Costs and Challenges of Polycentric Governance

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Outline

1. Polycentricity in Bloomington School (or Ostrom Workshop) approach to institutional analysis.

2. Costs and benefits of additional complexity in governance architectures.

3. Equilibrium concepts in polycentric governance.

4. An example from U.S. healthcare policy, seen at the community level.

Public Service Industries and Polycentric Governance

- A **public service industry** includes all organizations engaged in an identifiable area of public policy, including the provision or production of public or toll goods or the management of common-pool resources.
  - A complex network of inter-linked public, private, and voluntary organizations at multiple scales
  - Organizations in a public service sector produce, provide/select, distribute, finance, and manage local public goods and services
- **Governance**: the process by which the repertoire of rules, norms, and strategies that guide behavior within a given realm of policy interactions are formed, applied, interpreted, and reformed.
- Governance is **polycentric** when relevant decisions are made in different arenas, each serving different jurisdictions, by different groups of stakeholders, and these stakeholders engage in sustained patterns of coordination and collaboration to cope with shared problems and enhance new opportunities.
- **Institutional Diversity** is an important resource for society.

- **Collective Consumption Units**: Public goods/services and toll goods are consumed or experienced by some group as a whole.
- **Provision:** the process through which the bundle (configuration) of public goods-services and taxes-fees-transfers for a collective consumption unit is selected and financed.
  - Provision decisions are binding on all members of that CCU.
  - Provision decisions are typically made by elected or appointed agents.
  - Financing may take form of complex combinations of taxes, fees, transfers
- **Production units** (private, public, voluntary, community organizations) may be able to capture economies of scale that would not be possible if a single provision unit produced all goods and services.
- **Governance architectures** establish a pattern of correspondence between consumption groups and provision units
  - Management networks involve providers and producers

Governance Architectures

- **Jurisdictions** related to **density of transactions**
  - Groups that are likely to repeatedly face similar problems are more likely to be willing to expend the costs needed to design, establish, and maintain an common organization.
  - **Institutions are enduring artifacts**. Once established, they can be maintained at a lower cost than needed to create them anew.
  - Those sets of institutional procedures that are used frequently will tend to persist over time, whereas those that are not well-used will tend to atrophy.
- **Polycentric governance includes multiple jurisdictional types**
  - **Primary Governance Partition (Type I):** general-purpose nested jurisdictions (as in the local-provincial-national levels of federalism)
  - **Secondary Governance Units (Type II):** specialized, cross-jurisdictional political units (such as special districts, watersheds, etc.)
- **Complex patterns of interaction with voluntary associations, non-profits, cooperatives, private firms**

- Collective action is facilitated by actions of **public entrepreneurs**.
  - Propose a "project" for a particular group: lobbying, self-regulation, management, etc.
- **Collective action is costly** (in time, effort, resources).
  - Four costs components: start-up costs, negotiation/coordination costs, operational/implementation costs, monitoring and dispute resolution costs
- **Groups vary in the costs** associated with collective action.
  - Smaller, more homogeneous, more concentrated groups, with more effective leaders, face lower coordination costs, *ceteris paribus*
  - Thus, there is a pronounced inequality in the levels of social capital available to groups of different sizes and composition.
- **Successful collective action can impose costs** (negative **externalities**) on outsiders.
  - "Victims" of externalities may organize against these consequences.
  - But costs of their collective action can be increased by direct action.
- **Public policy** shapes the cost differentials to minimize or aggravate these inequities.
  - The establishment and operation of governance organizations is costly, but organizations can lower the costs of collective action.
  - A society's existing set of governance institutions is a resource available to those who share a common problem/opportunity.
- Governance architectures have **distributional consequences**
  - Thus we need to pay attention to how **public policy** shapes the **governance architecture**

Research Questions

- What factors determine the configuration of jurisdictional units in a governance system?
  - costs and benefits, density of transactions, changes
- Is there an optimal level of complexity?
  - model of S-core in polycentric system
- Does broader coordination tend to produce more generally positive results?
  - Example: US healthcare

Costs and Benefits Facing Public Entrepreneurs

Benefits

- Team production externality (from the collective project under consideration)
- Lower cost of operations (esp. if frequent, routine)
- Size of group of potential beneficiaries
- Intensity of concern for this issue
- Divisibility and tangibility of reward for entrepreneur

