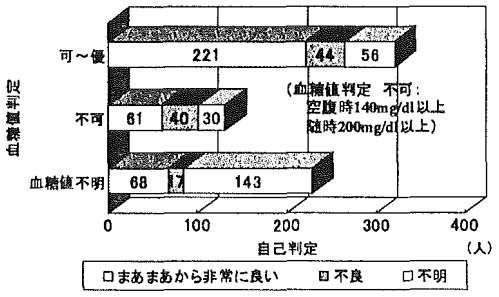


図2．一番最近測定した血糖値判定と自己判定

一番最近体重を測定した時期は、全体では1年以内が86%で、BMI25.0以上の「肥満」が26%、24.0から24.9の「太り気味」が8%、23.9以下の「標準以下」が57%、未回答が9%であった。「肥満」のうち、自己判定も「肥満」は62%であった（図3）。

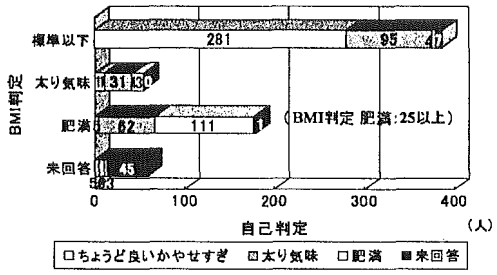


図3．一番最近測定した体重と身長によるBMI判定と自己判定

健診受診後の食生活改善状況は、全体では「改めていない」又は未回答が24%で、インスリン治療を受けている者では「改めていない」又は未回答の者はおらず、経口血糖降下薬を受けている者では12%であった。一方、薬物療法を受けていない者では、「改めていない」又は未回答の者は38%で、薬物療法を受けている者に比べて食生活改善状況が悪かった（図4）。

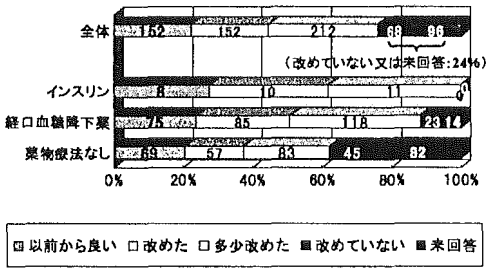


図4．治療内容と食生活改善状況

栄養指導を受けた者は、全体では45%で、「インスリン治療」を受けている者では93%、「経口血糖降下薬」の投与を受けている者では69%と多く、「薬物療法を受けていない」又は未回答の者では39%と少なかった（図5）。

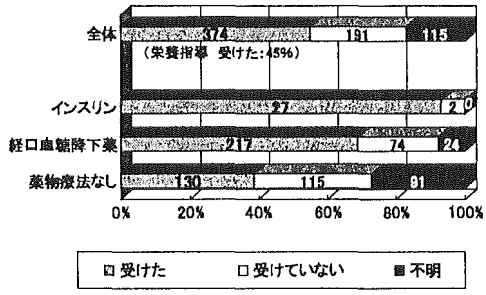


図５．治療内容と栄養指導の有無

食生活改善状況と栄養指導の関係を見ると、食生活改善状況が「以前から良いか多少とも改めた」者では栄養指導を受けた者が65％と多く、「改めていない」又は未回答の者では18％と少なかった（図６）。

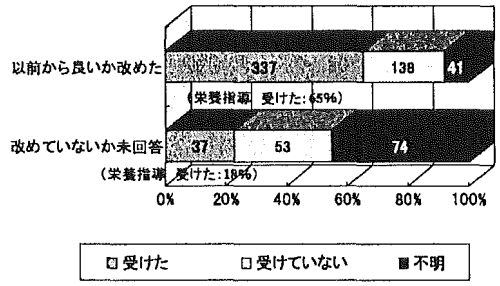


図６．食生活改善状況と栄養指導の有無

健診受診後の運動習慣改善状況は、全体では「改めていない」又は未回答が27％で、インスリン治療を受けている者では「改めていない」又は未回答の者は７％で、経口血糖降下薬を受けている者では18％であった。一方、薬物療法を受けていない者では、「改めていない」又は未回答の者は36％で、薬物療法を受けている者に比べて運動習慣改善状況が悪かった（図７）。

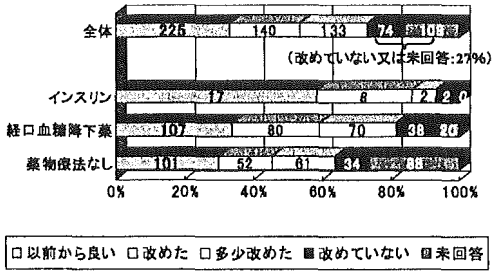


図７．治療内容と運動習慣改善状況

運動指導を受けた者は全体では33％と栄養指導を受けた者に比べると少なく、「インスリン治療」を受けている者では69％、「経口血糖降下薬」の投与を受けている者では43％で、「薬物療法を受けていない」又は未回答の者では32％と更に少なかった（図８）。

