Ageing, Chronic Disease and Long-Term Care: International Perspectives
With the reduction of infant mortality rates, the conquest of most epidemic diseases, and the increased longevity of the population, a much greater proportion of the people than formerly are afflicted with heart disease, cancer, rheumatism, diabetes, and other non-bacterial disorders. Being chronic, these diseases require medical care that is expensive and beyond the means of many individuals. Public action, therefore, is deemed necessary- especially in the development of numerous institutions for the aged and chronically ill.

As Britain Votes, Tight Races for Older Voters Hold the Key
By ALAN COWELL

BRAINTREE, England, May 4 - On the eve of Britain's election on Thursday, there are people in this unpretentious little town like retired secretary Evelyn Childs, 72, who says she is so disenchanted by the mainstream parties that she will not vote for any of them.

... there is a sense that the election will be decided in places like this where Tony Blair's Labor Party has only a slender lead on the Conservatives and where, as elsewhere, older people are far more likely to determine the outcome of the vote than the young. Some people call it gray power, the notion that the preponderance of older voters at the polls skews the political agenda in favor of them while the young remain disaffected...

According to Sir Robert Worcester, the head of the MORI polling institute, voters over the age of 55 make up just over one-third of the electorate but account for at least 45 percent of the vote. While three-quarters of people over 65 say they will definitely vote, only one-third of those under 25 say they will.
Ageing can be defined as a progressive, generalized impairment of function resulting in a loss of adaptive response to stress and in a growing risk of age-associated disease.

From: ActiveAgeing, A Policy Framework, WHO 2002
How Old is Older?

This booklet uses the United Nations standard of age 60 to describe “older” people. This may seem young in the developed world and in those developing countries where major gains in life expectancy have already occurred. However, whatever age is used within different contexts, it is important to acknowledge that chronological age is not a precise marker for the changes that accompany ageing. There are dramatic variations in health status, participation and levels of independence among older people of the same age. Decision-makers need to take this into account when designing policies and programmes for their “older” populations. Enacting broad social policies based on chronological age alone can be discriminatory and counterproductive to well being in older age.
Figure 4.3. Share of the population aged 80 and over, 2000

Source: OECD Health Data 2003.
As the proportion of children and young people declines and the proportion of people age 60 and over increases, the triangular population pyramid of 2002 will be replaced with a more cylinder-like structure in 2025.
Some trends in population ageing:

- **Definition:** Decline in the proportion of children and young people and an increase in the proportion of people age 60 and over.

- **Causes:** Decreasing fertility rates and increasing longevity

- By 2025, 120 countries will have reached a fertility rate below replacement level (2.1 children per woman). Currently 70 countries are at this level.

- Over half of the world’s older people live in Asia

- The fastest growing segment is those over 80

- At age >80, there are fewer than 6 men for every 10 women (In more developed countries, ratio can be < ½; in Brazil and South Africa women comprise about 2/3 of the population over 75).

- “While developed countries grew affluent before they became old, developing countries are getting old before a substantial increase in wealth occurs.”

- Important issues in developing countries with respect to social support of the aged: urbanization, migration of young to cities, smaller families, more women in the workforce, increasing trend for elderly to live alone

From: ActiveAgeing, A Policy Framework, WHO 2002
Table 1. Countries with more than 10 million inhabitants (in 2002) with the highest proportion of persons above age 60

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th></th>
<th>2025</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>24.5%</td>
<td>Japan</td>
<td>35.1%</td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>24.3%</td>
<td>Italy</td>
<td>34.0%</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>24.0%</td>
<td>Germany</td>
<td>33.2%</td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>23.9%</td>
<td>Greece</td>
<td>31.6%</td>
<td></td>
</tr>
<tr>
<td>Belgium</td>
<td>22.3%</td>
<td>Spain</td>
<td>31.4%</td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>22.1%</td>
<td>Belgium</td>
<td>31.2%</td>
<td></td>
</tr>
<tr>
<td>Portugal</td>
<td>21.1%</td>
<td>United Kingdom</td>
<td>29.4%</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>20.8%</td>
<td>Netherlands</td>
<td>29.4%</td>
<td></td>
</tr>
<tr>
<td>Ukraine</td>
<td>20.7%</td>
<td>France</td>
<td>28.7%</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>20.5%</td>
<td>Canada</td>
<td>27.9%</td>
<td></td>
</tr>
</tbody>
</table>

