

**Collaborative Stewardship of a Health Commons:
Combining Lessons from
Elinor Ostrom's Research on the Commons,
Collective Action Theory,
Inter-Organizational Relations,
and Health Policy**

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Presenter Disclosure Statement

Michael D. McGinnis

- Personal financial relationships with commercial interests relevant to this presentation that existed during the past 12 months: **NO RELATIONSHIPS TO DISCLOSE**
- My presentation **DOES NOT** include discussion of “off-label” use of any products.

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- This presentation draws on results generated by all members of the Indiana University **Managing the Health Commons (MHC) research team**, composed of myself and
 - **Elinor Ostrom**, Ph.D., Distinguished Professor, Political Science and Public and Environmental Affairs
 - **Joan Pong Linton**, Ph.D., Associate Professor, English
 - **Claudia Brink**, MBA, MPA, Ph.D. candidate in Public Policy, and Assistant Director, Workshop
 - **Carrie Ann Lawrence**, Ph.D. candidate in Health Behavior
 - **Ryan Conway**, Ph.D. candidate in Political Science
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A Regional Approach to Health Reform

- **Health and medical care are intrinsically local or regional.**
 - Researchers have documented a **wide range of regional variation** in costs and the overall quality of medical services.
 - A reasonable presumption is that ***someone did something*** in these communities that contributed to positive outcomes, and our guess is that they developed **informal mechanisms of collaborative stewardship at the regional level.**
- We're engaged in a research project to learn more about factors that affect **capacity for collective action** regarding **regional-level stewardship** of healthcare or medical services.
 - We **interview** stakeholders in **3 communities** to elicit experiences (positive & negative) with multi-stakeholder collaborations.
 - **We focus on collaborative stewardship among professionals**, but in long term, the active participation of ordinary citizens is critical.

What is a Commons?

1. A resource or system of resources to which members of a group share **access**, and which they either (a) consume jointly or (b) use as a common pool from which they extract units for private consumption;
2. This common resource **can be exhausted or degraded by over-use** (of resources) **or under-investment** (in resource replenishment and/or contributions to public goods);
3. Efforts to **replenish or maintain** the relevant resources are **costly**;
4. And these costs will be paid only by someone with an **incentive to consider long-term consequences** of current actions when they make decisions regarding rules, **regulations**, & procedures.

Examples:

- **Natural resource commons** (fisheries, common grazing land, forests);
- **Constructed commons** (irrigation systems, technical infrastructures, information systems, health commons)

Health as a Commons (In Need of Self-Regulation)

1. **Residents share access to local & regional resources for medical care:**
 - 1) trained healthcare professionals,
 - 2) hospitals, clinics & test facilities,
 - 3) financial support (insurance, government programs).
2. **Congestion** can be common and **service degradation** can be severe because there is a **limited number** of clinicians, hospital beds, emergency rooms, insurance programs, etc.
3. These resources can be **reallocated** to achieve more efficient or equitable outcomes, but any significant reform will face resistance from entrenched interests.
4. Research of Lin Ostrom & others on **Commons Theory** suggests that key stakeholders can work together to craft, monitor, and enforce rules that ensure the continued viability of common resources.
 - Who can act as **stewards** of common resources in health?

The Usual Suspects: Key Local Stakeholder Groups

1. Physicians and Other Healthcare Professionals
2. Administrators of medical facilities
3. Insurers (Private and Public)
4. Employers (primarily as purchasers of insurance)
5. Public health officials (and program managers)
6. Health Information Exchanges (HIEs)
7. Community Service Organizations (CSOs)

8. Individual Citizens (critical for overall health but limited influence over details of the medical services industry)

Note: Other categories of relevant actors have been excluded to simplify initial analysis.

Local Levers of Allocation and Power

Important resource allocation decisions are made in local settings:

1. Choices by healthcare professionals concerning career paths or specializations;
- 2. Corporate decisions to build new facilities or to consolidate;**
3. Negotiations between hospitals, physician groups, and insurance plans regarding reimbursement levels and partnerships;
4. Procedures established within hospitals or physician groups (regarding quality control, reducing medical errors, hospitalists, etc.);
5. Consultations among medical professionals (care coordination among physicians-nurses-pharmacists-therapists);
- 6. Interactions between individual patients and clinicians** (esp. regarding referrals to specialists or testing facilities);
7. Interactions between patients and employers or government agencies offering health insurance coverage or wellness plans;
- 8. Personal choices between healthy and unhealthy behaviors;**
9. How personal choices are shaped by the natural and built environment.

