Part I:
Examples from the Industrialized High-Income Nations
A. Types of Systems

• National health insurance, government assuming the role of third-party payer
• National health care, services provided by the government
• Community sickness funds with government subsidies
• A mixed public and private market system

Note: A good way to organize one’s thoughts about comparative health care systems is to ask, what are the incentives for the health care providers and what are the incentives for consumers (patients)?
A. Types of Systems

Comparative Statistics:

It will be useful before proceeding to look at some statistics on comparative expenditure, capacity, and health outcomes for the United States and the other three industrialized countries whose health care systems we are about to study, Canada, Germany, and the United Kingdom:
## A. Types of Systems

### Expenditure on Health Care and Comparative Health Outcomes

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</thead>
<tbody>
<tr>
<td>Canada</td>
<td>9.2</td>
<td>81.7</td>
<td>76.3</td>
<td>17.9</td>
<td>15.3</td>
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<tr>
<td>Germany</td>
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<td>80.7</td>
<td>74.7</td>
<td>17.3</td>
<td>15.0</td>
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<td>79.8</td>
<td>75.0</td>
<td>16.9</td>
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<tr>
<td>U.S.</td>
<td>13.1</td>
<td>79.4</td>
<td>73.9</td>
<td>16.6</td>
<td>14.9</td>
</tr>
</tbody>
</table>
## A. Types of Systems

### Capacity: Physicians and Hospital Beds/1000 Population, 2001

<table>
<thead>
<tr>
<th>Country</th>
<th>Physicians/1000 Population</th>
<th>Hospital beds/1000 Population</th>
<th>Average length of stay acute-care hospital (days)</th>
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<tbody>
<tr>
<td>Canada</td>
<td>2.1</td>
<td>3.2</td>
<td>7.2</td>
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<tr>
<td>Germany</td>
<td>3.3</td>
<td>6.5</td>
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<tr>
<td>U.K.</td>
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<td>U.S.</td>
<td>2.7</td>
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</table>
1. Origins and Description:
   Canadian Medicare was established in 1966. It provides a nation-wide single-payer system. Coverage is portable between provinces (and originally covered services performed in the U.S.)

2. Ways in which the Canadian system resembles the U.S. system:

• Similar training of physicians (similar quality of medical schools)
• Fee-for-service based physician payments
• Patients free to consult any physician of their choice, in other words, no “gate keeper” requirement
• Co-payment charges for prescription drugs
• Cost-sharing between provincial and federal government (not unlike our Medicaid)

Note: The health insurance systems of the U.S and Canada were very similar prior to the introduction of Canadian Medicare in 1966.
B. Canada: Universal Health Insurance

3. Ways in which the Canadian system differs from the U.S.:

- A universal single-payer system with no competing private sector option for covered services*
- Global budget caps limiting annual spending
- Almost all covered physician and hospital services free
- Less diffusion of high-tech equipment
- Longer hospitalizations for in-patients
- Lower proportion of GDP spent on health care

*This is gradually being eroded but is still the system “on the books”.
B. Canada: Universal Health Insurance

4. Problems with the system:

- How to afford the services people expect without rationing through triage (Long waiting periods for elective services are becoming a problem).

- Provincial governments now pay a higher proportion of costs, but are still mandated to provide basic services for all. (Ontario almost withdrew from the system in the 1990s.)

- A long-term problem: the “physician brain drain” to the U.S.
5. Does the U.S. health care system provide a “safety valve” for the Canadian system?

-- Research findings show mixed results about how many Canadians travel to the U.S. to get health care services that they want sooner or can not have at all at home, but research on balance indicates that the myth about this exaggerates the magnitude of this kind of “medical tourism”.

-- The Canadian government does, however, contract out to U.S. providers near the border for certain procedures when there is a shortage of capacity in Canada.
B. Canada: Universal Health Insurance

6. Reforms in the Canadian system

- The setting of global provincial budgets not related to previous levels of health care spending but to population growth and economic growth.

- Provincial budgets that combine health-care & education budgets.

- Global budget caps that limit the bargaining power of physicians’ and hospital associations.

- Note: As of 1997 in Quebec, all residents required to have drug insurance coverage, and all eligible for a private plan were required to join one. This led to increased medication and GP visits but had no effect on specialist visits or hospitalization.