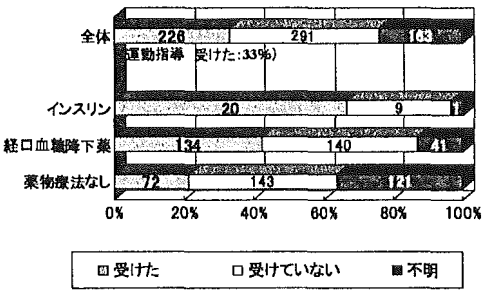


図８．治療内容と運動指導の有無

運動習慣改善状況と運動指導の関係を見ると、運動習慣改善状況が「以前から良いか多少とも改めた」者では運動指導を受けた者は39％と比較的多く、「改めていない」又は未回答の者では18％と少なかった（図９）。

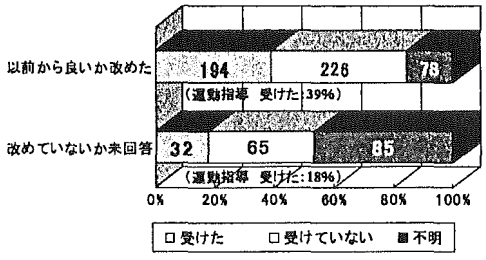


図９．運動習慣改善状況と運動指導の有無

## 4．考　察

血糖値の判定がコントロール「不可」あるいは血糖値不明の者が53％もあり、コントロール「不可」の血糖値を自分でコントロール「不良」と認識していない者が69％もあった。

体重については、「太り気味」以上あるいは体重不明の者が56％もあった。「肥満」でありながら「肥満」と認識していない者は38％と血糖値のコントロール「不可」を「不良」と自己認識していない者の1/2程度で、「肥満」は外見や服のサイズなどで認識しやすいためと考えられる。

食生活や運動習慣を「改めていない」又は未回答の者が1/4程度あったが、その内、栄養指導や運動指導を受けた者は18％しかおらず、食生活や運動習慣に注意している者に比べて専門職による指導を受けた者が有意に少なかった。

薬物療法を受けていない者は受けている者に比べて、栄養・運動指導を受けている者が少なかった。

今日、健康情報が氾濫しているにもかかわらず、糖尿病要医療者で、検査や食事・運動療法についての理解が不十分な者が多く、コントロール不良の一因と考えられた。

食事・運動療法等の患者指導こそが、合併症予防に結びつき、医療費節減に寄与することが知られているが、現行の保険点数では評価が低いこともあって、薬物療法を受けていないものでは、指導が十分行われていない。

保健所・保健センターでの健診事後指導はこれまで要指導が中心であったが、糖尿病による合併症や死亡を予防する為には、健診で要医療と判定されたが薬物療法の必要がなく、食事・運動療法のみで良いと診断された者についても糖尿病予防教室・個別健康教育への勧奨や糖病食の作り方の指導等を医療機関と連携しながら実施し、事後指導を更に強化する必要がある。

食事・運動療法のみで良い軽症の糖尿病や耐糖能異常の患者を、保健所・保健センターでの糖尿病予防教室・個別健康教育等に逆紹介することにより、医療機関側が収入を得られる様な老人保健制度上の予算措置が必要である。

老人保健法に基づいて行われている基本健康診査で、要指導・要医療になった者の事後指導に対して、国の補助金を増やし、健診で発見された糖尿病・耐糖能異常の患者の治療継続率100％を目標にし、達成度を国が把握する必要がある。

また、一般市民や糖尿病専門医以外の医療従事者に対する糖尿病や肥満症の予防・治療に関する正しい知識の普及・啓発もあわせて行っていく必要がある。

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# Implications for Strategies for Social Welfare in the United States

Sandra Reynolds, Department of Gerontology, University of South Florida

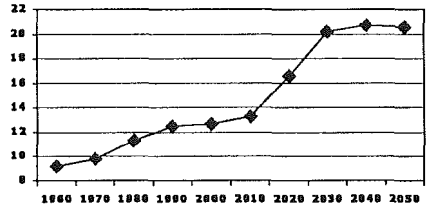
The United States and Japan are not unique in facing the prospects of an aging society for the foreseeable future-in fact, all of the developed nations are in reasonably similar situations, and even the developing world is beginning to face the aging society as well. However, I believe that there are enough similarities and differences between our two countries that can inform policy makers on both sides of the Pacific Rim, and that we can benefit from one another's experiences in dealing with the aging society. In this talk, I will primarily be summarizing current thoughts on the impact on our aging society on social welfare in the United States. I will examine current projections for the costs of Social Security, our national pension system, Medicare, which is our acute health care program for older adults, and Long-Term care, which is a growing problem that will challenge both the United States and Japan. I will also examine trends in the health and finances of today's and tomorrow's older adults, concluding with some of the policy recommendations that are currently being considered to "fix" our social welfare systems for the 21st Century.