How often are these local resource allocation decisions guided by considerations of long-term effects or systemic stewardship?

Allocation of human capital

- Availability of primary care
- Physician training & recruitment
- Referral patterns (for specialty care)
- Hospital-physician relations
- Care transitions

Healthcare facilities & physical capital

- Coordination of emergency care
- Quality improvement and cost-cutting procedures (e.g., reducing medical errors)
- Facility construction
- Consolidation of hospital systems
- Market concentration; anti-trust

Financial issues

- Cost of chronic and end-of-life care
- Cost of care for uninsured patients
- Safety net for catastrophic bills
- Reimbursement and rates for care

Public/population health

- Emergency preparedness
- Preventive care
- Pre-natal care
- Dental care
- Mental health care
- Health promotion (tobacco, obesity, etc.)
- Improving the built environment

Information systems

- Quality monitoring
- Format for electronic records
- Privacy of personal health records
- Health information exchange networks

Other issues

- Employment & economic conditions
- Equity; urban/rural disparities
- Legal culture (malpractice, regulation)

External Constraints on Local Autonomy in Healthcare

1. Technological innovation in medical testing, treatments, and drugs;
2. National policy initiatives (health insurance reform, ACO program details, changes in Medicare and Medicaid, drug approval, etc.);
3. State policy changes (esp. Medicaid reimbursement, but also changes in legal requirements and certification);
4. Professional standards and best practices, including limits on size of classes in medical or nursing schools;
5. Corporate decisions regarding advertising (esp. for new drugs) and location of and content of products in restaurants & grocery stores;
6. Consolidation and other trends within healthcare delivery, insurance, and related financial sectors;
7. Demographic and cultural changes;
8. Economic upturns and recessions.

BUT LOCAL HEALTH STAKEHOLDERS ARE NOT POWERLESS.

Design Principles for Sustainable Resource Management

Background Conditions

1. A group of resource users in well-defined region
2. That has sufficient authority to manage available resources

Patterns of Interaction

3. Does so by collectively crafting rules and procedures regarding levels and modes of resource extraction,
4. Sharing information generated through routine monitoring of user actions and resource outcomes,
5. Imposing graduated sanctions on rule-breakers,
6. Resolving disputes directly or with the help of intermediaries,
7. Forming sub-groups to focus on particular problems,

Outcomes and Evaluation

8. And these rules and procedures are appropriate for local circumstances and distribute the costs and benefits of their collective action in an equitable manner.

Notes: Current background conditions emerge from past interactions and outcomes.
See supplemental [slide](#) for a complete statement of these design principles.

We draw factors from four bodies of research/practice

- 1. Commons Research** on small-scale communities where
 - » Individual survival is dependent on continued access to that resource;
 - » Family ties often generate concerns for long-term future sustainability,
 - » Social ties among users are typically dense and salient,
 - » Resource users are close to the action, facilitating monitoring and effectiveness of social sanctions.
- 2. Collective Action Theory:** “best practices” for forming teams of collaborators who are not so closely linked,
- 3. Inter-Organizational Relations:** where participants are agents representing the interests of private, public and voluntary organizations as well as more informal groups.
- 4. Healthcare Policy:** factors specific to this policy area, including the unusually high prevalence of compassion as an influence on those who choose to enter the healthcare professions.

Key Complications Related to Health and the Delivery of Medical Services

- **Preventive care** is critical for health and for reduction of costs in the long term, but the medical care system focuses on treating people only after they become sick
- **Technological innovation** drives higher costs
- **Third-party payers and bundled reimbursement policies** separate cost considerations from patient and physician decisions, so having better information is critical for reform
- There is **no obvious institutional home for regulation** of medical services at the local/regional level
- **Compassion** as a potential resource to support improved collaboration

Conditions for Collaborative Stewardship of a Health Commons

BACKGROUND CONDITIONS

1. Sufficient physical, human, & social capital.
2. Maintain multiple communication channels.
3. Local autonomy recognized & protected.
4. Sense of community strong but expandable.