Source: UN, 2001
Figure 3. Distribution of world population over age 60 by region, 2002 and 2025

NAm: North America
LAmC: Latin America and the Caribbean

Source: UN, 2001
Figure 9. Percentage of labour force participation by people 65 and older, by region

LAmC: Latin America and the Caribbean
NAm: North America

Source: ILO, 2000
A New, Expanded Definition of Chronic Conditions

In summary, chronic conditions are no longer viewed conventionally (e.g., limited to heart disease, diabetes, cancer, and asthma), considered in isolation, or thought of as disparate disorders. The demands on patients, families, and the health care system are similar, and, in fact, comparable management strategies are effective across all chronic conditions, making them seem much more alike than different. Chronic conditions therefore include:

- noncommunicable conditions
- persistent communicable conditions
- long-term mental disorders
- ongoing physical/structural impairments

Innovative care for chronic conditions: building blocks for action: global report

© World Health Organization 2002
By the year 2020, chronic conditions including injuries (e.g., transport injuries that result in persistent disability) and mental disorders will be responsible for 78% of the global disease burden in developing countries.
Global burden of disease 1990—2020 by disease group in developing countries

Costs of Some Chronic Diseases

Cost of Asthma in Estonia
Asthma accounts for 1.4% of direct health care costs, or 2.1 million EUR. Medication expenses are 53% of the total.

Cost of Diabetes in Taiwan, China
Over 2% of the population has a diagnosis of diabetes. The direct costs of health care for this condition in 1997 was 11.5% of the total costs of health care for the country and was 4.3 times higher than the average cost of care for individuals without diabetes.

Cost of HIV/AIDS in India
The loss of productive potential due to HIV/AIDS from 1986 to 1995 is estimated to be between 8 and 28 million years. The estimated total annual cost (in billions of Rupees) of HIV/AIDS in India under low, medium and high estimates was 6.73, 20.16 and 59.19, respectively. The estimated annual cost of HIV/AIDS appears to be about 1% of the GDP of India if based on the high estimates.

Cost of Hypertension in the USA
The medical costs related to hypertension were $108.8 billion in 1998. This is approximately 12.6% of total national health care spending.
Why are Chronic Conditions Increasing?

The Demographic Transition

Throughout the world birth rates are declining, life expectancies are increasing, and populations are ageing. For example, in the 1950s, the expected number of children a woman would bear over a lifetime was six; today, the total fertility rate has declined to three. In addition, over the last century, life expectancies have increased by 30 to 40 years in developed countries. Longer lives are due, in part, to advances in medical science and technology, but also are because of successful public health and development efforts during the past 100 years.

Innovative care for chronic conditions: building blocks for action: global report

© World Health Organization 2002
### Major chronic conditions affecting older people worldwide

- Cardiovascular diseases (such as coronary heart disease)
- Hypertension
- Stroke
- Diabetes
- Cancer
- Chronic obstructive pulmonary disease
- Musculoskeletal conditions (such as arthritis and osteoporosis)
- Mental health conditions (mostly dementia and depression)
- Blindness and visual impairment

*Note: The causes of disability in older age are similar for women and men although women are more likely to report musculoskeletal problems.*