Costs

- Search costs to identify appropriate organization (or informal means)
- Operational costs within that organization or institution
- Start-up costs for new organization (or institution) dedicated to this task
- Operational costs for new dedicated organization or institution
- Costs of oversight needed to minimize corruption or misuse of positions

Polycentricity has several effects

- Increases number of potentially relevant organizations
- Increases individual and aggregate search costs
- Increases aggregate cost of oversight over organizations
- Decreases start-up costs

Modelling Subsidiarity and Coasian Equilibria

- Under ***subsidiarity***, any dispute involving k individuals should (if possible) be resolved by officials of the jurisdication corresponding to the smallest subset that contains all of the affected parties.
  - If the costs of collectively organizing are kept low for groups of all size and interest configuration, then jurisdictions intended to realize lower levels of gains can be easily formed
  - It would then be extremely difficult for any group (A) to pass the costs of their own collective action onto another group (B), if those costs exceed S.
- **Coasian analogy**: **If transaction costs** for establishing collective action organizations are **zero** for all groups, then we'd have a **fully-saturated system** (each subset corresponds to a governance unit).
  - This is not realistic, given the immense number of group subsets, but it does define a condition of radical equality among groups.
  - Externalization of any costs would be prohibitively expensive in a fully-saturated polycentric equilibrium, because all such groups could resist.

Defining the S-Core

- **S-core (for subsidiarty costs core)** generalizes this line of argument.
- **Associate each subset of a population** with the **minimal level of benefits (S) required to offset the transaction costs** required for that group to establish a formal organization or informal means of collective coordination.
  - Then **equilibrium** in a governance system can be defined in a manner analogous to the **core**, a fundamental equilibrium solution concept in economics and game theory.
  - Hildenbrand (1989: 108) defines it as follows: "**The *core* of an economy** consists of those states of the economy which no group of agents can 'improve upon'. A group of agents can improve upon a state of the economy if, by using the means available to that group, each member can be made better off."
- Let *S* denote the **minimal start-up costs** for establishing a new governance unit.
- In an ***S-core***, all public subsets whose members expect that by coordinated action they could obtain an aggregate benefit (or team production externality) of *S* or greater have formed an organization (or informal institutional procedure) to facilitate that coordination.

Polycentricity and the S-Core

- In a polycentric system of governance, most groups have access to a common jurisdiction or they face a low value of S (meaning they can easily coordinate in some other way).
  - Ideally, the value of S would not vary significantly among subsets of the relevant population.
- In a **polycentric S-core equilibrium**, no subset of individuals facing potential benefits less than S finds it worthwhile to establish a new organization for collective action.
  - As a consequence**, no group can reasonably expect to transfer costs larger than *S* to any potential victim group**, because that group would then be able to organize in response.
  - A fully-articulated system of polycentric governance would require S=0, a condition that can never be realized in practice. But **a low value of S sharply limits structural inequality**.

Sustaining an S-Core

- In dynamic settings, new groups constantly form, some of which may act to increase the costs of collective action by their intended victims. Thus, **a uniformly low value of *S* cannot be sustained automatically.**
- **Polycentricity** can be sustained **only if governing authorities take as one of their primary missions the task of minimizing the costs involved in bringing groups of all sizes and kinds together to resolve their own problems.**
- **Tradeoff**: As *S* decreases, the aggregate transaction costs for governance in the society as a whole will increase. So does the **complexity** of the system.
  - **Institutional diversity** will be realized, but citizens risk losing a basic understanding of the very system they inhabit.
  - To counteract this concern, public officials must take concerted efforts to alleviate this confusion **by insuring easy access to information** on diverse forms of institutional arrangements.