## Current Projections

In the United States, life expectancy has increased dramatically in the 2nd half of the 20th Century, due primarily to improvements in treatments of traditional "killer" diseases, such as heart attack, stroke, and hypertension. The result in the US is an increasing percent of older adults (age 65+) between now and 2050 (Fig.1). Reasons for this increase include both the increases in longevity attributable to medical advances in the late 20th Century, but also to the post-World War II baby boom, in which the fertility rate was nearly twice that of prior or subsequent birth cohorts.

**Fig.1**

**Increasing % of Older Adults (65+) 1960-2050**

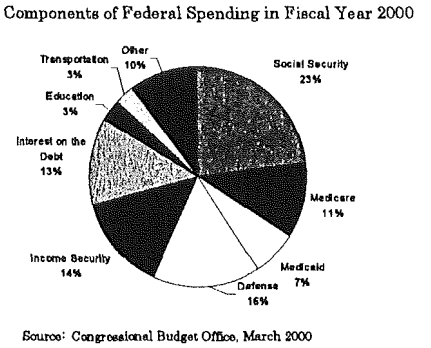



## Social Security

For better or worse, Social Security represents also represents the largest outlay of federal dollars at 23%; adding in Medicare (11%) and Medicaid (7%), and we see that currently our major social welfare programs take up 41% of the federal budget (Fig.2). In the future, this is expected to peak at approximately 68% in the year 2030(Fig.3). In the short term, Social Security is continuing to accumulate reserves and will continue to do so until 2015, due in part to the strong economy we are now enjoying. In the long term, however, Social Security payments to beneficiaries will increase as the baby boom retires. Consequently, under the Intermediate (II) assumptions, surplus will continue to build until 2015, - from 2024 on,

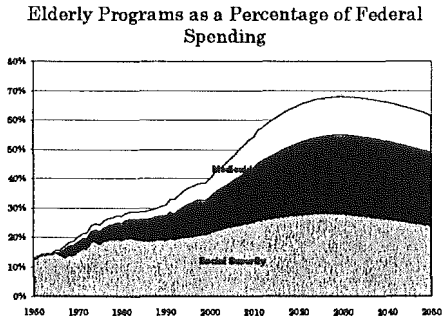
we will have to start liquidating investments. Current projections are that the Social Security Trust Funds will be depleted in 2037(Fig.4). The bottom line for Social Security, then, is short-term stability and fiscal uncertainty in the future, but its tremendous popularity will likely guarantee its survival as a social welfare program.

Fig.2



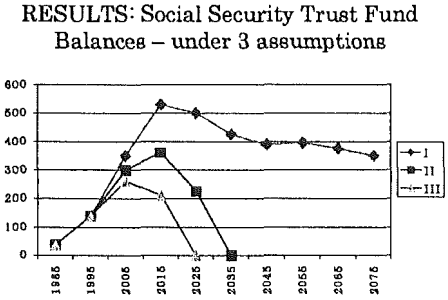

Source: Congressional Budget Office, March 2000

Fig.3




Source: Congressional Budget Office, July 1999

Fig.4




Source: OASDI Trustees Report, 1999.

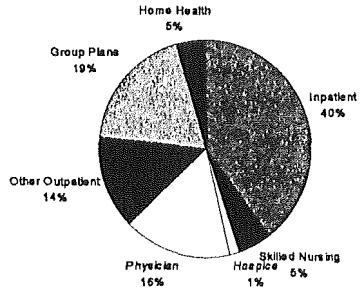
## Medicare

Prospects for our Medicare program offer a slightly different, and not as optimistic picture. In the US, we will spend approximately $220 Billion on Medicare beneficiaries, the overwhelmingly majority of whom are elderly. The average amount per beneficiary is $5600 per year. Medicare consists of 2 basic components: Part A covers the costs of hospitalization, and Part - covers supplemental care - doctor's visits, medical supplies, and the like. Between the two, (Fig.5) Medicare spending is primarily for inpatient hospital expenses (40%); outpatient and physician care together come to 30% of the Medicare outlay, and very little goes to home health programs, skilled nursing facilities, or hospice (total 11%). The result is that most acute care is paid for, but little chronic care is covered.

Funding for Medicare is also more complicated than that for Social Security (Fig.6). Funding comes from payroll taxes (part A), general tax revenues (part B), user premiums (part B), and interest from investments. While Medicare is not the sole source of funds for health care for the elderly (nearly 60% have some other type of supplemental health plan, paid either by themselves or by their former employers), there are significant deductibles and co-payments that make out-of-pocket costs a problem for many older adults--the average outlay is $2,150 dollars, and uses up 20% of the income of the average older adult. These amounts vary somewhat by the type of health insurance, age, marital status, race/ethnicity, and a variety of other factors.