SUPPORT

PROCESSES OF INTERACTION



1. Team defines core mission as stewardship.
2. Leaders maintain focus on specific goals.
3. Convener & coordinator roles filled.
4. Group learning generates innovation.
5. Shared norms support open discussion.
6. Routine monitoring & measurement.
7. Sanctions graduated and reversible.
8. Vital interests of all stakeholders protected.



ENABLE

OUTCOMES & EVALUATIONS



1. Success builds cumulatively.
2. Trust developed & reinforced.
3. Teams craft rules that fit local conditions.
4. Rules distribute costs & benefits fairly.

A Few Preliminary Lessons From Case Studies

- **Local autonomy** is not assured, and must be sought and protected.
- A strong sense of community or physical isolation is not enough; stewardship requires **frequent, open, & confidential communication**.
- **Best to keep focused on a few critical factors**, and use multiple ways to address that issue (ex: Grand Junction & primary care shortages).
- Collaboration on **health promotion campaigns** (such as anti-smoking or anti-obesity) are useful to develop trust and habits of cooperation, but eventually community leaders need to address **more difficult issues of facility construction, physician payment, and coverage for uninsured**.
- Teams must develop procedures through which partners who acted unilaterally on an earlier issue can be **welcomed back** into the fold.
- **Assessment tools** must be developed and applied, with regular re-evaluation of ongoing programs and future needs.

Format for a Community Self-Assessment Tool

[1] Ask representatives of local stakeholder groups familiar with past or ongoing efforts of collaborative stewardship,

[2] whether or not their interactions on each of these topical areas:

1. Allocation of human capital
2. Healthcare facilities and physical capital
3. Financial issues
4. Public/community health
5. Information systems
6. Other issues (employment, equity, legal culture)

[3] show evidence of the presence of these facilitating conditions:

- Background Conditions/ Structure
- Processes of Interactions
- Results

[4] and use their answers to help them **identify gaps in their capacity for collaborative stewardship** of their local/regional health commons.

Supplemental Slides

An Institutional Perspective on Policy Settings

In the **Institutional Analysis and Development (IAD)** framework

- **Policy outcomes** emerge from the combined effects of **actions** taken by **agents of critical stakeholder groups**,
- Agents choose from **options** according to decision processes shaped by **constraints** set by individual capabilities and predispositions as well as the organizations they represent and the broader institutional arrangements within which they live,
- Especially critical among the **background conditions** that define these settings are
 - The nature of the goods and services being considered,
 - The rules-in-use that key actors consider relevant to this situation,
 - And the attributes of the community within which these actors reside.
- Repeated situations generate **characteristic patterns of interactions and outcomes**,
- Which are subject to different forms of **evaluation** by actors directly involved and/or indirectly affected by these outcomes,
- Actions and outcomes constitute **feedback** that shape the conditions under which future policy decisions are made, and all of the constraints and conditions currently in place have been sculpted by the **past choices** of these actors and others,
- Finally, these constraints, interaction patterns, and outcomes are subject to disruption by the interjection of **exogenous shocks or surprises**.