- Recently, the introduction of “Concierge Medicine” as a way of providing a two-tiered system giving priorities in access to facilities and reduced waiting time.
Pozen and Cutler, “Medical Spending Differences in the United States and Canada, the Role of Prices, Procedures, and Administrative Expenses,” *Inquiry*, Vol. 47, Summer, 2010

- How much does per capita spending differ between the U.S. and Canada
  
  *The U.S. spends almost twice as much, $7290 vs. $3895.* (Source 2009 OECD Health Statistics).

- What are the components of expenditure that account for most of the differences between the U.S. and Canada in medical spending per capita?
  The article attempts to determine which of the various components blamed for this in the literature dominates. Is it primarily administrative costs, prices, or the extent of services provided?

- Looking only at hospitals and physicians (excluding pharmaceuticals)
  - 66% of the difference resulted from time spent on administration.
  - the second largest component was prices,
  - and the third largest component was extent and intensity of care.
C. German System: The Sickness Funds

1. Origins and Description:

The system dates back to Bismarck’s reforms in the late 19th century.

The sickness funds are quasi-public non-profit third-party payers.

The system is now a nearly universal social insurance system, financed primarily by employment-based taxation (payroll tax). All workers and employers must participate and pay the payroll tax.

All workers, except public-sector employees are members of sickness funds. The self-employed may also join sickness funds.

One can be exempted from the social insurance system only if one has a very high income.
C. German System: The Sickness Funds

2. Providers:

Office-based physicians are paid on a fee-for-service basis, with fees negotiated by the physicians’ organizations.

Hospital-based physicians are salaried employees whose salaries are also negotiated by the physicians’ organizations.

Note: There is complete separation between office-based and hospital-based physicians. The latter can treat patients only when admitted to hospital; office-based physicians can not treat hospitalized patients.

Hospitals are both public and private non-profit as in the United States. Hospitals are also reimbursed by the sickness funds.
C. German System: The Sickness Funds

3. Similarities to the U.S. system:

• Multiple third-party payers. As of 2007 there were still nearly 200 sickness funds.

• Use of a payroll tax: The problems of financing through a payroll tax are compounded since the tax is a much higher proportion of wages than is the Medicare tax in the U.S.

Financing through high payroll taxes is likely to result in either one or the other of the following effects: Either employment will decline or wages will decline. Which effect dominates depends upon the price elasticity of demand and the elasticity of labor supply.
C. German System: The Sickness Funds

Figure 12.1: Quantity of Workers Employed
This is a fairly accurate depiction since unemployment is high.
C. German System: The Sickness Funds

4. Ways in which the German system differs from the U.S. (pre-ACA) system.

- Strict differentiation between office- and hospital-based physicians
- Mandatory coverage for all but the highest income individuals. The U.S. post-ACA does not exclude on the basis of income.
- More generous coverage: disability, sick leave, long-term care, etc.
- Much longer average hospital stays
- Everyone except public sector employees can be a member of a sickness fund, including the self-employed. Our new health insurance exchanges are an attempt to provide something like this.
C. German System: The Sickness Funds

5. System reforms:

• Introduction of competition in the 1990s; individuals now may choose between different sickness funds: Inspired by the model of Managed Competition. *Prof. Alain Enthoven of Stanford U., the original author of the Managed Competition system has been a frequent consultant to the German social health insurance system.*

• To offset selection bias problems and preserve social insurance goals, funds with low-risk pools of subscribers are required to subsidize funds with higher-risk pools, e.g. sicker people.

• More risk sharing with consumers has been introduced: co-payments on prescription drugs, hospital stays, physical therapy, dental care, stays in spas, and medical transportation.
C. German System: The Sickness Funds

• Risk Sharing with Providers: tighter limits on payments to physicians, hospitals, and pharmaceutical budgets
  – Prospective payment system to hospitals rather like the DRG (diagnosis related groupings) system adopted by U.S. Medicare in the 1980s.
  – Penalties imposed on physicians who bill for prescription drugs in excess of the targeted amount
  – Risk sharing among physicians is accomplished in the following way: if a physician bills too much, other physicians in the group, treating people in the same sickness funds, will also have their fees reduced
C. German System: The Sickness Funds

6. Persistent problems:

- Generosity of benefits is a strain on the system in a country with an aging population (long-term care, spa visits, disability)

- Difficulty integrating the former East Germany into the system has also been a strain, particularly as many East German firms have had long-run difficulties staying solvent, compounded by their required contribution to the payroll taxes. Medical facilities in the former East Germany were not on a par with those in the West. This has required extensive construction costs as well.