Possible Model Extensions

- **Games on a network**: model choices of players to extend ties to other nodes in a social network
  - Must weigh benefits of adding a new member, vs. higher transaction costs
  - Costs of removing existing members, vs. a reduction in transaction costs
  - Integration into larger units, vs. higher costs
  - Disaggregation into smaller sub-units, vs. lower costs

- **Strategic representation** of goals likely to be achievable by different coalitions or subsets of stakeholder groups
  - Example: U.S. healthcare system (medical services)

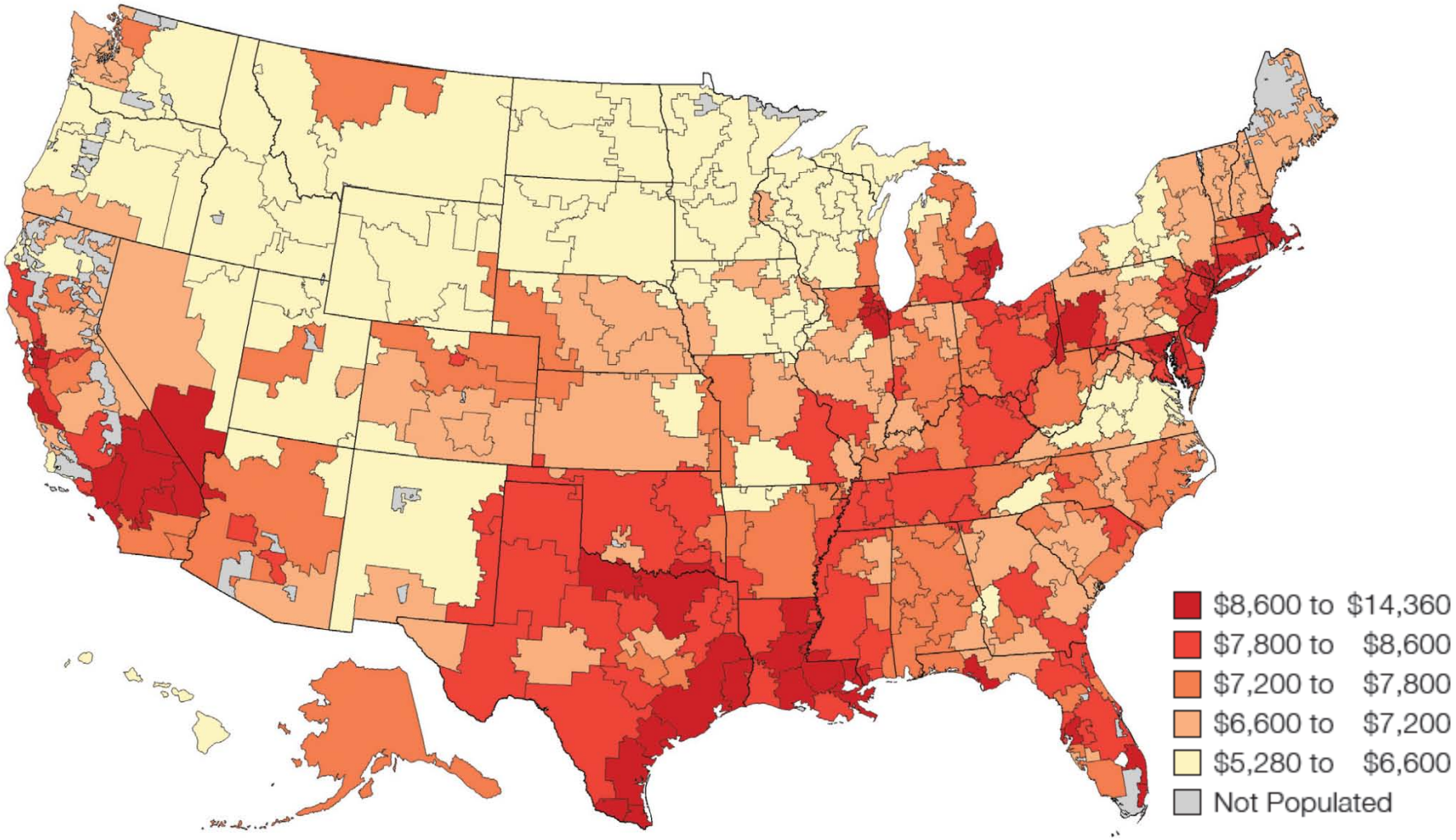
U.S. Healthcare Policy as an Example

- Policy debates on health policy reform have focused at the national level, but **healthcare is an intrinsically local affair**
  - Patients typically go to doctors and hospitals close to where they live.
  - Health care providers interact with others in that communities and neighboring regions.
  - Insurance regulation remains centered at the state level.
  - Government programs and technology link regions together at national and global scales, but fundamental interactions are local and intensely personal.
- **Health conditions vary across the country by region**
  - Diverse challenges set by demographic and economic conditions
  - Wide variation in health outcomes and costs at regional level
  - We can learn from close examination of regions with best outcomes (population health, high quality care, lower cost, wider access)

What Regions?

