

How Is an Operating Room Like a Commons?

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Elinor Ostrom receiving her Prize from His Majesty King Carl XVI Gustaf of Sweden at the Stockholm Concert Hall, 10 December 2009. Copyright © The Nobel Foundation 2009 Photo: Frida Westholm

IU professor **Elinor Ostrom** received the The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel in 2009 "for her analysis of economic governance, especially the commons"

What can we learn from Ostrom about health care?



Outline of Presentation

- I'll begin with a **brief summary of Lin Ostrom's research on resource commons** and why this was deemed sufficiently important to merit this recognition
 - **Please bear with me**: the connection to health care will NOT be immediately apparent.
- Then I'll **highlight three sets of implications** from her work for
 1. Effective teamwork in clinical settings (specifically, operating rooms);
 2. The nature of the health care system as a whole, and how it could be governed more effectively;
 3. For you as a health care professional.

Tragedy of the Commons



- **Commons**: natural or constructed **resources** available for use by some group.
- **Sustainability** requires natural **replenishment** and may also require human efforts in construction & maintenance of **infrastructure**.
- If too many resources are extracted, or too little concern for replenishment or maintenance, result will be depletion or destruction (**tragedy of the commons**)
- **Garrett Hardin** (1968) saw only two solutions: **privatization** or **central control**

Lin's Contribution: A Third Option is Available



A group may agree to work together to manage common resources jointly

- In **common property**, all can share in its management (or stewardship).
- **Rules** that (1) **restrict extraction levels** and (2) **require contributions** towards maintenance may be **written, monitored, and/or enforced** by the group members themselves (political authorities are often involved also).
- From her studies of many examples of successful collective management, **Elinor Ostrom** established eight **Design Principles** that support the **sustainability** of community-managed resource commons

Key Processes in a Resource Commons

1. Appropriation (resource use)
2. Provision or Construction/ Maintenance
3. Rule-Making
4. Monitoring & Sanctioning
5. Forming & Working in Teams



Terraced fields in the Dang Valley region of Nepal. The photo also contains farm houses. 1990-04 From [Digital Library of the Commons](#), IU.



Local farmers standing near an earthen irrigation canal in the Dang Valley region of Nepal 1990-04 DLC

Design Principles for a Sustainable Commons

1. Clearly Defined **Boundaries** (on authorized users and resources)
 2. Wide **Participation** in making decisions about rules on appropriation & provision
 3. **Congruence** between rules and local conditions, with results seen as fair
 4. **Monitoring** by users or monitors responsible to them
 5. **Graduated sanctions**, with opportunity for remaining in group
 6. **Conflict resolution** mechanisms are available and reinforce local procedures
 7. **Recognition of rights** to organize
 8. **Nested enterprises** for specialized tasks
- Plus (implicitly assumed by Ostrom)
9. **Distributed Leadership**
 10. **Shared Purpose & Multiple Evaluations**

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Team-Building

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Seeing the Design Principles in Action



Farmers repairing an earthen irrigation canal in the Dang Valley region of Nepal. **Upon discovering that a local farmer had diverted the irrigation canal, the farmers immediately rushed to repair the canal and sanction the offending party.** 1990-04 DLC

So How is this Relevant to Operating Rooms?



<http://anesthesia.iu.edu/Portals/0/UltraPhotoGallery/499/1/1.9076.jpg>

Shared resources include

1. the room and time to use it,
2. all the medical technology available in or near that room,
3. the financial capital invested in relevant provider organizations,
4. lots of human capital (the technical expertise of everyone involved),
5. and social capital (their experience working as part of a team)

**All of these resources need to be respected, and not wasted;
And all involved share in this responsibility!**

Design Principles in the OR

1. **Clear boundaries** on participants and their duties (*appropriation*), and shared responsibilities for arranging and cleaning the space, maintaining the equipment in sterile conditions, and keeping up the pace (*provision*)



[Aaron Cohen-Gadol](#) directs a colleague during a brain tumor removal at IU Health Methodist Hospital.
Photo By Erik Markov

2. **Participation:** All rules and procedures should be known to all participants, with changes announced at the beginning “time-out”.
3. **Congruence:** These rules and procedures should be based on current best practices and should follow the rules of that hospital or clinic.
4. Everyone shares responsibility for **monitoring** each other, especially regarding potential errors or breeches of sterile conditions.
5. **Graduated Sanctions:** Mistakes should be acknowledged and reported, with this record used to make future improvements (and not as a reason for punishment, under normal conditions).
6. Multiple procedures for **dispute resolution** are available if needed. ¹¹



<https://iuhealth.org:8443/methodist/surgery>

Recognition of nested enterprises (teams and sub-teams) in two senses:

7. The OR fits within the broader structure of IU Health, and the practices of the surgeons and anesthesiologists, and
8. The OR team includes specialized teams with specific responsibilities (prep, anesthesia, surgery, technicians, etc.) before, during, and after surgery, as well as others who may be called in as necessary.