Fig.5

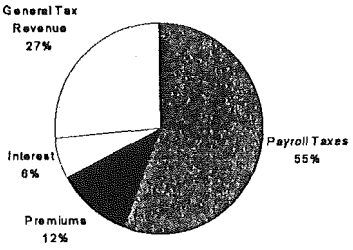
Medicare Spending by Major Category, FY 2000




Source: Congressional Budget Office, March 2000

Fig.6

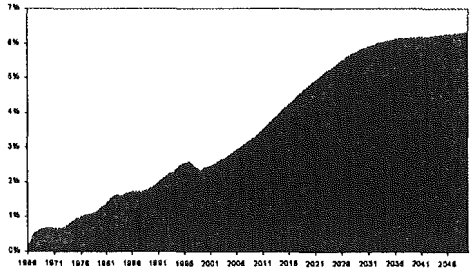
Sources of Medicare Financing (Major Components)




Source: Congressional Budget Office, March 2000

Fig.7

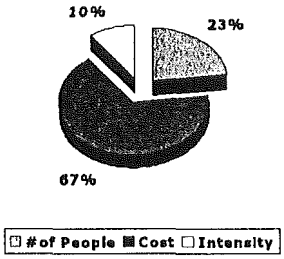
Medicare Spending as a Percentage of GDP



Source: Congressional Budget Office, July 1999

Fig.8

Why?




(Source: National Center for Health Statistics)

Medicare also has been increasing as a percent of the Gross Domestic Product (GDP) (Fig.7) and is projected to continue throughout the 21st Century. Unlike the increases in Social Security, however, these increases are due more to the unbridled expansion of the costs of medical care, not so much the numbers of beneficiaries. It is well known that the recent increases in the cost of Medicare have been due to factors other than increases in the number of beneficiaries, which has contributed less than a 1/4 of the increase (Fig.8). The bigger culprits have been our inability to control costs (67%) and the intensity of services (10%). Clearly the increases in the number of older adults in the 21st Century will exacerbate this trend, but it is also clear that getting a handle on the costs themselves will be critical.

## Long Term Care

Federal outlays for long-term care (Fig.9) will also be rising dramatically in the 21st Century, from $123 Billion this year to $350 Billion in 2040 (in year 2000 dollars). This is in spite of the fact that a large portion of long-term care is currently borne by private families. (Fig.10). The two biggest payers of long-term care are the family (Donated Care-27%) and Medicaid (26%- largely nursing home care). Medicare picks up 17% (in short term post-hospital coverage), and individual older adults pay 25%. Currently, very little of the long term care costs are borne by Long Term Care Insurance but this is destined to change as more adults with long term care insurance reach the ages where such care is needed.

Fig.9

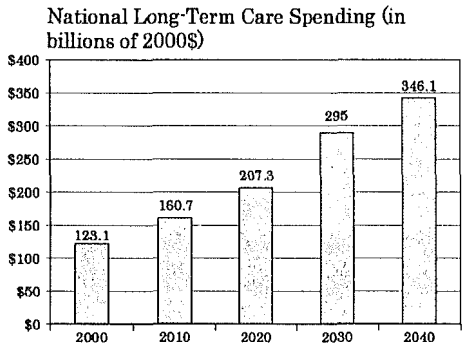
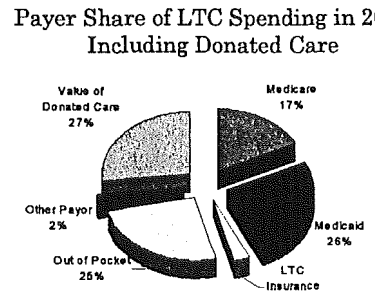



Fig.10

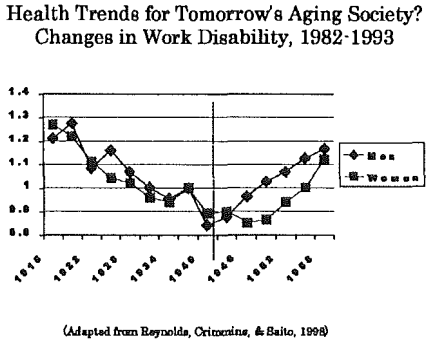



Source: Congressional Budget Office, 1999.

## Trends in Health

Of course, virtually all of our projections regarding the cost of health care, both acute and chronic (or long-term) are based on what we know about current trends in the health of the elderly. There is pretty much a consensus that increasing life expectancy has resulted in longer life and better health, although the evidence is not consistent across different surveys or different conditions. If we consider measures that are most likely to affect our funding of Social Security, it is useful to examine reported work disability among adults. When my colleagues and I recently examined work disability among adults born between the years of 1917 and 1959, we found that, indeed, for the older adults (cohorts born between 1916 and 1940), work disability steadily decreased for both men and women. Interestingly, this trend (1982-1993) makes a dramatic turn for those born 1946 and later - the baby boom, or tomorrow's older adults (Fig.11). This finding implies that future cohorts of older adults may not be able to continue working, just at a time when it might be important for them to do so, for their own financial well-being, and also for the continued solvency of Social Security.