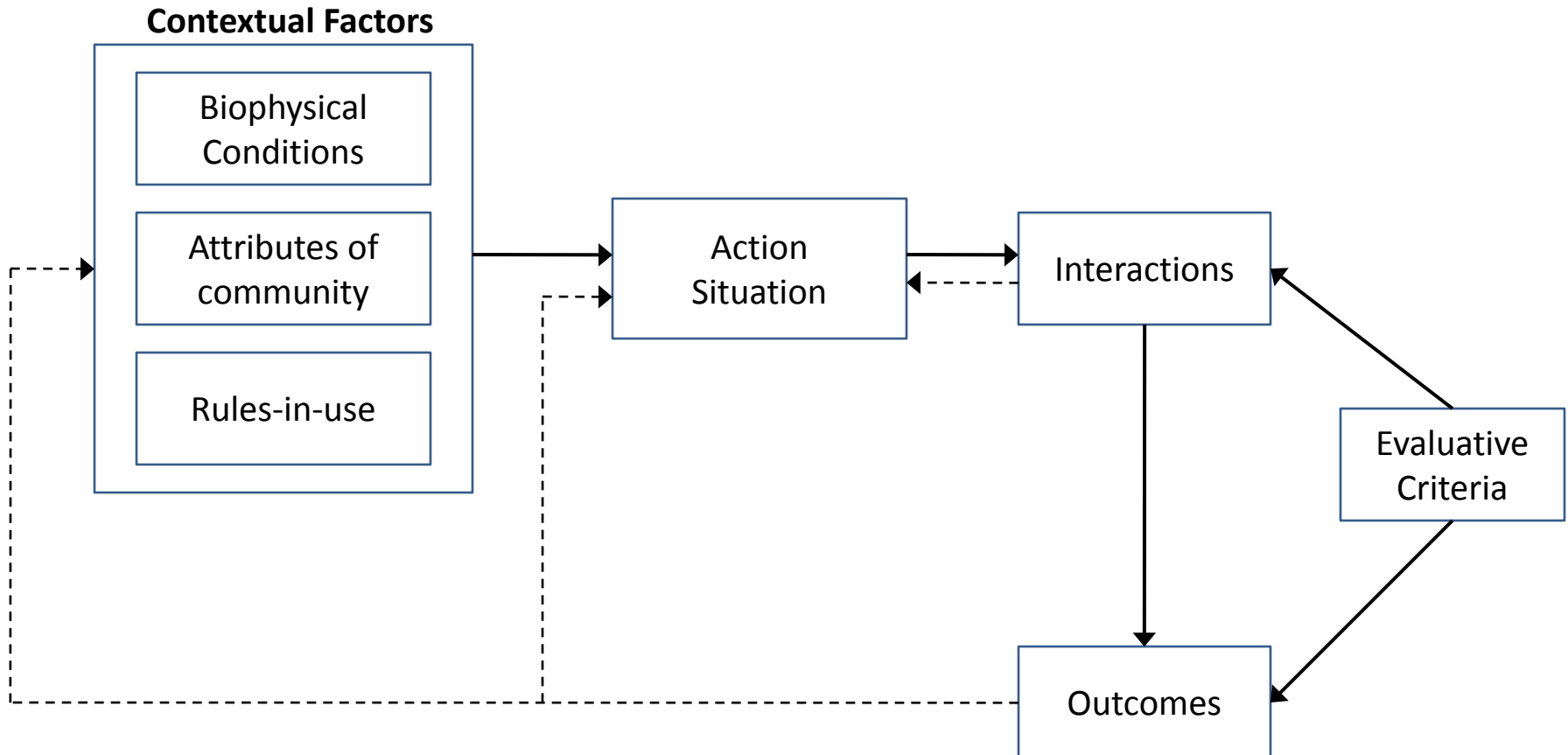
Design Principles for Sustainable Governance of Common-Pool Resources*

- 1. Clearly defined boundaries:** [A] Individuals or households who have rights to withdraw resource units from the common-pool resource must be clearly defined; [B] The boundaries of the common-pool resource must be well defined.
- 2. Congruence between appropriation and provision rules and local conditions:** [A] Appropriation rules restricting time, place, technology, and/or quantity of resource units are related to local conditions. [B] The benefits obtained by users from a common-pool resource, as determined by appropriation rules, are proportional to the amount of inputs required in the form of labor, material, or money, as determined by provision rules.
- 3. Collective-choice arrangements:** Most individuals affected by the operational rules can participate in modifying the operational rules.
- 4. Monitoring:** [A] Monitors are present and actively audit common-pool resource conditions and appropriator behavior; [B] Monitors are accountable to or are the appropriators.
- 5. Graduated sanctions:** Appropriators who violate operational rules are likely to be assessed graduated sanctions (depending on the seriousness and context of the offense) by other appropriators, officials accountable to these appropriators, or both.
- 6. Conflict-resolution mechanisms:** Appropriators and their officials have rapid access to low-cost local arenas to resolve conflicts among appropriators or between appropriators and officials.
- 7. Minimal recognition of rights to organize:** The rights of appropriators to devise their own institutions are not challenged by external governmental authorities.
- 8. Nested enterprises:** Appropriation, provision, monitoring, enforcement, conflict resolution, and governance activities are organized in multiple layers of nested enterprises.

***Source:** Michael Cox, Gwen Arnold, and Sergio Villamayor Tomás. 2010. "A Review of Design Principles for Community-Based Natural Resource Management." *Ecology and Society* 15(4):38 <http://www.ecologyandsociety.org/vol15/iss4/art38/ES-2010-3704.pdf>; updated version of design principles initially stated in Elinor Ostrom, 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. New York: Cambridge University Press, pp. 88-102.