- Researchers at the *Dartmouth Atlas Project* have "empirically defined 306 relatively separate, geographically defined **Hospital Referral Regions (HRRs)**, where the resident population receives most of its care. "
  - HRRs are defined by examination of zip codes of patients receiving care at hospitals located in a given community, based on Medicare data;
  - The majority of residents in an HRR get the majority of their care at one or more hospitals within that region
  - "80% of the US population lives in HRRs in which more than 85% of care is delivered by providers within that HRR"
  - Rough representation of natural health care markets
- Quotations taken from Nolan, Thomas. 2010. "US Health Care Reform by Region." Presented to the IHI (Institute for Healthcare Improvement) Board of Directors on February 17, 2010. URL http://www.ihi.org/NR/rdonlyres/07730B39-FCF0-43CC-AA40-2DCAC2B22491/0/IHINolanUSHealthCareReformbyRegionFeb10.pdf; see http://www.dartmouthatlas.org/ and references at end of presentation

Medicare Spending per Beneficiary, 2005



Wennberg, John E., Shannon Brownlee, Elliott S. Fisher, Jonathan S. Skinner and James N. Weinstein. 2008. Agenda for Change: Improving Quality and Curbing Health Care Spending: Opportunities for the Congress and the Obama Administration, A Dartmouth Atlas White Paper, December 2008.

Why Markets CAN'T Be THE Solution for Health Care

- **Co-production** critical to "health" (more difficult than a post-experience good)
- Consumers suffer **substantial information asymmetries**, especially regarding quality of & need for procedures
- **Costs are far from transparent**
  - Third-party payers separate consumers from realizing total costs
  - Uncoordinated billing further mystifies total cost, even service providers may not realize actual cost of procedures
  - Reimbursement varies widely depending on insurance plan, coverage
- **Supply-driven demand for use of high tech facilities**
  - Excessive use of test facilities driven by malpractice liability concerns
  - Competition often takes the form of excessive building if high-tech facilities, thereby increasing overall costs
- Consolidation of health care providers can result in **local monopoly power**
- **Insurance coverage** determined by factors remote from needs (employment)
- Choices are often intensely **emotional** and fear-driven, with cost not considered

Implications of Cost-Shifting

- **Cost-shifting:** a form of cross-subsidization in which those patients able to pay higher rates are charged more in order to subsidize coverage for other patient groups
  - Consensus that it exists, but controversy over extent and purposefulness
- Divides population into groups based on insurance coverage:
  - **Medicare** program sets prices for procedures, provider have to go along or lose access to other national programs
  - **Private insurance** rates set by negotiation with insurance plans and/or employers, can include very generous coverage and close oversight
    - Some especially generous programs, like that offered to Congressmen!
  - **Medicaid** payments lower than Medicare, given limits on state budgets; many primary care physicians refuse to see them
  - **Uninsured**: can charge as much as they can get away with, frequently results in bankruptcy of patients (who can then qualify for Medicaid!)
  - **Charity care**: emergency care for all is required by govnt. regulators

Implications of Cost-Shifting

- Division into collective consumption units on basis of insurance is not consistent with logic of polycentric governance as defined above
  - A more appropriate classification would be based on nature of care required: preventive, primary, specialized, chronic, acute, palilative,
  - Or by demographic cohorts: children, pregnant women, healthy adults, elderly, disabled, etc.
- Control over cost-shifting requires some actor in the system that has incentives to think over the long-term
  - Maintain focus on preventive care for all population segments, to minimize overall costs
  - Administrative costs can be lowered with standard payments, but that is not as critical as requiring minimal standards of care
  - Many countries require universal coverage via multiple insurance plans (Germany, Japan, Switzerland), which compete over extra benefits beyond required minimal care
  - Individual mandate of some kind is required, which is difficult in U.S. context
    - But may be more feasible at community or regional level