9. Distributed Leadership: The burden of leadership cannot, and should not, be placed entirely on the surgeon – all participants need to be willing and able to step forward when needed.

10. Shared purpose and multiple evaluations: centered on **patient safety**.

Some Further Considerations

As a commons, an OR poses **unique challenges**

- **Incredible time pressure** and **potential for serious damage**
- **Teams short-lived**, based on pre-assigned roles and an initial discussion
- **Significant power and status differentials** (but all participants should be encouraged to raise questions or concerns)



But **other challenges are shared by all commons**

- Deep tensions between collective goals and individual interests and habits
- Making and enforcing rules and norms requires a lot of time and effort
- Coordinating the tasks of specialized sub-teams can be difficult
- Ongoing evaluation and correction for past errors

Implications for Governance of the Health System

I realize I may be telling you what you already know

- Surely this is NOT the first time you've been told to improve your teamwork skills or to protect patient safety?
- So I'd like to conclude with a few **broader implications of this commons perspective on the health professions more generally**

Specialized teams are nested within each OR team, and each **OR team is nested within broader organizational settings**

- **This multi-level, overlapping, “polycentric” pattern is repeated throughout the health system,**
 - In health care, public health, health insurance, and health policy

Health Micro-Commons as Joint Ventures

- Examples of other significant “**health micro-commons**” include
 - Care Facilities and Hospital Systems
 - Clinical Procedures and Quality Improvement Programs
 - Health Promotion Campaigns and Wellness Programs
 - Managed Care Organizations and ACOs
 - Medicare, Medicaid, and all associated institutions
- In each of these **joint ventures**, professionals with different resources, knowledge and skills work together towards a **common purpose**
 - Programs are built and sustained through employment, contracts, reciprocal agreements, cost-sharing, and other legal mechanisms
 - Each is a **constructed “micro-commons”** jointly owned and operated by the participating providers and organizations

Looking Beyond the OR

- **The whole health care-insurance-behavior-policy system is built on collective action and teamwork**
 - **This health system is highly fragmented**, but fragmentation is **normal** in U.S. policy settings
- **Missing institutions** preclude effective coordination, especially
 - Coordination among different types of caregivers engaged in different forms of care (**care transitions**, across the continuum of care, etc.)
 - Better communication between patients and clinicians on available options (**shared decision-making** protocols)
 - **Shared stewardship at the local or regional level** (multi-stakeholder leadership teams including providers, payers, public health officials, community organizations, and patients/citizens)
- **Take-Away Points:** This complex, multi-layered nesting exists, and it is (or should be) familiar to you all, and these resources can be mobilized for purposes of improvement and reform

Implications for Health Care Professionals

- **Over-reliance on high technology can be counter-productive**
 - Ostrom demonstrated low-tech farmer-managed irrigation systems can out-perform high-tech systems built and managed by experts



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- **Humility is an essential ingredient in good governance**
 - People can work together to solve common problems, but **MONITORING** and **SANCTIONING** are **ALWAYS** needed
 - **There are no panaceas:** No policy proposal is a one-size-fits-all solution
 - It's always necessary to adjust policies to changing circumstances.
- Since all policy solutions are potentially flawed, we should maintain an attitude of **open contestation**, so we all can learn from each other, and from our past mistakes

Finding Reasons for Humility and Hope in Health Commons

- Resource-dependent communities realize the limits of human action, since **natural forces** are also critical
 - Similarly, health care professionals play essential roles in helping patients get better when they are sick, but the behavior of the patient and his/her social support network can make all the difference.
- **Finally, I hope Lin Ostrom's work on shared governance of resource commons can help inspire health care professionals to re-discover their common purpose**
 - Resource-dependent communities are motivated by survival instincts, and by their natural desire to insure a livelihood for their children.
 - I encourage you to pause to remember the deep well of compassion that convinced you to make this career choice in the first place.

Compassion was also deeply evident in the personalities of my colleagues and dear friends **Lin and Vincent Ostrom**. Here they are in a more informal setting, near their summer cottage on **Manitoulin Island, Ontario**.



**Back home again in Indiana,
Lin Ostrom as I knew her best.**

