Role of Internist in patient management in a demographically Changing Society in Bangladesh

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Demography:
Population characteristics

- Ascribed characteristics
- Achieved characteristics
Characteristics

- **Ascribed**
  - Gender
  - Race
  - Age

- **Achieved**
  - Education
  - Income
  - Occupation
  - Employment
  - Etc.
Population Pyramids: Less Developed and More Developed Countries; 1998

Less Developed Countries

More Developed Countries

Age (years)

Population (millions)

Critical Cohort
U.S. (slow growth)
Tanzania, Africa (rapid growth)
Denmark (zero growth)
Germany (effect of wars)
Sun City (Arizona) retirement community
The Demographic Transition

• The "Demographic Transition" is a model that describes population change over time.

• It is based on an interpretation begun in 1929 by the American demographer Warren Thompson, of the observed changes, or transitions, in birth and death rates in industrialized societies over the past two hundred years or so.

• This framework illustrates population growth in terms of discrepancies and changes in two crude vital rates – mortality and fertility (ignores migration)
Demographic Transition

Phase 1: Preindustrial
Phase 2: Transitional
Phase 3: Transitional
Phase 4: Industrial

Birthrate
Death rate
Total population

Births and deaths (per thousand per year)

Time
Stages of Demographic Transition

1. Pre-Industrial Equilibrium (high birth/death rates)

2. Early Industrialization (better sanitation)

3. Developed industrialization (better health care)

4. Post-Industrial Equilibrium (low birth/death rates)
Global health is in transition

- Demographic transition
- Epidemiological transition
- Lifestyle transition
- Nutritional transition
- Health transition
10 leading causes of death in US

1900
1. Influenza and pneumonia
2. Tuberculosis
3. Gastritis
4. Diseases of the Heart
5. Cerebrovascular Disease
6. Chronic Nephritis
7. Accidents
8. Cancer
9. Certain diseases of infancy
10. Diptheria

1998
1. Heart Diseases (31.4%)
2. Cancer (23.3%)
3. Cerebrovascular diseases (6.9%)
4. Pulmonary disease (4.7%)
5. Accidents (4.1%)
6. Pneumonia and Influenza (3.7%)
7. Diabetes (2.7%)
8. Suicide (1.3%)
9. Diseases of Arteries (1.2%)
10. Nephritis (1.1%)
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<thead>
<tr>
<th>Disease or injury</th>
<th>2004</th>
<th>2030</th>
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<tbody>
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<td><strong>As % of total DALYs</strong></td>
<td>Rank</td>
<td>Rank</td>
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<tr>
<td>Lower respiratory infections</td>
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<tr>
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<td>2</td>
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<tr>
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<tr>
<td>Cerebrovascular disease</td>
<td>3.1</td>
<td>6</td>
</tr>
<tr>
<td>Prematurity and low birth weight</td>
<td>2.9</td>
<td>7</td>
</tr>
<tr>
<td>Birth asphyxia and birth trauma</td>
<td>2.7</td>
<td>8</td>
</tr>
<tr>
<td>Road traffic accidents</td>
<td>2.7</td>
<td>9</td>
</tr>
<tr>
<td>Neonatal infections and other*</td>
<td>2.7</td>
<td>10</td>
</tr>
<tr>
<td>COPD</td>
<td>2.0</td>
<td>11</td>
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<tr>
<td>Refractive errors</td>
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<td>12</td>
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<tr>
<td>Hearing loss, adult onset</td>
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<td>15</td>
</tr>
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<td>Diabetes mellitus</td>
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<tr>
<td>Diabetes mellitus</td>
<td>1.6</td>
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Figure 1. Stages of the Nutrition Transition

Urbanization, economic growth, technological changes for work, leisure, & food processing, mass media growth

Pattern 1
Paleolithic man/Hunter-gathers
- Wild plants & animals
- Water
- Labor intensive

Lean & robust, high disease rate
Low fertility, Low life expectancy

Pattern 2
Settlements begin/Monoculture period/Famine emerges
- Cereals dominate
- Water
- Labor-intensive

Nutritional deficiencies emerge, stature declines
High fertility, high MCH mortality, low life expectancy

Pattern 3
Industrialization/Receding Famine
- Starchy, low variety, low fat, high fiber
- Water
- Labor-intensive work job/home

MCH deficiencies, weaning disease, stunting
Slow mortality decline

Pattern 4
Noncommunicable Disease
- Increased fat, sugar, processed foods
- Caloric beverages
- Shift in technology of work and leisure

Obesity emerges, range of other NR-NCD’s
Accelerated life expectancy, shift to increased DR-NCD, increased disability period

Pattern 5
Desired societal/Behavioral Change
- Reduced fat, increased fruit, veg, CHO, fiber
- Increase water, Reduce caloric beverage intake
- Replace sedentarianism w/ purposeful activity

Extended health aging, reduced DR-NCD

Epidemiological/Health Transitions

• Complex change in patterns of health and disease

• The interactions between these patterns and the demographic, economic, and sociological determinants and consequences.
Demographic Transitions and Health Transitions

- Decreased fertility rates
- Decreased infant mortality rates
- Increased life expectancies at birth
- Reflect shifts in social and economic patterns
- Changes in health conditions
- Changes in health care
Epidemiologic transition

• Asia is evenly burdened by both the unfinished agenda of communicable diseases and the growing burden of noncommunicable diseases.

