Health Policy Special Interest Group (HPSIG) of the System Dynamics Society
Meeting on System Dynamics and Health Reform
Sunday Afternoon, July 17, 2005

Comments on a Paper and Future Directions

Introduction

The meeting of the HPSIG at the 2005 ISDC focused on the question of why reform is so difficult to achieve in the US and other countries and the potential role that the HPSIG group might play in applying system dynamics to health care reform. The meeting began with a presentation by Dr. Steffie Woolhandler on the magnitude of the health care problem in the US. Then, Jack Homer and Gary Hirsch presented the highlights of the paper "Achieving Health Care Reform in the United States: Toward a Whole-System Understanding" that had been prepared in advance to provide a basis for discussion about health reform and the potential role of system dynamics. (Search on that title or one of the authors names to access that paper in the proceedings.) There were comments from a responder panel and then extensive discussion by the group about the paper and future directions that the HPSIG's work might take.

Comments Received Prior to the Meeting

The following comments were received in response to the paper, prior to the HPSIG meeting. Several came from Max Heirich, a long-time writer and authority on health reform:

- It's difficult to communicate complexity to non-modeling audience; a thorough analysis may actually discourage any action

- A better approach may be to identify promising strategies, use systemic analysis to help people understand benefits, and argue for demonstration projects.

- Diagramming the causal relationships has been helpful. We now need to understand the magnitude of effects shown in the causal relationships. Where are leverage points for affecting flow of resources through system? What are minimum effects required to shift its behavior?

- A bootstrapping approach starting with highest-cost patients may have value, but encounter resistance to up-front investment.

Additional comments we received included the following:

- We need to reflect effects of demographic shifts and changing payment mechanisms and money flow on utilization of health care and prevalence of risk and illness.

- Differentiate risk and disease management and include wellness orientation to prevent health risk.

- We need to understand that, historically, health insurance developed in the US as a way of guaranteeing provider revenue flow. Tax laws also made health insurance an attractive employee benefit (vs. higher salaries). These understandings need to be considered in strategies for changing the system.

- From an international perspective, health care is viewed as an industry in the US rather than a public service and is driven by vested interests instead of popular demand.

Magnitude of the Problem in the US

The HPSIG meeting began with an introduction by Jack Homer and a presentation by Dr. Steffie Woolhandler on the nature and magnitude of the health problems facing the US. Dr. Woolhandler is a co-founder of Physicians for a National Health Program (PNHP) and a faculty member of the Harvard Medical School. Highlights of Dr. Woolhandler's talk included:

- 15% of Americans (45 million) are without any health insurance coverage. Many of these people are employed by companies that choose not to provide health benefits. For example, only 38% of Wal-Mart's employees are covered. Health coverage for war veterans is also deteriorating.

- There is a direct relationship between presence and quality of health insurance coverage and health outcomes such as the probability of suffering a stroke.

- Globalization is producing pressure on US employers to cut back coverage because they must bear a much larger share of the cost than companies in other countries.

- In addition to cutbacks in coverage, Americans are incurring higher out-of-pocket costs for health care and prescription drugs. Current proposals on the table would increase the out-of-pocket share further.

- Much of the growth of health care costs and a substantial fraction of current cost is due to increases in administrative overhead. About half of the difference in health care cost between the US and Canada is due to administrative costs.

- Health care spending in the US is substantially greater than in other countries, but outcome measures such as life expectancy for men are worse.

- Spending in many areas of the US is already at a (lower) Canadian level. Variations that produce higher costs in many areas are difficult to justify.

- Surveys of both health providers and consumers reveal a preference for some sort of single payer system. Such a system would eliminate much of the administrative overhead and the money saved could help to cover those currently without insurance at no additional cost.

Presentation of the Paper and Comments of Responder Panel

Jack Homer and Gary Hirsch then presented the outlines of the causal diagrams and implications for health reform from the paper. There were a number of ideas expressed in response from an expert panel and the group as a whole. Reactions of the expert panel included those from:

<u>John McDonough, CEO of Health Care for All</u>

- The political system is not explicitly reflected in the diagrams and accompanying analysis and is a critical element that needs to be added. Representation of the political system should include the implications of the Federal structure (split of authority between national and state or provincial government) and the separation of legislative and executive branches in the US that can produce a stalemate as it is doing currently. There are a number of existing political models that could be incorporated.

- The emphasis in the US on making money vs. making people well should receive even more emphasis.

- Capitation has some potential for controlling cost. Past experience with capitation failed largely because of a lack of trust in health plans. Fee for service payment schemes lead to revenue maximization as the focus of care delivery.

- Disease management has shown some promise as a way of dealing with cost, but its effects are likely to be overwhelmed by medical inflation.

<u>John Rodat, CEO of Signal Health Consulting and HPSIG Member</u>

- The politics of reform are such that everyone feels they have “dibs” on whatever savings are generated. Reinvesting savings will be difficult.

- SD can offer an understanding of the importance of feedback, delays, and vicious cycles that policymakers can relate to. The challenge is how to communicate these ideas in terms they’ll understand. It’s also necessary to balance comprehensive vs. single-issue views.