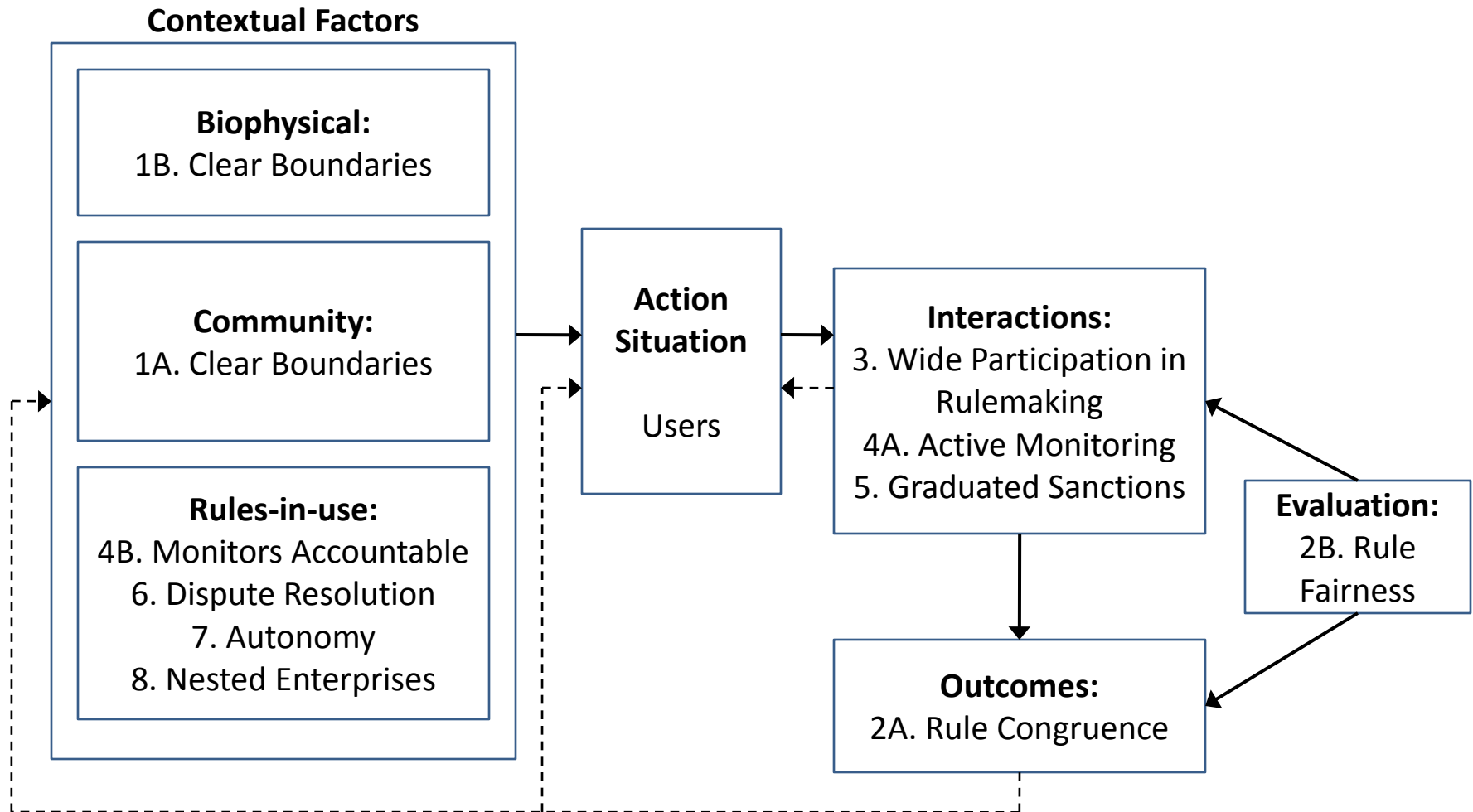
Institutional Analysis and Development (IAD) Framework:

Contextual Factors, Action Situation, Interactions, Outcomes, Evaluations, & Feedback