*Source: WHO, 1998a*
The WHO defines **long-term care** as “the system of activities undertaken by informal caregivers (family, friends and/or neighbors) and/or professionals (health and social services) to ensure that a person who is not fully capable of self-care can maintain the highest possible quality of life, according to his or her individual preferences, with the greatest possible degree of independence, autonomy, participation, personal fulfillment and human dignity.”
Measuring functional status:

- **Activities of Daily Living (ADL)**
  - Eating
  - Bathing
  - Dressing
  - Getting into and out of bed or chair
  - Going to bathroom

- **Instrumental Activities of Daily Living**
  - Preparing meals
  - Managing medications
  - Shopping
  - Housework
Figure 4. Maintaining functional capacity over the life course

*Changes in the environment can lower the disability threshold, thus decreasing the number of disabled people in a given community.

Functional capacity (such as ventilatory capacity, muscular strength, and cardiovascular output) increases in childhood and peaks in early adulthood, eventually followed by a decline. The rate of decline, however, is largely determined by factors related to adult lifestyle – such as smoking, alcohol consumption, levels of physical activity and diet – as well as external and environmental factors. The gradient of decline may become so steep as to result in premature disability. However, the acceleration in decline can be influenced and may be reversible at any age through individual and public policy measures.
Figure 3.2 Prevalence of dependency by age group

1. Dependency is defined as the inability to accomplish one or several Activities of Daily Living (see text).

Source: Comas-Herrera et al. (2003) and Secretariat calculations.
Figure 3.1. Public long-term care expenditure by age group

1. Expenditure per capita in each age group divided by GDP per capita.

Source: ENPRI-AGIR and Secretariat calculations.
A. Public health care expenditure
Increase in % points of GDP 2005-2050

Projecting OECD Health and Long-Term care Expenditures: What are the main drivers?
Working Paper No. 477
Copyright OECD, 2006
Figure 2.1 Public health care expenditure by age groups

1. Expenditure per capita in each age group divided GDP per capita.
Source: ENPRI-AGIR, national authorities and Secretariat calculations.
Quality of Care Concerns and Regulatory Responses- Institutional Care

Concerns:
- Inappropriate use of physical and pharmacological restraints
- Pressure ulcers (bed sores)
- Severe deficits in dementia care, e.g., inappropriate and/or insufficient support for eating and drinking
- Lack of privacy and basic patient rights
- High staff turnover and shortages of qualified personnel

Regulatory Responses:
- Re-accreditation (Australia 1997)
- New and Higher Standards (Austria 1994)
- Quality Regulations (Germany 2002)
- New National Regulator and Care Standards (UK 2001)
- Publication of Quality of Care Findings (Australia and U.S.)
- Higher salaries and more training for personnel in nationalized systems (Sweden)

From: Toward High-Performing Health Systems, OECD 2004
Institutional Capacity

- Widespread shortages: Japan, Spain
- Localized shortages: Australia, UK, US
- Growing supply: Germany, Japan
- Stable ratio of beds/elderly population: Austria, New Zealand, UK
- Declining ratio of beds/elderly population: Luxemburg, the Netherlands, Norway

From: Toward High-Performing Health Systems, OECD 2004
Home Care Issues

- Most people prefer home care to institutionalization
- Lack of consumer information about available services (Austria, U.K.)
- Limited access to services that support informal, primary caregivers, e.g., respite care, training and counseling
- Recent policies for quality assessment and improvement (Australia, Canada, Germany, UK)
- Home-based options considered first is mandated in many countries, e.g., UK
- Targeted approach to disabled elderly rather than all at risk of institutionalization (Sweden, UK, US)
- Enabling private sector growth by increasing funding for home care (Germany)

From: Toward High-Performing Health Systems, OECD 2004
Financial Issues for Long-Term Care