Fig.11




(Adapted from Reynolds, Crimmins, & Saito, 1998)

If we examine the same age groups in relation to a number of chronic conditions, we find that in men (Table 1), there appear to be improvements in the prevalence of arthritis, cardiovascular disease, and emphysema for both today's and tomorrow's elderly cohorts. However, with musculoskeletal disorders, we find that while today's older adults have experienced no change over the time period examined, the future cohort of older adults has experienced increased rates; in addition, both current and future cohorts of older adults are experiencing increased prevalence of orthopedic impairments. These findings are largely the same for females - they also participate in continued decreasing rates of cardiovascular diseases and arthritis. For females, however, we find increases in asthma and orthopedic impairments only for future cohorts of elderly women.

**Table 1**

Cohort Trends in Diseases/Conditions- Men

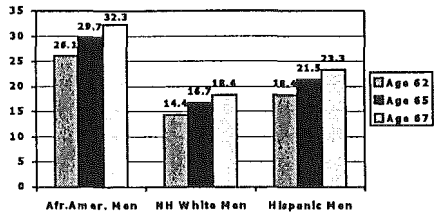
| Today's Elders | | Future Elders | |
|---|---|---|---|
| Arthritis | Down | Arthritis | Down |
| Cardiovascular | Down | Cardiovascular | Down |
| Diabetes | Up | Diabetes | Unch. |
| Emphysema | Unch. | Emphysema | Down |
| Musculo-skeletal | Unch. | Musculo-skeletal | Up |
| Orthopedic | Up | Orthopedic | Up |

(Adapted from Reynolds, Crimmins, & Saito, 1998)

**Fig.12**

Trends in Work Disability: Age and Race (Men w/ 10 yrs. Educ.)

(adapted from Crimmins, Reynolds, & Saito, 1999)




Another point to make, in stark contrast to Japan, is the impact of the US' racially diverse population (Table 2). At the present time, non-Hispanic whites account for 84% of the US elderly population - by 2050, this percent is projected to be only 64%, with the highest amount of growth among the Asian & Pacific Islanders (a census grouping), followed by Hispanics, and African Americans. This is important because, in the US, Hispanics and African Americans are the least healthy, wealthy, and those most likely to be dependent on our social welfare programs, potentially complicating the projections we see for the overall population. For example (Fig.12), if we examine work disability rates among men, we see that rates of work disability for African American men are nearly twice that of Non-Hispanic White men, with Hispanic men falling in between the other two.

**Table 2**

Future Retirees Will Be More Racially Diverse

| Percent 65+ by Race | 2000 | 2030 | 2050 |
|---|---|---|---|
| Non-Hispanic Population | | | |
| White | 84% | 74% | 64% |
| African American | 8% | 10% | 12% |
| American Indian | a | 1% | 1% |
| Asian & Pacific Islander | 2% | 5% | 7% |
| Hispanic | 6% | 11% | 16% |

a / Less than 1 percent

Source: National Center for Health Statistics

In terms of our projections for health, then, we see that in the future, our older adults may be subject to a remarkable increase in work disability, continued improvements in life-threatening diseases, but increases in conditions such as asthma, musculoskeletal and orthopedic disorders that my compromise both their continued ability to work, and their need to pay for, primarily, long-term care. In terms of their financial condition (Fig.13), an examination of the comparative income of adults aged 40 who were born in 1921-25, in 5 year cohorts, up to cohorts born between 1951 and 1955 shows another threatening trend. What we see is that each successive generation of 40 year old Americans has been better off than the previous cohorts, with a halt to this increase in the 1946-1950 cohorts and beyond - in other words, the baby boom. Even then, these figures mask differences between subpopulations, with the most affluent of the baby boomers continuing to have growth in their comparative income, and the least affluent losing ground.

Fig.13

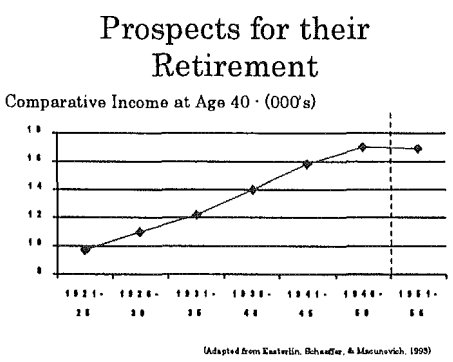
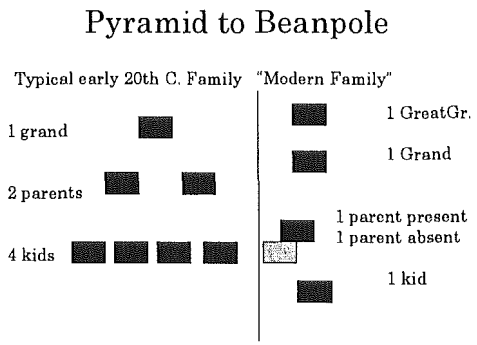