Initial Impressions of the Structure of the Health Industry

- Neither free market nor centralized command-and-control can be enough.
- Increasing attention is being paid to **regional networks** such as Hospital Referral Regions
  - Not many **formal organizations** coordinate operations at this level
  - Informal coordination can be effective, if sustained by a shared trust
- **Many different forms of consolidation** have already been tried, (hospital systems, independent physician associations, HMOs, insurance plans, other integrated organizations)
  - Recent innovations include accountable care organizations (ACOs) and patient-centered medical homes (PCMHs)
- **Experimentation by stakeholders** provides a range of institutional alternatives from which to build comprehensive networks.
  - Plenty of **institutional diversity** in health care public service industry.
  - Problems not amenable to solution by direct application of standard market or state-based solutions; requires **strategic institutional focus at community level**

Strategic Analysis: Key Actors and Organizations in Healthcare Policy

1. **Individual Patients and Households**
2. **Physicians and Other Healthcare Professionals**
    a. Primary care professionals
    b. Specialists in secondary or tertiary care
    c. Other health professions (nurses, pharmacists, technicians, etc.)
3. **Administrators of facilities** from the following categories:
    a. Specialized clinics and general-purpose hospitals
    b. For-Profit and Non-Profit
    c. Academic and Community and Government-Owned
    d. Stand-alone or Consolidated Hospital Systems
4. **Insurers** (Private and Public)
5. **Purchasers** of Insurance (Employers, Government programs, Citizens)
6. **Administrators of government-run programs**
7. **Public health officials**
8. **Government Regulators and officials of certification organizations**
9. **Health Information Exchanges (HIEs)** and other information services
10. **Community Service Organizations (CSOs)**

Key Decisions

Individual patients
- Healthy life-style
- Regular check-ups
- Threshold for seeking help
- Compliance with advice
- Buy insurance
- Active engagement with health info.

Physician/Professional: Primary Care
- Number/time of patients seen
- Threshold for ordering tests
- Independent or join association
- Oppose new entrants
- Use electronic records

Physician/Professional: Specialists
- Threshold for intervention
- Set up/join specialized clinic
- Partner with PCPs
- Expand areas of activities

Facility Administrators
- Legal status: profit, nonprofit
- Ties to training programs
- Independent or consolidated
- Relationship with physicians
- Build new facilities?
- Build specialized clinics or partner
- Participate in gov. programs

Insurers
- Reimbursement options
- Relationship with hospitals, IPAs, patients
- Monitor physician, facility performance

Employers
- Offer insurance to employees
- Self-insure or partner with plan

Government Administrators
- Breadth of coverage
- Compensation levels

Regulators
- Tax breaks (esp. local officials)
- Set safety standards (esp. state & prof. assoc.)
- Approve new facilities (if certificate of need)
- Anti-trust exemptions (national)
- Medical legal system (all levels)

Public health officials
- Sanitation and related public goods
- Public information campaigns
- Design of built environment

Health Information Exchanges
- Inclusive or club structure
- Access by consumers

Community Based Organizations
- Set up free clinics or focus on advocacy
- Disseminate comparative information

Key Stakeholder Decisions in Different Arenas of Choice

Stakeholders	Constitutional	Collective (Policy)	Operational (Direct Services)
Patients	•Lifestyle choices	•Insurance coverage	•Regular checkups •Threshold for seeking help •Compliance with advice
Physicians	•Join physician's assoc •Attitude to new entrants	•Number of patients seen •Fee schedule	•Threshold for tests, prescriptions •Use electronic records
Facility Administrators	•Profit or nonprofit •Consolidation •Physician relationships	•Build new facilities •Community outreach •Government programs	•Quality control measures •Use electronic records
Insurers	•Eligibility requirements •Ties to hospitals, IPAs	•Cost of premiums •Coverage limits •Reimbursement policies	•Timeliness of payments
Employers	•Offer insurance? •Self-insure or health plan	•Portability conditions	•NA
Government Administrators	•Population groups eligible for coverage	•Procedures covered	•Compensation levels
Regulators	•Malpractice limits •Anti-trust exemptions	•Tax policies •Grants and programs •Quality Standards	•Extent of monitoring
Public Health	•Community planning	•Disease control policies	•Information campaigns
HIEs	•Inclusive or club members	•Scope of coverage	•Implementation & effectiveness
Cmty. Orgs	•Build social capital	•Advocacy	•Scope of services