- Contribution vs. General Taxation
- Universal (Need-based) vs. Means Tested (Income-based, safety net)
- Caregiver payments (Australia, UK) or increased payments that can be used to compensate caregiver (Austria, Germany)
- Part of Healthcare System vs. Social-Care
- Rising incomes and net worth of elderly, particularly in developed countries → Increasing user responsibility for payment (Australia, Sweden, some Canadian provinces)
- Minor role for private insurance (US has largest share at 11% of total LTC spending) Problems: Low uptake by non-elderly, poor policy retention, problems projecting future cost and use, premium stability required for sale, decision to purchase insurance vs. self-funding
- Rising number of elderly + macroeconomic downturn + no accounting for indexing of benefit rates = Unsustainable financial solvency (Germany-deficits, Japan- 10% increases in premiums 3 years after introduction of policy)
- By 2050, to maintain a constant ratio between working and pension aged populations would require Germany’s population to consist of 80% immigrants (or progeny) or require the average Japanese to work until age 83
- Suggested financial changes to social security benefits: Eliminate early retirement schemes; make benefits actuarially neutral, e.g., pensions reflect actual time working; raise standard retirement ages; increase childcare subsidies; eliminate tax discrimination against female participation (due to higher marginal rate for two worker families); enhance the role of part time work; mid-life enhanced job training

Figure 4.4. Public expenditure on long-term care as a share of GDP in selected OECD countries, 2000

Source: OECD Long-Term Care Study.
### The Cost of Nursing-Home Care

<table>
<thead>
<tr>
<th>City</th>
<th>Daily Cost for a Private Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birmingham, Ala.</td>
<td>$133</td>
</tr>
<tr>
<td>San Diego</td>
<td>217</td>
</tr>
<tr>
<td>Washington, D.C.</td>
<td>260</td>
</tr>
<tr>
<td>Jacksonville, Fla.</td>
<td>180</td>
</tr>
<tr>
<td>Des Moines</td>
<td>209</td>
</tr>
<tr>
<td>Chicago</td>
<td>136</td>
</tr>
<tr>
<td>Boston</td>
<td>284</td>
</tr>
<tr>
<td>Fargo, N.D.</td>
<td>188</td>
</tr>
<tr>
<td>Spokane, Wash.</td>
<td>196</td>
</tr>
</tbody>
</table>

The highest nursing-home rates were reported in Alaska, where the cost is $204,765 a year, or $561 a day on average. The lowest rates were found in Louisiana at $36,135 a year, or $99 a day.