• This is different from what we see in the established market economies, driven by noncommunicable diseases, and in sub-Saharan Africa, driven by communicable diseases.
Rapid and Slow Transition

<table>
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<tr>
<th>Rapid transition</th>
<th>Slow Transition</th>
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<tbody>
<tr>
<td>Japan</td>
<td>Bangladesh</td>
</tr>
<tr>
<td>South Korea</td>
<td>India</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Pakistan</td>
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<tr>
<td>Singapore</td>
<td>Philippines</td>
</tr>
<tr>
<td>Thailand</td>
<td>Papua New Guinea</td>
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From Infectious to Chronic Diseases
THE INCREASING BURDEN OF CHRONIC NONCOMMUNICABLE DISEASES: 2002-2030

"Ageing is a development issue. Healthy older persons are a resource for their families, their communities and the economy."

WHO Brasilia declaration on healthy ageing, 1996.
Ageism

• The term "ageism" was coined in 1969 by Robert Butler, the first director of the National Institute on Aging.

• Ageism is the process of systematic stereotyping and discrimination against people because they are old.

• Today, it is more broadly defined as any prejudice or discrimination against or in favor of an age group (Palmore, 1990).
Possible Negative Impacts of Ageism:

- Discrimination at work place
- Discrimination at health care
- Discrimination at social value judgements
Most common of negative myths and stereotypes about aging (Palmore 1990. Ageism: Negative and Positive):

1. Illness and disability
2. Impotency
3. Ugliness
4. Mental Decline
5. Political Power
6. Mental Illness
7. Uselessness
8. Isolation
9. Poverty
10. Depression
MULTIPLE EPIDEMIOLOGIC TRANSITIONS

- Recent resurgence of infectious disease mortality marks a third epidemiologic transition
- Characterized by newly emerging, re-emerging, and antibiotic resistant pathogens in the context of an accelerated globalization of human disease ecologies
Comorbidity Prevalence

1. The percentage of Medicare beneficiaries with 5+ treated conditions increased from 31 to 40 to 50 in 1987, 1997, 2002.

2. The age-adjusted prevalence increased for
   - Hyperlipidemia: 2.6 to 10.7 to 22.2
   - Osteoporosis: 2.2 to 5.2 to 10.3
   - Mental disorders: 7.9 to 13.1 to 19.0
   - Heart disease: 27.0 to 26.1 to 27.8

3. The percentage of those with 5+ treated conditions who reported being in excellent or good health increased from 10% to 30% between 1987 and 2002.

MESSAGE: “Discretionary diagnoses” are increasing in prevalence, particularly those associated with new pharmaceuticals. How much of this is appropriate?

Multimorbidity and Use of Primary and Secondary Care Services

- Morbidity and comorbidity (and hence multimorbidity) are increasing.
- Specialist use is increasing, especially for routine care.
- The appropriate role of specialists in the care of patients with different health levels and health needs is unknown.
Internal Medicine - Definition

• The branch of medicine that deals with the diagnosis and (nonsurgical) treatment of diseases of the internal organs (especially in adults)- wordnetweb.princeton.edu/perl/webwn

• Internists provide comprehensive, long-term, general medical care for patients in office and hospital settings. They are trained in the diagnosis, treatment, and prevention of numerous diseases and conditions, and manage the common illnesses and complex problems of adults and the elderly. ... www.cvshealthresources.com/topic/medglossary

• Is concerned with systemic diseases of adults, ie those diseases that affect the body as a whole (restrictive, current meaning), or with all adult non-operative somatic medicine (traditional meaning), thus excluding pediatrics, surgery, gynaecology and obstetrics, and psychiatry. ... www.themedicineprogram.com/home/portalList/Medicine
Internal Medicine

• “General internists handle the broad and comprehensive spectrum of illnesses affecting adults.” ACP
  – Experts in diagnosis
  – Experts in management chronic illness, complex patients with multiple diagnoses

• General internists are consultants
  – See patients on referral from a primary care physician or other specialist
Internists

• When encountering patients with undifferentiated or multi-system disease, general internists excel at “sorting out” their illnesses and balancing the management of multi-system disease.

• They are particularly skilled in the evaluation and care of such patients when they are acutely and severely ill.
Internists

• This is in contrast to subspecialists who, by focusing on deeper but narrower aspects of single-system disease, are more comfortable practicing in a “rule-out” mode, and often are uncomfortable with sick patients whose illnesses are multi-system or arise from another system (e.g., undifferentiated shock)
The World of Internal Medicine

Subspecialty Internal Medicine

Internal Medicine

General Internal Medicine
Why do people chose IM?