- Regulation is tricky because there is a tendency for the regulator to become the “customer”. Providers and insurers try to please them and argue for more resources rather than working to improve service efficiency to the ultimate customer, the patient. High costs that ensue create an apparent demand for more regulation and a

"regulatory loop" that perpetuates this phenomenon. A different paradigm is needed. Some providers may opt out of regulatory schemes such as JCAHO accreditation so they can concentrate on real service improvement.

- John disagreed with the characterization that managed competition leads to gaps in insurance coverage. Some managed competition proposals such as that of Alain Enthoven can include universal coverage.

- The movement among various insurance coverage statuses (none-partial-full?) is the other key set of stocks that should be reflected in the model.

<u>Steffie Woolhandler, Co-Founder PNHP; Faculty member, Harvard Medical School</u>

- The model we are developing is useful for outlining hypotheses to test. It makes the connections explicit.

- The conclusion that powerful interests cannot be defeated may be premature. Coalitions that include businesses that are suffering the effects of impaired competitiveness due to high health care costs could be instrumental in changing things.

- Fee-for-service is not necessarily the enemy. It works fine in Canada.

- Managed competition may not have the means to succeed. The (redundant) business costs waste resources that could be used for more valuable things such as covering the uninsured.

Comments from Others In The HPSIG Group

An open discussion by the group ensued and produced the following additional comments:

<u>On the paper and the potential role of system dynamics in health reform:</u>

- Another worthwhile perspective may be that of young doctors making decisions about their careers. How will the incentives created by the payment system affect the paths they follow?

- We should look more extensively at literature on social determinants of health from the UK. Also look at linkages across health services and other departments in the UK that have made it easier to deal with health care and related needs.

- There may be incremental mechanisms within the current system for driving a greater proportion of care "upstream" toward more preventive care and risk reduction. An example might be creating a reimbursement code for wellness activities that are currently unreimbursed.

- The systems archetypes may be a good communications tool for getting our ideas across to policymakers and others. Group model building may be another tool for bringing more stakeholders to the table.

- There are actually multiple communities to deal with:
  - The SD community
  - Policymakers
  - Data folks

- Political feasibility of proposed structural changes is closely related to changes in money flow. Money flow needs to be a focus for quantification.

- Rather than trying to model everything at once, we might focus on a subgroup such as children, for example, and model the experience with expanding the access of children to health insurance and health care in different states in the US.   Differences among states may yield some useful clues about determinants of effective health system change. Doing this effectively with one segment such as children may build our credibility and enable us to generalize to other segments and to the system as a whole.

- It may also be useful to go to smaller areas (e.g., populations of 250,000 or metropolitan areas) rather than trying to model a country as a whole.

- Free trade agreements have the ability to spread the US' health care problems to other countries. An example is changes being forced on other governments regarding pharmaceutical purchasing.

- An important part of health reform is assuring that innovation occurs to reduce administrative costs. Insurance reform is key.

- Reform is a threat to pharmaceutical companies because they perceive it will entail price regulation. Pharmaceutical companies may be an inefficient way of getting innovation in drugs and it may be more efficient to spend the money on the NIH instead.

- Even in the UK where the whole system is under integrated management, change can run into political opposition. Key questions are: What is the right rate of change? How can you stimulate those who are unhappy to overcome the influence of the vested interests? What are the dynamics of shifts in positions of large groups? Smoking and anti-smoking campaigns were cited as an example of fairly radical shifts in public attitudes.

- One thing that may influence the public in favor of reform is the realization that those without access to care can be a threat to others if, for example, they develop a contagious disease.

- Investments in health may not get made if payors worry about turnover and losing the benefits of investments they make in health improvement and risk reduction.

With regard to what to do next:

- We need to be clear on what we are trying to accomplish.

- Show how stakeholders interface with the causal map. We need to bring together the three conceptual threads that are central to the work and relate to each other:
  - Health and disease
  - Political
  - Insurance coverage and financial

- We should propose a special issue of the System Dynamics Review on health systems to provide a forum for the parallel efforts we undertake.

- A number of people in the HPSIG expressed a willingness to engage in projects between now and next year's conference in Nijmegen. These could be analyses of particular countries' experience including SD models that help to explain why health reform efforts in those countries have been successful or unsuccessful. The efforts could focus on health reform in a national system or, as was suggested, a smaller segment of the population such as children or older people or a geographical area such as a state or province or metropolitan area. We could then have an expanded workshop at the Nijmegen to share what we learned from the different efforts.

- The Signal Health web site may offer a capability for doing collaborative work by posting work in progress on these parallel efforts.

- We agreed that the authors of the paper presented in the HPSIG session would make revisions to the causal diagrams to reflect some of the comments received and that the revised diagrams could serve as a template for the parallel efforts if people found them useful for that purpose.

(We subsequently learned from Etienne Rouwette, a member of the 2006 organizing committee that they are quite interested in having an influence on health reform in the Netherlands in connection with the Nijmegen conference.)

Business Meeting

The session ended with a business meeting at which Geoff McDonnell was elected President and Gary Hirsch Vice-President.