Shared Stewardship of a Health Commons: Examples and Opportunities from Grand Junction, Colorado

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The purpose of this white paper is to introduce the reader to principles that support shared stewardship of a health commons, with particular reference to the case of Grand Junction, Colorado. By **shared stewardship** we mean the collective management of a community's resources related to the delivery of health care or medical services so as to make the most effective use of those resources for the benefit of all members of that community. We use Grand Junction as an exemplar of shared stewardship of a health commons, since it has been recognized as a national leader in the delivery of high-quality health care at unusually low costs over the last few decades (see Berwick 2009, Bodenheimer and West 2010, Nicols et al. 2009, Okie 2010, Thorton et al. 2010).

We are engaged in a long-term research project focused on identifying the principles or factors that can support this kind of success. We began by drawing upon the Nobel Prize winning research of Elinor Ostrom, Ph.D., on the community-based management of a natural resource. But the analogy between natural resources and those of a health commons is far from exact, and our analysis has identified factors that operate in different ways in these two contexts. These complications have implications for the ability of other communities to copy the success that leaders in Grand Junction have achieved. This white paper concludes with discussion of some opportunities and potential problems that may emerge as health care and community leaders in Grand Junction try to extend their record of success to achieve fundamental improvements in public health outcomes.

What is a Commons?

Generally speaking, a commons is any resource to which members of some group share access. Typical examples include common grazing land, lakes, or forests. Individuals may extract resources from a commons for their own private use, but if too many people extract too much in too short a period of time, the commons may be degraded or destroyed. This "tragedy of the commons" (Hardin 1968) can be avoided if someone takes responsibility for insuring the replenishment or maintenance of that resource. The question is who will pay the costs for doing so?

In this paper we use the term "stewardship" to refer to the practice of managing common resources in a way that insures the continued availability of that resource to future users. The problem is a classic dilemma: each individual has an interest in extracting as many resources as possible, and hoping that someone else will pay the costs of replenishment or maintenance. In the absence of effective stewardship, the commons will be destroyed.

Our colleague Elinor Ostrom was awarded the 2009 Nobel Memorial Prize in Economic Sciences for her demonstration that this tragedy is not inevitable. Over several years she examined case studies of natural resource commons which were successfully managed by

local users of that commons over long periods of time, as well as cases in which these efforts were unsuccessful. Community groups exert stewardship by establishing and enforcing their own rules concerning how many and what types of resources can be extracted, and when, as well as requiring contributions to collective efforts to maintain access to those resources. Ostrom (1990) summarizes her findings in an influential list of eight "design principles" which are satisfied, in one way or another, in cases of sustainable resource management. (These design principles are discussed below.)

Shortly after she won the Nobel Prize, Donald Berwick (before he became head of CMS) and other leaders in healthcare and public health contacted Ostrom about engaging in a group effort to discover and encourage the development of commons within the healthcare and health promotion sectors in the United States. We lead a research team (composed of faculty and students associated with Indiana University's Workshop in Political Theory and Policy Analysis) that has, through the generosity of the Fannie E. Rippel Foundation, been able to work with healthcare and community leaders in three communities (Grand Junction, Cedar Rapids, Iowa, and Bloomington, Indiana) to discover whether and which design principles are helping to support a commons of healthcare and health. This white paper summarizes our initial findings from this ongoing research project.

Health as a Commons

Our initial discussions focused on the serious concern that lessons drawn from the study of natural resource management (mostly in the developing world) might not even be relevant to the highly technical realm of modern healthcare. Technically speaking, Ostrom limited her conclusions to the management of common-pool resources, in which individuals extract resources from a common pool for their own use. Some commons are better described as public goods, in the sense that individuals jointly enjoy the benefits without any threat of exhaustion. Other commons are available only to those who pay a membership fee, as is the case for country clubs or housing associations. Health and healthcare policy encompass the full array of private, public, and club goods, and only a few aspects fit the technical definition of a common pool resource.

Access to emergency room services seems the best fit, since ERs are clearly subject to overcrowding and overuse in some circumstances. The patients are users of an ER who need to draw upon the skills of the physicians and nurses in order to improve their health. There are a limited number of medical personnel who can treat a finite number of patients at one time, just as there are a limited number of examination areas. If a patient comes to the ER for a non-emergency, the doctor who treats that patient is not able to take care of another patient who really needs emergency care.