Source: MetLife 2004 [Market Survey of Nursing Home and Home Care Costs](#)
<table>
<thead>
<tr>
<th>Country</th>
<th>Service</th>
<th>Main source of funding</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Nursing home care</td>
<td>General taxation</td>
<td>Means-tested</td>
</tr>
<tr>
<td></td>
<td>Personal care at home</td>
<td>General taxation</td>
<td>Means-tested</td>
</tr>
<tr>
<td>Austria</td>
<td>Nursing home care</td>
<td>General taxation</td>
<td>Universal</td>
</tr>
<tr>
<td></td>
<td>Personal care at home</td>
<td>General taxation</td>
<td>Universal</td>
</tr>
<tr>
<td>Canada*</td>
<td>Nursing home care</td>
<td>General taxation</td>
<td>Means-tested in most provinces</td>
</tr>
<tr>
<td></td>
<td>Personal care at home</td>
<td>General taxation</td>
<td>Means-tested in most provinces</td>
</tr>
<tr>
<td>Germany</td>
<td>Nursing home care</td>
<td>Contributions</td>
<td>Universal</td>
</tr>
<tr>
<td></td>
<td>Personal care at home</td>
<td>Contributions</td>
<td>Universal</td>
</tr>
<tr>
<td>Ireland</td>
<td>Nursing home care</td>
<td>General taxation</td>
<td>Means-tested</td>
</tr>
<tr>
<td></td>
<td>Personal care at home</td>
<td>General taxation</td>
<td>Means-tested</td>
</tr>
<tr>
<td>Japan</td>
<td>Nursing home care</td>
<td>Contributions and general taxation</td>
<td>Universal</td>
</tr>
<tr>
<td></td>
<td>Personal care at home</td>
<td>Contributions and general taxation</td>
<td>Universal</td>
</tr>
<tr>
<td>Korea</td>
<td>Nursing home care</td>
<td>General taxation</td>
<td>Means-tested</td>
</tr>
<tr>
<td></td>
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<td>General taxation</td>
<td>Means-tested</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>Nursing home care</td>
<td>Contributions and general taxation</td>
<td>Universal</td>
</tr>
<tr>
<td></td>
<td>Personal care at home</td>
<td>Contributions and general taxation</td>
<td>Universal</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Nursing home care</td>
<td>Contributions</td>
<td>Universal</td>
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<td>Universal</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Nursing home care</td>
<td>General taxation</td>
<td>Means-tested</td>
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<td>Personal care at home</td>
<td>General taxation</td>
<td>Means-tested</td>
</tr>
<tr>
<td>Norway</td>
<td>Nursing home care</td>
<td>General taxation</td>
<td>Universal</td>
</tr>
<tr>
<td></td>
<td>Personal care at home</td>
<td>General taxation</td>
<td>Universal</td>
</tr>
<tr>
<td>Spain</td>
<td>Nursing home care</td>
<td>General taxation</td>
<td>Means-tested</td>
</tr>
<tr>
<td></td>
<td>Personal care at home</td>
<td>General taxation</td>
<td>Means-tested</td>
</tr>
<tr>
<td>Sweden</td>
<td>Nursing home care</td>
<td>General taxation</td>
<td>Universal</td>
</tr>
<tr>
<td></td>
<td>Personal care at home</td>
<td>General taxation</td>
<td>Universal</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Nursing home care</td>
<td>General taxation</td>
<td>Means-tested</td>
</tr>
<tr>
<td></td>
<td>Personal care at home</td>
<td>General taxation</td>
<td>Means-tested in most areas</td>
</tr>
<tr>
<td>United States</td>
<td>Nursing home care</td>
<td>General taxation</td>
<td>Means-tested</td>
</tr>
<tr>
<td></td>
<td>Personal care at home</td>
<td>General taxation</td>
<td>Means-tested</td>
</tr>
</tbody>
</table>

1. Services covered are nursing and personal care in a nursing home, and personal care in one's own home. It does not include "hotel" charges in nursing homes. Nursing care furnished in one's own home is normally covered by the acute health system in all countries.
2. General taxation may be national, regional or local. Contributions are those made to a social insurance scheme.
3. If coverage is not subject to a test of income or assets, it is shown as "universal", although there may be other restricting criteria. If coverage is subject to a test of income or assets it is shown as "means-tested".
4. Long-term care is devolved to the provinces. The table shows the situation in the majority of provinces.
5. Except in Scotland.

Figure 4.6. Long-term care expenditure by source of financing in selected OECD countries, 2000

Note: Data include only health expenditure on long term care.
Source: OECD Long-Term Care Study.
Measures to improve efficiency in delivery of long-term care:

- Pre-admission screening
- Enhanced flexibility to individualize services (avoiding costly “either-or” options, like “3 day rule” for Medicare in US)
- Allowing payment for home care services as an alternative to institutionalization
- Enhance coordination of care (case management)
- Support family care-givers

*** All these measures were adopted, to some degree in Japan after 2000 and some adopted in Australia, Canada, the Netherlands, UK and US