- The financing system itself has negative effects on labor markets. Payroll taxes discourage expanding the labor force and contribute to chronic high levels of unemployment.
Germany is still ahead of the OECD average in terms of allowing more choice and having a higher provider/population ratio. Over the past 20 years reforms have increased level of co-payments and increased the scope of drugs, services, and medical aids on which co-payments are imposed. The share of private expenditures on health care has grown from 18.4% in 1995 to 23.1% in 2007.

Two recent reforms:
(1) the Statutory Health Insurance Modernization Act of 2004 introduced a quarterly co-payment for first visits to an out-patient provider and for visits to any other physician during the same quarter without referral.
Recent Reforms (continued)

• (2) the Statutory Health Insurance Competition Strengthening Act of 2007 extends the statutory “benefit basket” to additional services, including prevention and rehab. Sickness funds now must provide financial support for families with children in rehab facilities. More palliative care for the terminally ill is mandated. The introduction of the “basic benefit package” to private plans, which high income households may join, moves the two systems closer together.

    However, it also introduces more managed care elements (utilization review, quality measurements, etc.

        ………If a particular sickness fund cannot cover its expenditures, it can charge an additional premium and efficient funds can pay surpluses to the insured.

• (3) The Social Health Insurance funding has been changed with the introduction of the “Health Fund” financed by contributions from employers, employees, and general tax revenues. The latter has become necessary since payroll taxes can no longer cover the cost of health care.
D. British National Health Care System

1. Origins and Description:
   The British National Health Care System (NHS) was instituted by the Labor Government after the end of World War II. It is a social health care system as opposed to a social health insurance system, like those of Canada or Germany. It has long been considered a model of a social health care system providing basic care quite efficiently relative to cost. A lower proportion of GDP is spent on health care in the U.K. than in most other E.U. nations or Canada.

   Providers within the NHS can be thought of as employees of the government’s health ministry. NHS Physicians are paid on a capitation or salary basis. Hospitals receive direct reimbursement from the government.
D. British National Health Care System

Citizens and residents in Britain using the NHS have a primary care physician who refers them to specialists. They may not see a specialist or have a laboratory test without a prescription from their G P.

One can also purchase health care in the private market, and there is private supplementary insurance available, but most British residents use the NHS for the majority of their health care.

People are more likely to “go private” for in-hospital services and for elective surgery. It may be used to avoid long waits for such things as cataract or hip replacement surgery.

It is also frequently used to pay for a private or semi-private hospital room rather than use the typical NHS ward.
D. British National Health Care System

2(a). Reforms in the early 1990s

(1) Under Margaret Thatcher: The GP Fundholder System gave large physician practices their own budgets to pay for referral services. This enabled Fundholders to compete with District Health Authorities in purchasing hospital and specialist services for their patients. It was an attempt to introduce competition into the system. *Note: Alain Enthoven, author of the managed competition model, has also been and continues to be a consultant to the British government*

Problem of Incentives: Studies show evidence of “imperfect agency” on the part of GPs. When queues were longer, more referrals were made, since it was more likely that people would drop out of the queue. Those with private insurance were more likely to receive referrals. This system was discontinued under Tony Blair.

(2) Hospitals were also given more autonomy, often organized into Trusts.
D. British National Health Care System

2(b). More Recent Reforms in the 21st Century
Goals include more separation of providers from payers, more assessing of quality of providers, and more cost containment:

- Larger physician groupings organized on a regional basis.
- A higher level of funding for the NHS, which is intended to help reduce waiting time for services
- A reimbursement system for hospitals that is more similar to our Medicare DRG system
- The new fashion among British policy makers is an attempt to introduce “evidence based” criteria into the practice of medicine.
- Unlike the U.S. where integrated systems are promoted more to cut costs or increase profits, the UK is promoting integrated care for (at least ostensibly) to provide higher quality care and more continuity.
Summary: Persistent Problems in the NHS:

The NHS is famous for its “rationing by queuing”. Delays in receiving elective surgery may be very long and this has led to more patients “going private”.

There is some evidence that quality of care still varies greatly by region and by socio-economic class.

The guidelines continue to encourage NICE’s Committees to make (arbitrary) judgments about the appropriateness of new treatments available in the NHS, based on comparative clinical- and cost-effectiveness.

Low salaries continue the “brain drain” of British physicians to other countries with higher physician incomes (Canada and the U.S.) and to the private sector.
Some findings about NHS Reforms


• Greener, Ian, et al, *Policy Studies*, 30 (2009), “Has Labour Decentralised the NHS…..” found that reforms under the New Labour government that claimed to decentralize, actually centralized services more.