Other important aspects of health care, like community health or insurance coverage, are more like public or club goods. Fortunately, Ostrom left open the possibility that the design principles might also be relevant to the sustainable production of public goods, especially at the local level. She also emphasized, from the very beginning of our research into health policy, that analysts cannot simply assume that conclusions drawn from one policy arena

can be automatically extended to cover over policy realms. Instead, she was adamant that there are no panaceas available for policy analysts, that any organizational structure or institutional arrangement has both strengths and weaknesses (Ostrom 2009).

We define a ***health commons*** as the entire supply of financial, physical, human, and social resources available for use in the delivery of health care (or medical services) to members of a specific group of individuals. Unlike a simple commons, however, these resources are rarely available equally to all members of the relevant group. Instead, different aspects of the relevant resources (in terms of specific forms of financial, physical, human or social capital) are owned or their use managed by organizations or individuals, many of whom are primarily interested in pursuing their own personal goals.

It is important to note that, in any community, the resources of a health commons are being allocated. Financial resources are allocated whenever prices are set through negotiations among stakeholders, physical resources whenever a patient undergoes a test recommended by a physician, human resources whenever employment decisions are made, and social capital is expended in any campaign to address obesity, smoking, or other public health concerns. Resource allocation takes the form of stewardship only when the people making these decisions take explicit account of their effects on the system as a whole, and make decisions intended to insure the continued availability of these resources.

Design Principles in Natural Resources and in a Health Commons

Finally, we are in a position to summarize the design principles that Ostrom identified as being critical to sustainable stewardship of natural resources. We illustrate each principle with examples from natural resource commons and the Grand Junction health commons.

1. Clear Boundaries: This boundary refers both the resource that is being shared and the users who need the shared resource. The geographic area that surrounds the resource of an agricultural growing region or a fresh water fishing area can have very specific boundaries. Having such a boundary makes it easier for the users of a commons to focus their collaborative efforts. The challenge in identifying the boundary for a commons in healthcare is that there are few natural or observable boundaries.

In Grand Junction we found a financially based commons that includes the physicians who are members of the Mesa County Professional Independent Physicians Association (MCPIPA) and the Rocky Mountain Health Plan (RMHP, but known locally as Rocky). MCPIPA and RMHP have created a boundary around all of the reimbursements for healthcare regardless of source (private insurance, commercial insurance and Medicare/Medicaid).

Some commentators who are aware of the successes in Grand Junction have discounted this accomplishment by implying that the level of collaboration, or commons-like behavior, could only have occurred in a low population area that is geographically isolated from large urban areas. However, in our study of Grand Junction we have that seen that, when

needed, the community leaders reached outside of this boundary to call upon other organizations, including a national professional association, and state and national elected and appointed official to increase the level of recognition for the community's autonomy – which is the second Design Principle.

2. Local Autonomy: When a commons is managed by a group of *only* users of that commons, there is more motivation to take care of the resources being shared. Given that payers for community-based healthcare often are not based in the community, and that many relevant rules are set at the national or state levels, and that new technological opportunities continue to become available, it is especially challenging to establish and protect a significant degree of local autonomy for healthcare.

In Grand Junction, MCPIPA, with its members making up more than 85% of the physicians in Mesa County, has worked hard for over 30 years to ensure that doctors maintained as much autonomy as possible to make the best treatment decisions for their patients while improving the productivity of their practices.

When the Federal Trade Commission and the Department of Justice communicated to MCPIPA that they were going to initiate an unfair trade action against MCPIPA, one of the member physicians reached through the medical community's boundary and sought the assistance of the AMA. The AMA brought to bear legal resources that enabled MCPIPA to continue to operate as autonomously as possible given the consent decree from the FTC. Without participation by the AMA, MCPIPA may have been forced to disband.

In many of the natural resource commons studied by Ostrom, the resource was located far from the national capital, and thus may have been of little interest to national level officials. As a consequence, local user group had a significant level of local autonomy conveyed on them by default. However, this autonomy was informal in nature, and could be upset by a change in national policy. In health care, local stakeholders need to take direct action to assert and realize a sufficient level of local autonomy.

3. Wide Participation in Collective Choice: Ideally, all users of a commons also have the right to participate in making decisions that affect the resource being shared as well as other relevant matters. This can be relatively easy to achieve if a small group both uses and manages a particular resource, but in other cases the users and managers may constitute quite different groups. If there is little or no connection between the two groups, then the managers are unlikely to have much of an interest in sustaining that resource.