From: Toward High-Performing Health Systems, OECD 2004
<table>
<thead>
<tr>
<th>Country</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Residential care is mainly funded by the federal government out of general taxation. Community Aged Care Packages (CACP) is a federal government programme to provide in-kind benefit for home care. Home and Community Care (HACC) is a home care programme jointly funded by Commonwealth government and the State and Territory governments.</td>
</tr>
<tr>
<td>Austria</td>
<td>Cash allowance for care covers both home care and institutional care in the form of cash benefits, covering the whole population since 1993.</td>
</tr>
<tr>
<td>Canada</td>
<td>Both home care and institutional care are provided via provincial programmes. Support is means tested, but to a varying degree across provinces.</td>
</tr>
<tr>
<td>Germany</td>
<td>Social Long-Term Care Insurance covers home care (since 1995) and institutional care (since 1996) for over 90% of the population.</td>
</tr>
<tr>
<td>Ireland</td>
<td>Public funding exists for both home care and institutional care based on general taxation.</td>
</tr>
<tr>
<td>Japan</td>
<td>Long-Term Care Insurance is a social insurance scheme which provides both home and institutional care for the elderly as in-kind benefits.</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>Public support for long-term care is mostly based on the Dependency Insurance, where users have to pay the difference between the benefit and actual costs of care.</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Algemene Wet Bijzondere Ziektekosten (Exceptional Medical Expenses Act) is a social insurance which covers both home and institutional long-term care.</td>
</tr>
<tr>
<td>Norway</td>
<td>Local authorities have full responsibility over public long-term care according to the Municipal Service Act and the Social Services Act.</td>
</tr>
<tr>
<td>Sweden</td>
<td>Municipalities are responsible and provide most of the home and institutional long-term care services based on the Social Services Act.</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Social services provide both home and residential care funded by municipalities with subsidies from the central government. National Health Service provides home and institutional health care and is funded and managed by the central government.</td>
</tr>
<tr>
<td>United States</td>
<td>Medicare is a federal programme for persons aged 65 and over and for certain disabled groups. It covers care in nursing homes and home health services for a short period of time after an acute event, but it does not cover continuing long-term care. Medicaid is a joint federal and state programme, which covers both home and institutional care for persons with low income.</td>
</tr>
</tbody>
</table>
The extent to which countries rely on formal as against informal care has little relation to the extent to which care is publicly funded

Considerable reliance on informal care (paid or unpaid)

(Korea) Austria
(Spain) Luxembourg

Germany
Ireland
United Kingdom
Australia

Japan

Considerable provision of formal care

Extent of public funding for long-term care

Canada
United States
Netherlands
Norway
Sweden

Consumer Direction and Choice in Long-Term Care for Older Persons, Including Payments for Informal Care
Payments for informal care play a considerable role

Austria
Luxembourg
Germany
United Kingdom
Australia

Limited choice for persons receiving public support for formal care

Canada
United States
Norway
Netherlands
Japan

Considerable choice for persons receiving public support for formal care

Note: This figure aims to give simply a rough illustration. The position of countries should not be read as reflecting an exact metric, but rather whether the country in question is at the one or the other end of the spectrum of OECD countries - or somewhere in between.

1. The system in Japan has changed considerably in recent years. With the introduction of the social insurance scheme for long-term care, Japan has moved and is moving "south-east" in the diagram towards increased public funding and development of an infrastructure of formal care.

Consumer Direction and Choice in Long-Term Care for Older Persons, Including Payments for Informal Care

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Definition of Disease Management

Disease Management is a system of coordinated healthcare interventions and communications for populations with conditions in which patient self-care efforts are significant. Disease management:

- supports the physician or practitioner/patient relationship and plan of care,
- emphasizes prevention of exacerbations and complications utilizing evidence-based practice guidelines and patient empowerment strategies, and
- evaluates clinical, humanistic, and economic outcomes on an ongoing basis with the goal of improving overall health.