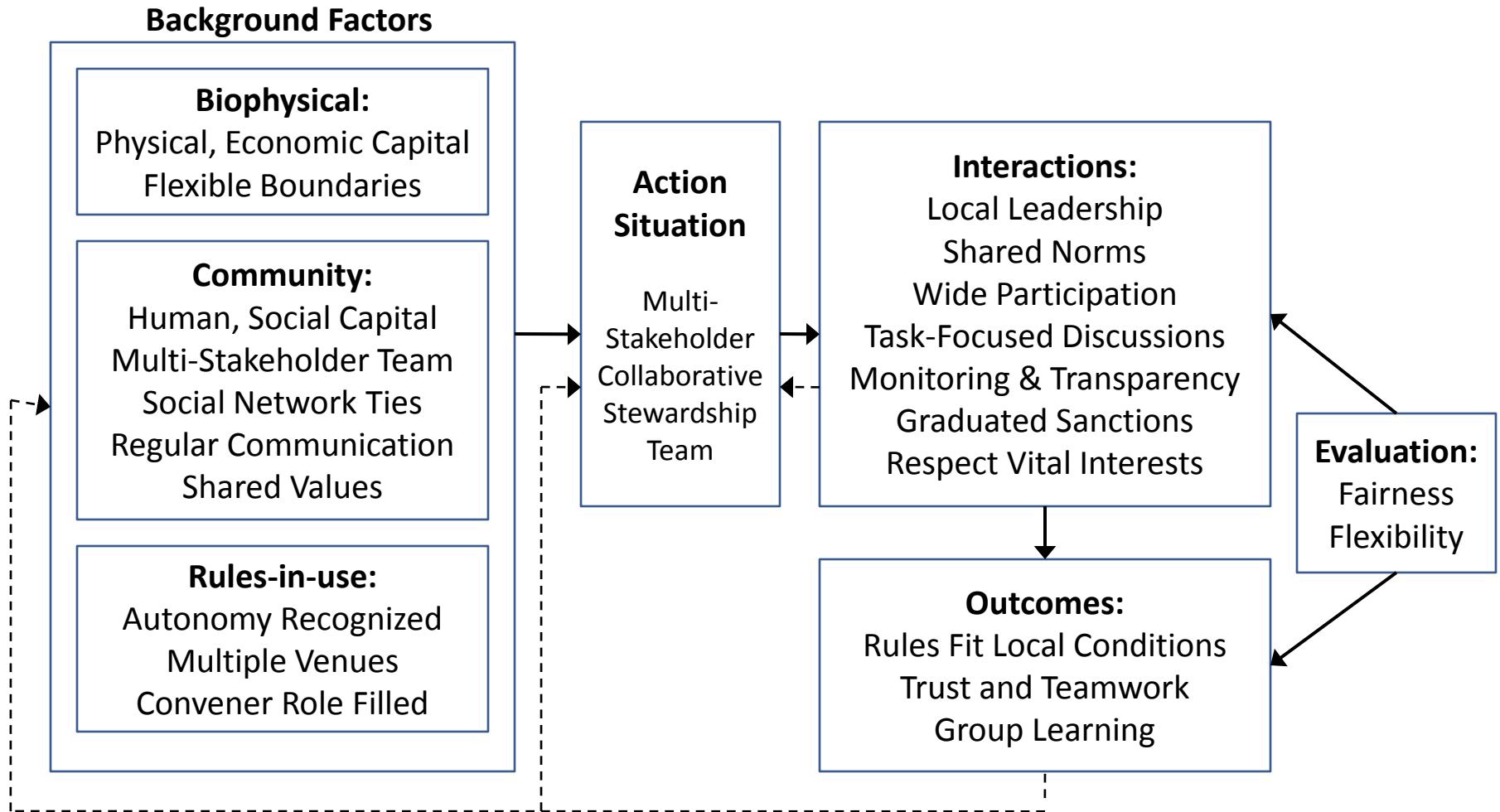
Sources: Ostrom 1990, 2005, 2010, 2011, McGinnis 2011, Aligica and Boettke 2009.

Design Principles for Sustainable Management of Common Pool Resources



Design Principles numbered as in Michael Cox, Gwen Arnold, and Sergio Villamayor Tomás. 2010. "A Review of Design Principles for Community-Based Natural Resource Management." *Ecology and Society* 15(4):38
<http://www.ecologyandsociety.org/vol15/iss4/art38/ES-2010-3704.pdf>.