In 2010, with facilitative support from the Institute for Health Improvement – who were invited to participate by a community leader, a new healthcare collaborative was established – the Mesa County Health Leadership Consortium (MCHLC). Represented organizations on the consortium include: the community health plan (RMHP), both local hospitals, Mesa County Public Health, the hospice, the mental health facility, the health information exchange, MCPIPA, and others. The group meets monthly to discuss issues and opportunities that affect Mesa County. Each representative, regardless of the size of his or her respective organization, is allotted one vote.

4. Monitoring: After members of a community have made an agreement to abide by common rules, the work of governance has only just begun. Each individual still faces incentives to shirk on responsibilities, and to undertake actions that serve his or her own personal interest. Thus, a critical on-going challenge concerns the need to monitor the extent to which members of that group actually follow the rules in question.

For the case of a resource commons, it is critical to monitor withdrawals to prevent excess use by members, and to insure that adequate efforts are made to maintain the relevant infrastructures. In many of the cases studied by Ostrom, it was relatively easy for members of the user group to monitor each other's behavior. For example, a farmer using a communal small-scale irrigation system can easily observe if an upstream neighbor is extracting too much water, and he has a personal interest in doing so, because that water would not then be available for his own use. His own extraction level, in turn, can be observed by his immediate downstream neighbor.

Physicians in the MCPIPA commons participate in a rigorous peer evaluation process on a regular basis with support from the Rocky Mountain Health Plan. Rocky staff prepare a report for each physician that shows how their testing and treatment practices match up against other physicians in their practice area. This report allows the physician to see if they are over or under-prescribing – both practices could harm their patient as well as incur additional costs.

MCPIPA has also created a number of productivity improvement programs that focus on patients with chronic illness. MCPIPA medical staff trains employees in physician practices about how to help patients with diabetes, heart disease, asthma and other diseases. The programs are voluntary and offer the participating physician a modest financial incentive. On a quarterly basis MCPIPA sends out a letter to all physicians, those they are participated are thanked for their efforts and receive a check. Doctors who do not participate are informed about the percentage of their peers who are participating, the results of the programs, and the amount of income they are forfeiting by not being involved.

5. Graduated Sanctions: Monitoring behavior is of little value unless those who violate rules are actually punished for doing so. And yet it rarely makes sense to expel a rule violator for a first offense. Ostrom argues that sanctions need to be applied in a graduated manner, with increasing sanctions being imposed for additional violations. In this way rule violators can learn of the increasingly severe consequences of their actions, and can reverse course before they go too far. Punishment needs to be certain, but groups also need to find ways to forgive those who have made earlier mistakes.

Throughout our interviews with Mesa County leaders we learned of a number of sanctions that ran the gambit from "taking someone out for coffee" to help bring their views and actions back in line with the goals of a group to the removal of someone from elected office because of inappropriate behavior. New physicians are also subjected to gentle forms of mentoring that encourage the adoption of locally-accepted forms of behavior.

6. Dispute Resolution Mechanisms: For some commons there are formal legal institutions that can help resolve disputes; in other cases informal mechanisms must be applied. Yet such mechanisms must be available, in one form or another, because the occurrence of disputes is inevitable. And since some disputes may involve interests that are critically important to one or more parties, these mechanisms need to be seen as fair.

The leaders in Mesa County primarily use informal means to resolve disputes. In many cases, the leaders in Mesa County are able to resolve problems before they become disputes as a result of a long-standing practice of open communication between parties, and particularly opposing parties.

7. Nested Enterprises. Formation of committees is a universal aspect of all forms of collective action. Even in relatively small groups, it is useful for even smaller groups to take on the responsibility for solving particular problems. Doing so is not only practical in the sense of saving time and effort, it also makes it possible for the community to take advantage of the distinctive expertise of different members. Another advantage is that doing so gets more members directly involved in the collective effort.

In a commons that is made up of organizational users, like in the health commons, it is especially important to delegate responsibility for achieving particular goals to committees or to stand-alone entities specializing in specific task. Members of the MCHLC have, on many occasions, jointly supported the establishment of clinics or other separate enterprises. In the process they add to the complexity of the resulting system of stewardship, but, by doing so they get more people involved in the collective effort of resource stewardship.

8. Congruence with Local Conditions and Fairness. It is very difficult to inspire continued efforts towards collective ends if those efforts fail to show any practical results. Similarly, if some participants pay high costs by contributing greatly to maintenance activities or by voluntarily forgoing temptations to cheat, while others reap disproportionate benefits from these actions, the former group will, eventually, stop contributing. In other words, the rules in place need to be at least minimally effective and fair. In a small resource-based community, inequalities in benefit are difficult to hide, but that is rarely the case in more complex settings.