Disease Management Components include:

1. Population Identification processes
2. Evidence-based practice guidelines
3. Collaborative practice models to include physician and support-service providers
4. Patient self-management education (may include primary prevention, behavior modification programs, and compliance/surveillance)
5. Process and outcomes measurement, evaluation, and management
6. Routine reporting/feedback loop (may include communication with patient, physician, health plan and ancillary providers, and practice profiling)

Full Service Disease Management Programs must include all 6 components. Programs consisting of fewer components are Disease Management Support Services

Source: Disease Management Association of America
RMS Disease Management, LLC is one of six organizations selected by CMS for the Care Management for High Cost Beneficiaries (CMHCB) demonstration. The Demonstration will test the ability of direct-care provider models to coordinate care for high-cost/high-risk beneficiaries by providing such beneficiaries with support to manage their conditions and enjoy a better quality of life.
DM...Expanding Around the World

- **Australia**
  - Over $400 Million being spent on demonstration projects
  - [Choice: build new expensive hospitals or keep people out of them] – New DM Association formed

- **Germany**
  - DM legislated with reimbursement for sickness funds that provide DM

- **Singapore**
  - National initiative in 2000 – leveraging public sector infrastructure

Source: WJ Todd, President, DMR, LLC
DM...Expanding Around the World

- **United Kingdom**
  - Several models in early testing. NHS Strategic Health Authorities developing RFP's

- **South Africa**
  - Private sector programs achieving good results; combining with wellness

- **India**
  - Several pharma-backed DM pilots being tested

Source: WJ Todd, President, DMR, LLC
RANBAXY TO FOCUS ON INTEGRATED DISEASE MANAGEMENT

Diagnostics has become paramount to disease management. A common practice in the developed countries, it is being pioneered in India by Ranbaxy.

Laboratory studies form an integral part of a physician’s armamentarium when managing patients. Health is defined as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. The delicate internal balance in the normal condition is disturbed by various factors such as infections, metabolic and genetic disorders.

The abnormal conditions of the body, found in patients are corrected in two steps—diagnosis, followed by treatment. Diagnosis involves identifying and determining the nature of the disease by physical examination which is supported by laboratory investigations of the blood, urine, stool or tissues obtained from the patient. Other non-invasive tests like X-rays also equip the physician to arrive at the final diagnosis. Once the disease is established, therapeutic measures are initiated. The treatment aims at eliminating the causative agent.

Diagnosis: The First Step to Recovery

Current diagnostic methods focus on technologies that detect the underlying cause of the disease. These methods may include the measurement of substances such as glucose, cholesterol or urea, levels of which show abnormal quantities under diseased conditions. They may also be based on detection of antibodies produced by the immune system in response to infection.

The diagnostics market in India has traditionally been confined to the system of diagnostic tests being conducted at hospitals and laboratories under the prescription of a referring physician. For the past couple of years, however, alternate methods of testing such as Point of Care tests have become popular, owing to their ease of use and lack of requirement of expertise or instrumentation. These tests can be used in various settings such as the emergency room, operation theatre, physician’s clinic and even the patient’s home. Point of Care tests for home use, are available for monitoring glucose and cholesterol levels and for detection of pregnancy.

Ranbaxy’s Diagnostics Division

Ranbaxy Diagnostics, a division of Ranbaxy Laboratories Limited was started in 1987. Its objective being to become an integral part of the Disease Management System contributing towards accurate diagnosis in order to facilitate timely and appropriate therapy. Ranbaxy Diagnostics operates with a focus on diagnostics reagents and instruments in the segments of Clinical Chemistry, Immunochemistry and Hematology. The division’s pursuit has been to emerge as the first choice Company offering solutions to laboratory needs for in vitro diagnostics. The product range of the division encompasses the scope of infectious diseases such as HIV, Hepatitis, Tuberculosis, Syphilis and lifestyle diseases including diabetes and cardiac disease.

Reliable Diagnosis

The division is constantly on the look out for new diagnostic tests emerging in the world market. The product range is constantly expanded with an aim to ceaselessly improve accuracy and reliability. The division’s endeavor is to explore horizons of newer technologies for the diagnosis of diseases like cancer and products for reliable home use.

In an effort to expand the business further, the division has initiated exports to countries like Sri Lanka, Bangladesh and the UAE. The initial phase consisted of identification of markets and product portfolio and selection of distributors in these territories and is being followed up by consolidation of business in these territories.