Categories of Factors Facilitating Multi-Stakeholder Sustainable Stewardship of a Health Commons



Source: Compiled by author

Examples from Collective Action Theory

Generic process for collective action

- A group meets regularly to discuss their shared concerns and to
- Identify specific goals that they can accomplish together,
- Allocate tasks to members and follow up on implementation,
- Reassess the situation frequently and consider changes in plan,
- Enhance social ties and practices of effective communication within group,
- Inspire and nurture leaders from within the group to sustain these efforts.

Specific example: **Relational Coordination** in multi-speciality teams in patient-centered care, from Jody Gittel, *High-Performance Healthcare*, 2009.

- Communication is frequent and problem-focused,
- Participants have Shared Goals, Shared Knowledge, and Mutual Respect

Examples from Inter-Organizational Relations

Principles for Successful Public-Private-Nonprofit Collaboration in Governance Networks: from Bryson, Crosby, and Stone, “The Design and Implementation of Cross-Sector Collaborations,” *Public Administration Review* 2006.

- Have committed sponsors and effective champions at many levels,
- Build leadership, legitimacy, and trust,
- Engage in deliberate planning but remain flexible and resilient,
- Use resources to cope with power imbalances, conflict, and shocks,
- Remain responsive to key stakeholders & build on distinctive competencies,
- Engage in regular reassessments, and
- Have an accountability system that uses a variety of methods to track and interpret data on inputs, processes, and outcomes.

Health Care Systems: Typical Problems and Potential Remedies

| Characteristics | Typical Problems (or Strengths) | Potential Remedies (or Reinforcement) |
|---------------------------------------|---|---|
| Lots of money to be made | <ul style="list-style-type: none"> •Over-advertising of new products •Many consultants & new govt. programs | <ul style="list-style-type: none"> •Individuals need to take responsibility for their own health outcomes •Avoid program chasing, keep focus on mission goals and observable measures |
| Highly professionalized | <ul style="list-style-type: none"> •Poor coordination •Silo thinking | <ul style="list-style-type: none"> •Patient-centered care (esp. transitional care) •Encourage multi-stakeholder collaboration |
| Highly technological | <ul style="list-style-type: none"> •(Innovation) •Lose personal touch | <ul style="list-style-type: none"> •Help consumers access and interpret info. •E-records and HIE can be effective cost-savers •Can help coordinate patient-centered teams |
| Third-party payers | <ul style="list-style-type: none"> •Poor feedback •Cost containment | <ul style="list-style-type: none"> •Monitor and disseminate information on provider and facility performance |
| Complex mix of stakeholders | <ul style="list-style-type: none"> •Lack of common understanding | <ul style="list-style-type: none"> •Encourage diverse forms of stewardship orgs •Protect vital interests and core competencies |
| No obvious institutional pivot | <ul style="list-style-type: none"> •Poor macro-level coordination | <ul style="list-style-type: none"> •Fill convener role (formal or informal) •Coordinator maintain contacts within group |
| Compassion as motivation | <ul style="list-style-type: none"> •(Potent inspiration for reform) | <ul style="list-style-type: none"> •Enhance sense of community •Annealing (crises can build solidarity, trust) |

Institutional Diversity in the Healthcare Industry

- Problems of U.S. healthcare are not amenable to solution by direct application of standard market or state-based solutions; instead requires attention to **strategic analysis of institutional options at the local/regional level**
- Increasing attention is being paid to **regions** such as Hospital Referral Regions
 - Not many **formal organizations** coordinate operations at this level
 - But networks of informal coordination can be effective, under the right conditions
- **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.
 - There is plenty of **institutional diversity** in health care public service industry.
 - Such institutional diversity is required given the complexity of this interrelated system of healthcare as a public service industry – market sector – commons.

Markets and Common Resources in the Healthcare Industry

Health care (or medical services) can be seen as a **private good**, involving service transactions between patients and **healthcare professionals**.

- But these are **not merely private goods**, given the need for consumers to be actively engaged in producing their own health outcomes (**co-production**).
- And **healthcare markets** are typically inefficient in providing the optimal mix of services, for a variety of reasons, such as the difficulty of measuring quality, the technical complexity of evaluating alternative procedures, and a payment structure that make costs far from transparent to consumers and/or professional clinicians.
- In sum, **regulation** is especially important for healthcare markets.
- Other aspects of health care (especially medical insurance) have properties known in economic theory to create problems related to **overuse of services** or suffer from **adverse selection problems in the client pool** – both leading to an upward spiraling of insurance costs.
- Still other aspects are similar to **common-pool resources**, in which individuals extract resources without full payment, like ER services for a significant subset of the population.
- **Public health officials** routinely promote **population health**, which is widely recognized as a **public good (a good with positive externalities)**, where individuals may under-invest in health maintenance from the perspective of society.