During a MCPIPA meeting, a doctor may be identified as underutilizing or not embracing a productivity-enhancing tool like electronic medical records (EMR). Prior to levying any graduated sanctions or employing a dispute resolution mechanism, the leaders of MCPIPA consider how the short and mid-term goals of this physician might be different than the average member. The physicians who were not implementing EMR in their practices all were within a few years of retirement and would not be able to achieve any financial return for their investment in an EMR system. In this case, it seemed fair not to take any further action to encourage these doctors to learn to use electronic records.

Where Do the Design Principles Come From?

We are not the first observers to draw a connection between the characteristics found in Grand Junction and Ostrom's list of design principles. (for earlier efforts along these same lines, see Berwick 2009, Bodenheimer and West 2010, Nicols et al. 2009, Okie 2010, Thorton et al. 2010.) Ultimately, however, such an exercise remains incomplete, because it does not tell us how we might work to strengthen or sustain any of these conditions. In our research on stewardship in a health commons, we adopt a more explicitly dynamic perspective, in order to understand the processes underlying the original establishment (or not) of these design principles.

For the most part, commons research has focused on small-scale communities, often in remote areas, where individual survival is dependent on continued access to that resource. In such situations, concern for one's children and grandchildren naturally generates an appreciation for long-term sustainability of the resources upon which that community depends. In addition, social ties among users are typically dense and highly salient, and resource users are close to the action. All this facilitates the process of monitoring each other's behavior, and social sanctions are be very effective in warning of the consequences of violating community norms. Also, since everyone knows each other very well in small communities, a consensus can arise designating certain individuals as natural leaders.

Together, these conditions predispose small, resource-dependent communities towards fulfillment of the design principals identified by Ostrom. Of course, this is not an automatic process, since some resource-dependent communities have indeed suffered from a collapse of their critical resources, including examples which inspired Hardin's tragedy of the commons. The challenge for stewards of a health commons is to find alternative ways to generate conditions that can approximate the design principles in ways that are relevant to their own context.

In our research we have concluded that the most critical key to the success of Grand Junction lies not in its geographic isolation or its specific reimbursement schemes or anything to do with the details of its organizational structure. Instead, the critical factor is the way in which leaders interact with each other. In many settings, both formal and informal, they communicate with each other on a regular basis, and they do so in a way that builds mutual trust and respect. Leaders share many social ties outside of their professional careers, and these informal social networks are critical in sustaining a sense of community. Collectively they have taken ownership of their regional system of health care delivery, and defended their autonomy against threats from outside the region. And they have established regular procedures for sharing information and rewarding those physicians who perform best, according to the standards they have jointly set.

For multi-stakeholder collaborations, it is especially important that there are committed sponsors and effective champions at many levels who provide formal and informal leadership. Of particular importance to a health commons is the need to fill the role of convener. In the U.S., it is not at all obvious who has the authority to bring representatives of health and healthcare stakeholders together for discussions. In other countries public

health officials play this role, but in the U.S. public health remains institutionally separate from the operation of healthcare facilities. In Grand Junction this convening function was filled by a group of healthcare leaders, including the Director of the Marillac Clinic (that offers healthcare to the underserved) who contacted IHI to help establish the MCHLC.

In our opinion, the importance of the clarity of resource and social boundaries has been overemphasized or misunderstood by previous efforts to apply the design principles to a health commons. What is important is that all relevant parties are involved. As new problems are addressed, it may become necessary to invite other stakeholders to the table, because they control resources critical to the resolution of that particular problem. It is only after everyone is at the table that clear boundaries for the group can be achieved. In other words, clarity of boundaries is a consequence of the operation of the right kind of collaborative processes, and not a pre-condition for their success.

Even so, having a quasi-clear boundary in a geographic sense can be especially helpful in the areas of health stewardship. The Grand Junction area, and the broader region of Colorado west of the Rockies, gave residents a sense of needed to rely on each other rather than expecting help from others. Although this degree of physical separation is simply not possible in most parts of the country, it is still possible for local leaders to define the scope of their own authority, and to do so in a way that leaves them open to the possibility that others may participate when needed.