Fig.14




## Changes in Family Structure

While we consider these figures, and their impact on Social Security and Medicare, it is also critical that we keep in mind the potential problems that arise when considering the changes to family structure in the U.S. Due to increased longevity, adults will live longer in all of their relationships: whether as a parent, a child, a spouse, or alone. Alternatively, in the US, we are seeing more and more cases of "serial monogamy," in which divorce and remarriage result less in being a spouse longer (my parents have just celebrated their 59th Anniversary), to having 1 spouse for the earlier part of life, another for midlife, and perhaps a third spouse with which to grow old. In any case, the general trend has been for the family to move away from a traditional "pyramidal" structure toward something more like a "beanpole" - (Fig.14) - here I present a photograph of 4 generations of women in my family - my mother, sister, her oldest daughter, and her daughter. In contrast, when I was in high school, all of my grandparents were deceased, so for several years, there were only 2 generations alive.

For adults in the US, the increase in 4-generation families has resulted in some unintended consequences. Increasingly, we see phenomena where adults in their 40s have aging parents (and sometimes grandparents) while they are struggling to raise their children; alternatively, for the adults in their 60s and 70s, we see increasing numbers who have frail parents, and whose retirement years are interrupted by the prospect of the divorced daughter moving in with her children. Thus, the burden of caring for frail older adults increasingly falls on fewer and fewer family members - usually women (donated care!).

## Policy Choices

There are a number of changes to Social Security and Medicare that are currently being considered to cope with the projections we have discussed today. For Social Security, the changes include:

- reducing benefits (trim back benefit)
- increasing revenues
- privatization
- strengthening the economy

Politically, it would not be feasible to reduce benefits for those already receiving Social Security; what would be possible would be to reduce benefits for new retirees. Another way

is to raise the retirement age, which is in process now, going from 65 in 2000 to 67 by the year 2025-moving the age further to 70 is currently being discussed. Finally, it would be fairly easy, but again, unpopular for the government to cut back on the Cost-Of-Living-Adjustments which ensure that those receiving Social Security are able to keep up with inflation.

Increasing revenues are even less popular. In order to meet the demands of Social Security, the current 6.2% in payroll tax (12.4% total) would be raised to 8.6%, an unlikely occurrence in today's political climate. Other options would be to raise other federal taxes or to cut other government expenditures, options that are also not likely in the foreseeable future, considering the makeup of the U.S. Congress.

Privatization would require the reduction of Social Security benefits, and the mandate that workers put some percentage of their earnings into individual retirement investment accounts. The main problem with privatization is that is tends to benefit those who are already able to put money away for retirement - not those who will really need Social Security to survive. The risk is that the system then becomes two-tiered, with one system for the affluent, and "welfare" for the rest. This would dramatically undermine the widespread political popularity of Social Security.

The real solution is to strengthen the economy. This can be done through a number of means, including finding incentives to increase capital accumulation (savings and investments), and to enhance productivity.

For Medicare, the most important and effective policy option would be one which I fear will never happen - Universal Health Care (UHC). Whether it is structured similarly to a Canadian plan, or on the U.K. model, or completely differently, UHC is the only way to bring down the cost of medical care insurance by including all in the risk pool. If President Clinton's 1994 attempt to reform our health care system tells us anything, however, it is that Americans are too satisfied with the system they have, for all its flaws. Therefore, attempts to reform the health care system will have to be incremental. The easiest method would be to reform health insurance coverage by a number of means:

- extending Medicare to cover the un- and under-insured
- including prescription drug benefits, and
- allowing people aged 55-64 to buy into Medicare voluntarily

The results of these reforms, however, are likely to increase costs at a time when we will be looking to reduce costs, instead. The efforts to control spending have largely centered on "managed care" - in our country, the Health Maintenance Organizations (HMOs), Preferred Provider Organizations (PPOs), and other attempts to limit the cap on medical spending. The good news is that, in 1998 and 1999, health care spending did slow down, suggesting that managed care can be effective in the short run.

In the long term, however, there are no readily available solutions. Current proposals include controlling prices and utilization -i.e., the continuation of managed care efforts to control costs; premium supports, and medical savings accounts.

Premium supports would offer choices of care similar to those currently offered in extended-care facilities - if one chose to contract with a cheaper plan, they would receive fewer benefits, and vice versa. The government's involvement would be limited by a bidding

system, in which local contractors would vie for the right to provide Medicare services. A system such as this might, indeed, save money, but it would have to be properly monitored, and again, it would tend to benefit most the people who can already afford health care.

Similarly, the medical savings account is the equivalent of privatization of Social Security. The idea is to expand our current system of putting tax-deferred income into a designated medical account. These accounts have the potential to provide an interesting and attractive long term financial planning device, but again, they do not solve the problem of funding health care for older adults who are not able to save.