We argue that the overall system of health and the delivery of healthcare (medical) services is best understood as a commons that encompasses multiple types of resources and many types of goods and services. Such a commons definitely requires some form of **stewardship**.

- Collaborative stewardship is effectively a form of **self-regulation of a commons**.

Different Types of Goods in Healthcare

Rival

Consumption

Nonrival

| | | |
|--|---|--|
| <p><i>Low</i></p> <p><i>Costs of Exclusion</i></p> | <p>Private Goods/Services</p> <ul style="list-style-type: none"> • Consultation with clinicians • Drugs and medical procedures • Elective medical services • Commercial health insurance • Malpractice insurance • Professional training • Individual health (requires co-production) | <p>Toll Goods/Services</p> <ul style="list-style-type: none"> • Certification programs • Employer-funded insurance plans • Healthcare cooperative • “Cadillac plans” covering a wide range of medical procedures • Membership in Y or similar organizations • Management services for members of IPAs |
| | <p><i>High</i></p> | <p>Common Pool Resources*</p> <ul style="list-style-type: none"> • Time for physician consultations • Access to emergency services • Money in budgets for social insurance programs • Beds or testing facilities in existing hospitals or clinics • Organs for transplantation <p>[*Consumption is rival because of scarcity; exclusion costly because of professional norms of compassion and care for all]</p> |

Interpretations of Commons Terminology in Terms Appropriate for Healthcare

| Components | Common Pool Resources (Capital Stocks) | | | | Public Goods |
|---|---|------------------------------------|---|--|---|
| | <i>Physical Capital (Facilities)</i> | <i>Financial Capital (Funding)</i> | <i>Human Capital (Providers)</i> | <i>Social Capital (Trust)</i> | <i>Population/Community Health</i> |
| <i>Source of High Exclusion Costs</i> | Legal Requirements | Sense of Fairness | Professional Norms | Generalized Trust | Nature of Community |
| <i>Source of Rivalness in Consumption</i> | Physical capacity | Money as private good | Time and Effort Constraints | Trust can be degraded if cheating occurs | (NA: Public goods are nonrival) |
| <i>Resource System (source of units)</i> | Hospitals and Specialized Clinics | Economic system; public budgets | Healthcare professionals (Providers) | Individual and social decision processes | (NA: Units Not Relevant for public goods) |
| <i>Resource Units Consumed (or Appropriated)</i> | Hospital beds and test facilities | Dollars (and insurance protection) | Time for consultation | Lower costs for individual transactions | (NA: Units Not Relevant for public goods) |
| <i>Resource Users</i> | Patients and Providers | All parties | Patients/Consumers | Professionals, leaders, citizens | Citizens |
| <i>Activities Needed to Replenish or Maintain CPR (or Produce Public Goods)</i> | Construction and Maintenance of Facilities | Economic growth; Tax revenues | Training; Recruitment, Continuing education | Open discussion, willingness to compromise, time for healing | Individual healthy choices |

Collaborative Stewardship and Polycentricity

Collaborative stewardship is a generalization of collaborative governance:

- a term used in public administration to designate situations in which public officials routinely confer with private firms and voluntary organizations in the formation and delivery of public services.

Both terms are specific instances of polycentric governance:

- a technical term from institutional analysis (Ostrom, Tiebout, and Warren 1961) designating a complex political system in which
 - multiple public authorities from overlapping jurisdictions
 - and agents of relevant private, voluntary, and community-based organizations
 - govern themselves and all relevant individuals (who may be participating as constituents, managers, employees, volunteers, members, visitors, and/or citizens)
 - through an ongoing process of mutual adjustment,
 - within the constraints of general rules and cultural norms.
- Although messy in practice, polycentric governance provides plenty of opportunities for all interested parties to participate in policy-making and implementation, and facilitates the fine-tuning of rules and procedures to fit distinctive characteristics of local situations.
- For decades, the concept of polycentricity has been the central focus of research conducted by scholars affiliated with the Workshop in Political Theory and Policy Analysis.

Key References on Commons Theory, IAD, & Polycentric Governance

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