• Great mentors
• Attracted to a specific subspecialty area
• Enjoy physiology / pathophysiology
• Enjoy breadth and versatility in terms of scope of practice
• Potential for long term relationships with some patients – without the need for long term relationships with all!

• Enjoy sorting out complex problems / good reasoning skills
“I’d rather be a huge part of the problem than a tiny part of the solution.”
Distinct character of the Internist

1. The ability to be a diagnostician
   - Strong clinical reasoning / critical thinking skills

2. The ability to provide care of complex acute and chronic problems
   - Strong knowledge & skill base, strong organizational skills

3. The ability to be a consultant for generalists, specialists and subspecialist
   - Strong communication and team skills

4. Curiosity
   - Links between disease and pathophysiology
   - Links between therapy and mechanism of action
Internists Vs Specialist Care

1. Inappropriate referrals to specialists lead to greater frequency of tests and more false positive results than appropriate referrals to specialists.

2. Inappropriate referrals to specialists lead to poorer outcomes than appropriate referrals.

3. The more DIFFERENT specialists seen: higher total costs, medical costs, diagnostic tests and interventions.

A MAJOR ROLE OF INTRNIST CARE IS TO ASSURE THAT SPECIALTY CARE IS MORE APPROPRIATE AND, THEREFORE, MORE EFFECTIVE.

Risk factor Approach

Today’s risk factors indicative of tomorrow’s disease

• Preventable
• Modifiable
• Measurable
• Identifiable
• Feasible to monitor
• Provides vital information for health planning & management
• Figure 2: Emerging challenges to health system
Challenges for the Internists

• More and more informed patients
• Apply science, and evidence based medicine within the patient’s context
• Engage patients in informed decision making / collaborative care
• Team leader in Acute care, Critical care & palliative care
• Role model/Mentor for primary care
• Insurance policies & potential litigations
• Play well with others
Figure 5: Three generation of reform

1900
- Instructional
  - Institutional
  - University based

Science Based
- Scientific Curriculum

Problem Based
- Problem – based learning
  - Academic centres

System Based
- Competency driven:
  - Local - global
  - Health – education systems

2000+
Internists

• A Profession On the Rise
• If the problem isn’t as simple as money and strategies to build revenues, where should we turn our attention?
• Embracing a New Culture in Academic Medicine
THE CULTURE CODE
AN INGENIOUS WAY TO UNDERSTAND WHY PEOPLE AROUND THE WORLD LIVE AND BUY AS THEY DO

CLOTAIRES RAPAILLE
The Traditional Culture of Academic Medicine

• Individualistic
• Autonomous
• Scholarly
• Expert-centered
• Competitive
• Focused
• High-achieving
• Hierarchical
Embracing an Emerging Academic for Academic Medicine

- Collaborative
- Transparent
- Outcomes-focused
- Mutually accountable
- Team-based
- Service-oriented
- Patient-centered
Internist’s Role

• Make values explicit, and use them visibly in everyday decisions
• Align governance, leadership, and management across organizational and “corporate” divisions!
• Use the tools of mission-based management to realign and maximize resources!
Internist’s Role

• Foster collaboration and accountability, accepting nothing short of high performance teams in all mission areas!
• Focus leadership recruitment on organizational fit, and do real succession planning for long-term stability!
• Patient-centered care of high-quality interdisciplinary care
• Rethink our approach to education!
In Search of Transformation – New Models of Continuity for the People

- Premedical
- Medical School
- Residency and Fellowships
- Practice
- Life-long Learning

- Two-Year College
- Premedical
- Medical School
- Residency and Fellowships
- Practice
- Life-long Learning

- Non-Premed Degree
- Premedical
- Medical School
- Residency and Fellowships
- Practice
- Life-long Learning

- Pre-medical
- Medical School
- Residency and Fellowships
- Practice
- Re-training
- Practice
- Life-long Learning
Creating a Culture of Teamwork and Collaboration
Creating a Culture of Reliability and Quality in the Face of High Risk
Creating a Culture Based on “Evidence” Rather Than “Eminence”

Issacs and Fitzgerald, BMJ 319: 1618, 1999
Creating a Culture of Trust

ON THE TAKE
HOW MEDICINE’S COMPLICITY WITH BIG BUSINESS CAN ENDANGER YOUR HEALTH

JEROME P. KASSIRER, M.D.
Creating a Culture in Which All Teach and All Learn
An Institute of Internal Medicine may address the issue of Quality Assurance in Transitional Health setting by-

- provision of training & education through service to improve primary care
- Support institutional capacity clinical Research in country perspective
- Uphold ethical principles of medical practice
- a learning & interacting environment for continuous improvement

Broadly benefit the population
"Remember,
The future isn’t what it used to be..."

Alias, Yogi Berra