In terms of Long Term Care, the picture is even more bleak (Slide 24). Suggested ways of providing funds for long-term care include expanding Medicare and Medicaid to cover more chronic care. The appealing nature of this suggestion is that the infrastructure is already there, so implementation would be relatively simple. However, to do this would require an enormous increase in taxes and user premiums, something that is unlikely to happen in the current climate in the US.

Another suggestion would be to subsidize "uncompensated" or "donated" care through tax credits. For example, if a working woman had to cut back her hours, or quit her job altogether to care for a frail older relative, the federal government would allow a certain credit on her income taxes, similar to those currently in use for child care. While tax credits are politically easier to swallow than actual payment of benefits, the fact remains that revenues to the federal government would decrease, thus making this option somewhat unlikely to happen.

Finally, one proposal to fund long-term care is to stimulate the growth of the long-term care insurance industry, presumably also through tax incentives. Long-term care insurance is a decidedly growing field, having started badly in the 1980s and early 1990s. In the beginning, companies were plagued by an inability to adequately price their policies, and older adults were plagued by high costs and exclusions contained in fine print in their policies. In the 1990s, however, the US government began to require that policies be written that were easier to understand, and the industry found better ways to price their policies. For older adults, however, the age at which they buy these policies is critical - as with all insurance policies, the closer you are to needing them, the more they cost.

## Real Solutions

Most demographers and economists agree that most if not all of our problems with funding our social welfare programs would be minimized, if not corrected altogether, if the economy were to continue to grow, certainly as it has in the past 10 to 15 years. In the absence of guarantees, however, there are concrete things that Americans can do (Table 3).

First, the government must find creative ways to encourage private and public savings. Some methods are already being undertaken - the balancing of the federal budget was an obvious first step; however, the retirement of the national debt is another issue entirely and needs to be addressed. Second, the government needs to make a concerted effort to educate the American public on our social welfare programs. The Social Security Administration and the Health Care Financing Administration have long known that, even among citizens who receive Social Security and Medicare, these two major programs are not well understood. If we are to remain committed to these

programs in the long run, we must be sure that the American people understand who pays for what types of benefits, and what they would have to pay out of their own pockets, if those programs were not in place. Third, the single most important way to guarantee a growing economy is to have a well-educated and productive workforce. In my view, it is not acceptable that we should have to import workers for the high-technology industry due a shortage of properly trained workers in our own workforce. The U.S. needs to put more of its money where its mouth is, in funding public education in particular.

**Table 3**

Economy of U.S.

- Find ways to encourage private and public savings
- Continually educate American public on public programs
  - Who pays for what
  - Who would pay in their absence
- Encourage growth ·· EDUCATION

## What the US and Japan can learn from one another

At the risk of significant oversimplification, Japan has two characteristics that I think could benefit the US, should we ever choose to adopt them (Table 4). First, the US is consumed by short term thinking; we are famous for postponing action on our problems until they are actually staring us in the face; at the same time, our economic system is built on a system of short term financial gains - indeed, short term used to mean quarterly profits in our country; now, short term means the stock price each day. Japan has traditionally been much better at evaluating their society with the long term in mind allowing, in my view, a more balanced way to examine the true costs and benefits of social programs.

**Table 4**

What U.S. and Japan can learn from one another

- Japan looks much more to the future; US is focused on the short term.
- Japan has much more flexible system in which older workers can continue to be productive.
- US has greater experience and infrastructure for formal long term care—both positives and negatives

Second, compared to the US, Japan does a much better job of making it not only possible, but desirable, for older workers to continue working, both approaching and after the traditional retirement age of 60. In the US, we have only just eliminated the tax penalty for citizens on Social Security to keep working; at the same time, our industries are rather backward, in terms of developing phased retirement programs, partly due to the different way that our large industries are organized compared to Japan's. In order for the US to adopt some of these policies, laws regarding age discrimination in employment would have to be changed and, quite frankly, I do not see our unions (and other vested interests) allowing that to happen.

From the US, however, I believe Japan could learn a lot in terms of ways to provide chronic, or long term, care. The rapid increase of the elderly population in Japan, combined with the declining fertility rate, has resulted in increasing demand for long term care services. This demand is exacerbated by significant declines in multi-generational households, increasing female labor force participation, and something of a cultural revolution in which Japanese women are beginning to resist the traditional role of caring for their

husband's mothers.

While our long term care policies are somewhat disjointed, we do have a relatively healthy network of institutional and home- and community-based systems of long term care delivery, as well as considerable experience in trying alternative means of funding such care. I know that, as we speak, Japanese social and policy researchers are consulting with their American counterparts in order to gain knowledge from the American experience with long term care - not simply what works well, but also lessons we have learned about what does not work well. In the meantime, of course, the Japanese government has taken a number of steps, of which I am sure you are all familiar, to address these concerns, including the implementation of the Gold Plan, as well as the 1997 Long Term Care Insurance Act, which I believe was due to be fully implemented this past April.