Key Stakeholder Interests and Scope of Control

Stake-holders	Primary Interests	Facility Construction	Number of Procedures	Cost of Procedures	Quality of Procedures	Access and Coverage	Information Exchange	Overall Health
Patients	•Effective care •Choice •Low co-pay		•Critical role: demand for care •Consent to procedures	•Passive co-pay	•Compliance	•Select coverage from options	•Allow use of electronic records	•Critical role
Physicians	•Material incentives •Quality care	•Indepen-dent clinics	•Critical role •CYA logic	•Negotiate payment levels	•Critical role	•Volunteer work at clinics	•Critical role: Use new technology	•Primary care
Facility Admin.	•Profits •Growth in business	•Critical role	•Set capacity •Encourage high usage	•Negotiate payment levels	•Critical role: medical errors	•Extent of charity care	•Share information	•Outreach programs
Insurers	•Profits •Cost containment		•Pre-approval	•Critical role: Negotiate payments	•Monitor and reward quality	•Critical role: Products on market	•Share information	
Employers	•Cost containment •Healthy workers					•Critical role: job benefits		•Worksite programs
Gov. Program Admin.	•Cost containment •Implementation			•Critical role: sets payment levels		•Eligibility for safety net	•Share information	
Regulators	•Adherence to rules •Econ. health	•Critical role: approval or tax breaks	•Set standards •Medical legal system		•Critical role: set standards and monitor	•Require emergency care for all		
Public Health	•Prepare for emergencies		•Set standards					•Critical role: built envir. •Information
HIEs	•Wide adoption			•Reduce duplication			•Critical coordination	•Coordinated care
Community Orgs	•Equity, access •Social capital	•Reactive or lobbying			•Disseminate comparative data	•Critical role: run clinics •Advocacy		•Built environment

Critical Roles of Stakeholders

Stake-holders	Primary Interests	Facility Construction	Number of Procedures	Cost of Procedures	Quality of Procedures	Access and Coverage	Information Exchange	Overall Health
Patients	•Effective care •Choice •Low co-pay		•Critical role: demand for care					•Critical role
Physicians	•Material incentives •Quality care		•Critical role		•Critical role		•Critical role: Use new technology	
Facility Admin.	•Profits •Growth in business	•Critical role			•Critical role: medical errors			
Insurers	•Profits •Cost containment			•Critical role: Negotiate payments		•Critical role: Products on market		
Employers	•Cost containment •Healthy workers					•Critical role: job benefits		
Gov. Program Admin.	•Cost containment •Implementation			•Critical role: sets payment levels				
Regulators	•Adherence to rules •Econ health	•Critical role: approval or tax breaks			•Critical role: set standards and monitor			
Public Health	•Prepare for emergencies							•Critical role: built envir.
HIEs	•Wide adoption						•Critical coordination	
Community Orgs	•Equity, access •Social capital					•Critical role: run clinics		

Capabilities of Different Types of Integrated Organizations

- **IPAs: Independent Physician Associations**
  - Provide management services to physicians and thereby lower operating costs
  - Can improve bargaining power vis-à-vis hospitals, insurers
- **Integration of hospitals and specialty clinics**
  - Can capture market share via patient referrals
  - Optimize facility construction, improve quality, facilitate information exchange
- **National programs (like Medicare)** determine extent of safety net
  - Market and regulatory power allows program officers to unilaterally set reimbursement levels and other requirements
- **Loose network of regulators, hospitals, community clinics** can guarantee access to minimal level of emergency care
- **HMOs** establish networks of patients, providers, facilities, payers
  - Cost containment by restricting patient choice
- **ACOs** add monitoring and reward based on quality of care
  - But may tend to focus on cost savings, esp. if backed by national incentives
- **Community-level integration of medical services stakeholders**
  - Paternalistically manage healthcare system as a community asset
  - May be restricted if seen as violation of anti-trust laws
- **Citizen behavior is THE critical determinant** of population health outcomes
  - Co-production is a critical component of polycentric governance