The mission of Ranbaxy Diagnostics is to offer products of high quality, reliability and accuracy backed by an efficient service. These pillars of strength are now well entrenched in the minds of customers as well as business associates.
DM...Expanding Around the World

- **Spain**
  - Government initiated pilot being developed & tested in Barcelona
- **Brazil**
  - Favorable system. Free standing DMO & health plan models.
- **Argentina**
  - Private hospital initiatives with good use of technology/EMR
- **Japan**
  - Ministry of Health Interest; private sector pilots; New DM Association, book, newsletter

Source: WJ Todd, President, DMR, LLC
DM...Expanding Around the World

- **Netherlands**: Academia-driven assessment of DM programs in progress; private & public sector interest
- **Italy**: US Company pilots being developed...early stage
- **Taiwan**: Pilot programs in several disease states
- **Poland**: Physician-based model being developed and tested for “proof of concept”

Source: WJ Todd, President, DMR, LLC
Two Examples of DM Programs:

Disease Management Programs In Germany’s Statutory Health Insurance System
Reinhard Busse : Health Affairs 23:56-67, 2004

The introduction in 1996 of free choice among sickness funds in Germany was accompanied by a "risk structure compensation" (RSC) mechanism based on average spending by age and sex. Because chronically ill people were not adequately taken into account, competition for newly insured consumers concentrated on the healthy. The introduction in 2002 of disease management programs addresses this problem: Insured people in such programs are treated as a separate RSC category, making them a more "attractive" group that no longer generates a deficit. The degree of sickness fund activities and the fierce dispute with physicians are valid indicators that the incentives work.
Staged Diabetes Management (SDM) is a set of guidelines and clinical pathways for managing diabetes in primary care settings. It provides clinical templates and flowcharts to guide care decisions, helping to improve the standard of care, reduce variation in practice, and increase surveillance for diabetes-related eye, foot, heart, and kidney disease. The model was developed by the International Diabetes Center (IDC) of Minneapolis, Minn., supported through an educational grant from Becton Dickinson and Company, and piloted in the United States, Brazil, Mexico, and Poland…

Based on the specific studies conducted, SDM resulted in: lower pregnancy and neonatal complications among pregnant women with type 1 diabetes in Poland; reduced blood glucose levels and rate of concurrent morbidities of people with diabetes in poor Mexican communities; and significantly improved [HbA.sub.1c] levels and increased surveillance for eye disease and foot disease in rural primary care settings in Minnesota.

Source: Clinical Diabetes, Sept/Oct 1997
Innovative Care for Chronic Conditions Framework

Positive Policy Environment
- Strengthen partnerships
- Support legislative frameworks
- Integrate policies
- Provide leadership and advocacy
- Promote consistent financing
- Develop and allocate human resources

Community
- Raise awareness and reduce stigma
- Encourage better outcomes through leadership and support
- Mobilize and coordinate resources
- Provide complementary services

Health Care Organization
- Promote continuity and coordination
- Encourage quality through leadership and incentives
- Organize and equip health care teams
- Use information systems
- Support self-management and prevention

Better Outcomes for Chronic Conditions

Innovative care for chronic conditions: building blocks for action: global report

© World Health Organization 2002
How do we measure success?

“'As the survival rate from acute and short-term disease increases, there will be an increase in long-term and intractable chronic illness. Thus, other indices of ‘payoff’ need to be brought into an evaluation of the ‘effectiveness’ of a health service. These indices involve relief of pain, relief of anxiety, measures of satisfaction, and a graceful adjustment to inevitable disabilities as a person ages. In other words, these are ‘quality’ of life rather than ‘quantity’ of life measures and will require a concept of payoff as yet undeveloped.”'

Odin Anderson in: HEALTH CARE: Can There Be Equity? (1972)