In short, we are all in this together - we are all facing the increasing challenges of supporting our growing elderly populations - and I believe that we can learn much from one another, if we will only allow ourselves to do so. Unfortunately, I think that the willingness tends to be there in the academic and business communities - the general public tends to lag behind, and we all need to do a better job in educating our people on these important issues, different options, and the relevant costs and benefits of each.

# Future Perspective: Strategies for Management of Life Style related Diseases, Diabetes in Japan

Shigeaki Baba, Toshiro Katayama, Seiki Nambu and Yasuro Kameno
International Institute for Diabetes Education and Study

In Japan, recent affluent society underwent the structural change along with changes of our modern life style and advancement of new technologies. As shown in Fig.1, newly emerged concept, human inventory is now introduced to various activities, individualism is further emphasized and diverse choices are given to our daily lives, which lead the society to respect human aspects and healthiness of its citizen.

As the result of it, we started to recognize the change of value which motivates us to put people or humanity as the core concept in urban planning. We can say that especially in the field of medical treatment, the basic principle has been shifted to human health and science.

**Fig.1**

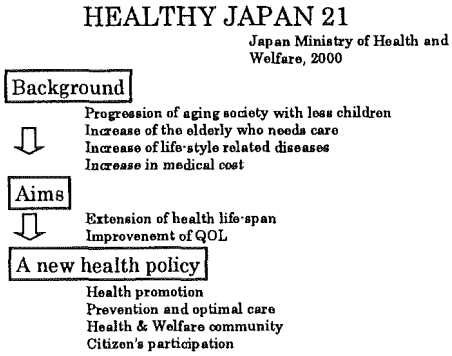

Japan required to come up with countermeasures for many issues such as westernized dietary life style, environmental pollution and the huge difference and gap in the sense of values between the generations.

Therefore, the Japanese Ministry of Health and Welfare issues a new policy, "Healthy Japan 21" in April 2000 (Fig.2).

This policy is designed based on the progression of the aging society with less children, the increase of the elderly who needs special care, the increase of life-style related diseases, and the increase in medical cost. The basic idea of this policy is to extend the span of healthy life as well as to improve the Quality of Life

The modern medical treatment is centered to the patients and it requires optimal care to improve the Quality of Life.

**Fig.2**




Following is my medical philosophy in setting diabetes strategy, responding to these newly emerged challenges.

## 1. Future direction of diabetes strategy and EBM

Evidence-based Medicine, EBM, is reasonable medical care which is well supported by the

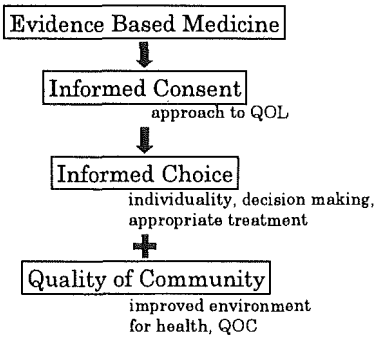
scientific evidence and acceptable to patients. As in Fig.2, it is designed to achieve the fairness and holism in providing medical care and to establish medical economics. In order to implement EBM, each specific care and its way of provision has to be evaluated based upon cohort studies.

Further, patient's compliance is regarded as one of the key factors for the successful medical care. Recently, it is said that how to obtain an adherence of the patients is another key factor.

This will encourage patients for their willingness and ability to change behavior, so that they can psychologically adjust to diabetes. Once you establish adherence of the patient, it will lead the patient for his/her self-management with confidence.

The next concept is informed consent at medical care aimed the improvement of QOL. Now the time has passed to change from informed consent to informed choice. Self-realization calls for individual recognition and optimal medical care. It also requires to adjust the environment which enables such medical care is fully implemented. QOL was the indicator of medical ethics in 20th century. In this new century, QOC, quality of community has to be also emphasized, which implied the 21st century type medicine, namely the third new medicine. (Fig.3)

**Fig.3**




It is essential for us who are health/medical professionals to recognize that human ethics is reflected into the community planning.

Accordingly, with the emphasis on the prevention of diabetes, and having the objective of improving the Quality of Life of people with diabetes, the International Institute for Diabetes Education and Study (IIDES) was established on the basis of worldwide cooperation, 1998 in Kobe. The merit of this institute lies in its accumulation of modern medical research information, and in its role as a place of education and learning for health professionals, thus it contributes to both a healthy society and the creation of a comfortable community life.

**Table 1**

EVIDENCE-BASED MEDICINE (EBM)

- Evaluation of medical treatment (cohort study)
- Compliance and adherence
- Equity in medical practice
- Comprehensive medicine
- Quality and efficiency
- Economics

## 2. Future direction of diabetes prevention project

Chronic non-communicable diseases, i.e. diabetes, cancer, cardio-vascular diseases, have common risk factors. These diseases can be controled or prevented by intervention as the Interhealth Project (WHO).

Nowadays diabetes prevention project can be summarized into several topics as it is shown in this slide (table 2).