The system of shared stewardship did not arise fully formed in Grand Junction. Instead it was built over a long period of time. Habits of community collaboration were initially built through non-healthcare related projects, such as managing irrigation water for agriculture and restoring riparian habitats that had been damaged by mining operations. Armed with these initial successes, local leaders took on more difficult challenges such as establishing a hospice organization that now operates in a four country area. Currently, they are poised to tackle fundamental problems of improving public health, as will be discussed below.

One of the most striking aspects of the story of Grand Junction is the many ways in which leaders have attacked the problems generated by a shortage of primary care physicians. Having seen at an early stage how important it is to have a sufficient number of primary care physicians, they have implemented several different programs over the years to recruit such physicians to their community and to mentor them once they enter the system. This kind of focus is exemplary of the sense of ownership needed to support the level of autonomy required by the design principles.

Shifting our analytical lens to processes highlights the critical importance of learning to sustainable stewardship. Unless stewards learn from their past experience, they are likely to make the same kinds of mistakes over and over again. Yet, learning is impossible in the absence of good information on the results of previous collective endeavors. This is another reason why an initial focus on specific and realistic goals is so important, and why the group needs to keep moving onto new challenges, rather than remaining content to dwell on past successes.

Despite their nationally recognized success at delivering high-quality health care to an unusually wide portion of their population at relatively low cost, the community around Grand Junction has not scored as well on overall measures of public health. Improving public health will require the active involvement of the public as a whole. This is a very difficult challenge, and our analysis suggests that they should expect to face additional challenges as they move into this new area of shared stewardship.

In effect, the MCHLC governs much of health care policy in this community, albeit in an informal matter. Despite the informality of the procedures through which they establish and enforce common rules and norms of behavior, we argue that it is useful to turn to the study of public administration for relevant lessons and insights.

Bryson, Crosby, and Stone (2006) summarize the conditions that facilitate the creation of public value through the operation of cross-sector collaborations, that is, networks through which public, private, and voluntary organizations work together to solve public problems and realize their collective aspirations. Among the many propositions they examine are two that seem especially problematic for instances of shared stewardship of community health.

"Accountability is a particularly complex issue for collaborations because it is not often clear whom the collaborative is accountable to and for what." (Bryson et al., 2006: 51)

Although the MCHLC (and its more informal predecessors) has been diligent in pursing the public interest by stewarding community resources available for health care, the public per se has not had a direct voice in this process. In order to achieve its emerging goals in the area of improving public health, leaders must find some way to bridge this disconnect between public interest and public participation. To a great extent, it's a question of boundaries. Projects related to quality of care improvements or changes in financial reimbursements could be implemented directly by workers subordinate to the top executives engaged in cross-stakeholder collaboration, or through separate clinics jointly established and supported by their respective organizations. But public health can be achieved only by people themselves; some other way needs to be found to encourage people to take the actions necessary to improve their own health. Financial incentives, through wellness plans or other programs, can help, but only go so far. Ultimately, the public needs to feel that they are directly invested in this stewardship process and that the leaders in the MCHLC and related organizations are accountable to the public for the consequences of their decisions.

"Competing institutional logics are likely within cross-sector collaborations and may significantly influence the extent to which collaborations can agree on essential elements of process, structure, governance, and outcomes." (Bryson et al., 2006: 50)

The unusual dominance of non-profit stakeholders in Grand Junction has made some observers skeptical of claims that their record of success could be replicated elsewhere, especially in regions where inter-hospital competition is fierce. Although executives of non-profit organizations may be better situated to take account of long-term community effects when they are making decisions, it is certainly possible for leaders of a profit-making

enterprise to also take such matters into account, especially in an area such as healthcare, where caring for others is so critical to the mission of even profit-making enterprises. Ultimately, the question is not one of organizational structure per se, but rather in understanding the ways through which local leaders have managed to overcome past financial controversies, and especially in how they continue to cope with new challenges.

Anyone seeking to realize shared and sustainable stewardship of their local health commons can learn a lot from research on natural resource commons, and especially from the experience of leaders in Grand Junction. However, any lessons need to be fine-tuned to the conditions in place in one's own regional setting. Focus needs to be directed towards establishing and sustaining the right kind of *process*, where communication is regular and respectful among participants who remain open to new information and continual re-assessment of their past accomplishments and honest in their assessment of the challenges they face.

Bryson et al. (2006: 52) conclude that "*The normal expectation ought to be that success will be very difficult to achieve in cross-sector collaborations."* Shared stewardship of a health commons is difficult work, and leaders in Grand Junction should be proud of their success at overcoming these challenges for many years, and for the secure foundation this provides them for coping with the even more difficult challenges that lie ahead.

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