• Chalkidou, K, (2012) *Health Economics, Policy and Law*, 7, “Evidence and Values: paying for end-of-life drugs in the British NHS” explores NICE (the National Institute for Health and Clinical Excellence) policies promoting “evidence based” medical practices and Value-Based Pricing. Effects were found to be uneven, with resources skewed toward cancer at the expense of treatment for mental health and cardiovascular disease.
Part II:
Health Care in Developing Nations
A. Health and Health Care in Developing Nations

1. Communicable diseases still play a much larger role in the overall constellation of health problems: about 20 percent of the disease burden in low-income countries vs. about 1 percent in high-income countries is caused by communicable diseases.

2. Problems of financing both education and health care: especially as there is an interaction between education level and effectiveness of health care.

Note: High correlations between literacy, particularly mother’s literacy and infant and child mortality rates are found throughout the world.
A. Health and Health Care in Developing Nations

3. There is very little private insurance. Most people, even the very poor, pay out-of-pocket for their health care expenses.

4. A huge disparity between health care in cities and countryside.

5. More reliance on local healers and on private provision of care than in more advanced nations.

6. Importance of NGOs and foreign assistance.

Examples:
- Combating HIV/AIDS: Bill and Melinda Gates Foundation, Harvard Public Health Program in Botswana, etc.
- United States CDC programs throughout Africa
- UNICEF and private NGOs in South Asia
A. Health and Health Care in Developing Nations

5. The prevalence and cost of HIV/AIDS makes it worthy of special study.

Societal Costs of This Disease:

• Closing of schools, factories and clinics

• Care of Orphans

• Reduction in life expectancy
  – In South Africa from 65 to 40 years
  – In Botswana from 72 to 39 years

One AIDS death is estimated to reduce average per capita income by 18-19 life-years.
B. Case Study: India

India, the world’s largest democracy, with a population exceeding a billion. Its public health facilities vary widely by region and between urban and rural areas. This is typical of the large developing nations, including China.

India, like most developing nations, has both low average per-capita income and vast disparities in socio-economic status. These two factors, plus the caste system, limit its ability to provide high quality public health care. Public facilities tend to be over-crowded and under staffed.
B. Case Study: India

Unusual features of India (compared with other developing nations)

• It has a thriving pharmaceutical industry.

• Health care consists of both Western medicine (allopathy) and several forms of Asian healing (ayurveda, unani and Tibetan medicine).

• It has extremely good Western-style medical schools which require training in both ayurvedic and Western medicine.

• It devotes a larger proportion of GDP (roughly 6%) to health care than do most low-income countries. The average is about 4%.
B. Case Study: India

Description of India’s Public Health System:

Health centers are open to all. People are usually charged minimal fees for services, which still may be prohibitively expensive for the poor.

Types of public health facilities:
(1) Health and Family Welfare Centers for every 120,000 persons (except in very remote regions)

(2) Primary, Secondary and Tertiary Hospitals
   Tertiary Hospitals, which can handle the most complicated cases, are generally located only in large urban areas. They are often funded at least in part by municipalities. Mumbai, for instance, has several excellent city hospitals.
Private and Non-governmental health care facilities:

Private clinics often specialize in ayurvedic medicine and can be very luxurious and expensive or, especially in rural areas, offer rudimentary care.

Private markets for medicines and birth control exist in both villages and cities.

Private insurance (of any kind) was not available until the 1990s, is becoming more popular among the growing middle class, but only about 5-6% of Indians have any private health insurance.

Non-governmental non-profit organizations are very important in providing funding for charity care. They consist of local NGOs, foreign private NGOs, and international organizations, such as UNICEF.
B. Case Study: India

My own study of 9 villages in rural Rajasthan.

- In 2004-5, a random sample of 1000 adult women (18-65) of whom only 15% were literate, and a random sample of adolescent girls (10-18) of whom only about 25% were literate. Village classes in basic literacy and numeracy provided by an NGO (the Veerni Project).

- Average family size was 8+. Infant mortality inversely correlated with fertility.

- Rates of malnutrition among women extremely high (81.9%); almost as high among adolescent girls (about 77%).

- Infant mortality rates were also very high. (Male 3%; Female 3.8%).

- No government (public) clinics available in any of the villages. Health care provided by an NGO: a mobile medical unit (a mini-bus with medicines, a doctor, a nurse and social worker) visits villages once a week. In extreme emergencies villagers are transported to a hospital in Jodhpur.