



Healthcare in America: Try Thinking This Way - Part 1

Gregory P. Shea, PhD, and Bruce Gresh, PhD*

The cries for healthcare reform, or the reform of reform, will grow during the election year of 2016. This guarantees an ongoing national perseveration about whither, what, and how the provision of healthcare in America will transform. Stakeholders in the complex system of providing and paying for America's healthcare have come to specialize in slicing off and manipulating sections of the system to further their own goals.

Politicians and the media, for their part, feed off simplification and the sensational flame-fanning that it enables. As complex technological, economic, and social forces reshape and transform the U.S. healthcare system, we need to move away from oversimplified and reductionist thinking, and we need to consider change in a holistic and systemic way in order to find possible interventions to improve the system. In other words, thinking more systemically and holistically about our system of healthcare only becomes more important in these times of change. Thinking in this way amounts to innovating by going back to the future, namely by employing older frameworks to see the current world both differently and, the authors argue, more productively.

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Publisher's Note: Part I of this article appears in this issue and Part II in the next. Part I will introduce the subject by presenting a sample of common viewpoints of healthcare in America and how to improve it before going on to begin the presentation of a systems perspective and how it might influence how we think about and therefore act to improve America's healthcare system. Part II will further develop the systems perspective, revisit the initial list of remedies presented in Part I, and suggest guidance for how we might proceed from there.

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► Introduction

Consider the following quote concerning healthcare in America.

Adequate emphasis should be given to facilities that are particularly useful for prevention of diseases—mental as well as physical—and to the coordination of various kinds of facilities. It should be possible to go a long way toward knitting together facilities for prevention with facilities for cure, the large hospitals of medical centers with the smaller institutions of surrounding areas, the facilities for the civilian population with the facilities for veterans.

We offer two observations concerning this quote. First, it takes a systems perspective on healthcare. It speaks of the whole even as it speaks of major components such as prevention and cure of mental and physical ailments, various facilities, and civilian along with veteran populations. Second, **Harry Truman** spoke these words on November 19, 1945, seven months into his presidency when healthcare comprised 4% of America's GDP, as opposed to more than 17% of America's current GDP.

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This article dusts off and reapplies that perspective to America's healthcare today, going back to the future in an attempt to avoid **Ambrose Bierce's** definition of hope, namely, “Hope, n. Desire and expectation rolled into one.” We respectfully rewrite this definition to fit more snugly the topic at hand: “The act, often repetitive and infectious, of expecting a desired and clearly more favorable future absent change of any sort on the part of the desirous and expectant.” We suggest that we need to change how we think about healthcare. Thinking affects how we see and thus how we act. We would benefit in particular from retaking a systems perspective, from going back to the future.

► Section 1: A Popular Question and a Flawed, Almost As Popular, Answer

Q: Why does healthcare cost so much in America while ranking so low in international rankings?

A: It costs so much because it's the best in the world. After all, people who are really sick with really bad diseases and maladies often choose to come to the United States for care if they can.

But: If this is the case, then why is it not supported by methodical international comparisons such as the Commonwealth Fund's Mirror, Mirror on the Wall analysis, which ranks the United Kingdom much higher than the United States in effective care, safe care, coordinated care, and patient-centered care—while per capita healthcare spending in the United Kingdom is 40% of that in the United States?

Top U.S. hospitals and physicians provide highly specialized services that rank among the best in the world, but the United States lags behind many other countries in survival rates for many diseases, and the typical experience of U.S. healthcare consumers is variable quality, mediocre patient experience, and very high cost.

What are some of the key dynamics behind the U.S. dilemma of unsustainably high costs and poor performance? Let's start with a bit of international context:

- In 2014, U.S. healthcare spending was 17.1% of GDP, compared to the OECD average of 8.9%.
- In 2013, U.S. life expectancy at birth was 78.8 years, compared to the OECD average of 80.5.
- The U.S. has fewer physicians per 1000 population (2.6) than the OECD average (3.3), and fewer hospital discharges per 1000 population (125) than the OECD average (156), but it has over twice the number of MRI exams per 1000 (107) than the OECD average (51), and over twice the per capita pharmaceutical spending (\$1,034) than the OECD average (\$517).

Nearly everyone reading this article most likely finds these numbers familiar—worth repeating and familiar. This article focuses on how we tend to understand and discuss what produces these numbers and the connection of “how” these numbers occur with “what” we recommend and with what will actually work.

► Section 2: Elixirs in Good Standing and Abundant Supply

Remedies to the U.S. dilemma of unsustainably high costs and relatively poor performance abound, and they include the following, all of which are in play at the moment:

1. Provider consolidation will be good for you. It will bring the blessings of care coordination, economies of scale, and better care for lower costs.
2. We need to eliminate barriers to access and affordability, so that every American can receive access to world class health care at every point in his or her life. If we can provide services, we should.

2014 Healthcare
Spending

17.1%
of GDP

2013 U.S. Life
Expectancy at Birth

78.8
years



3. The triple aim is the solution. We need to improve population health, decrease per capita expense, and improve the patient experience. That will solve our problems.
4. Health care consumers need skin in the game, and transparency will empower them and improve value dramatically. It will bring the power of the market to bear and drive providers toward efficiency and effectiveness.
5. We need more regulatory oversight of providers, insurers, as well as drug and device companies, and the government should use its purchasing power to keep costs in line.

We are all well experienced in hearing and in providing these answers. Yet, if they are the right ones, then why the rampant frustration? And why the continued and often frenzied recycling of finger pointing in the apparent hope of disabusing one another of folly? Ambrose Bierce provides a potentially useful perspective on our tail-chasing, finger-pointing folly, “Disabuse, v.t. To present your neighbor with another and better error than the one which he has deemed it advantageous to embrace.”

Let’s start by taking a more systemic perspective.

► Section 3: Toward a Systems Perspective

If we think about healthcare in America as a complex and dynamic system, then we forgo the comfort of easy sound bites and simple unidirectional causal thinking. In exchange, we can gain useful perspective on the ways in which policy choices and stakeholder actions might realistically play out over time. In this section, we will consider two important characteristics of complex systems and their applicability to healthcare.

Dynamic interconnectivity and feedback

The naturalist **John Muir** observed that “When we try to pick out anything by itself we find that it is bound fast by a thousand invisible cords that cannot be broken, to everything in the universe.” His observation referred to the natural world, but it also applies to most issues in healthcare. Consolidation in the hospital industry (Elixir 1 in the previous section), for example, has often been described as a path to economies of scale, more efficient allocation of resources, and, combined with the acquisition of physician practices, better coordination of care. Those claims, while not strongly supported by empirical evidence, also tend to ignore the potential ties to broader systemic effects, such as the interplay between hospital/health system consolidation and insurer consolidation.

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This same pattern reappears with many complex issues—unidirectional causality and a lack of attention to other potential systemic connections and effects. As healthcare evolves and is transformed in complex ways, we need a more holistic and systemic paradigm for thinking about change. One way of creating, developing, and testing more systemic theories of issues like consolidation is to use diagrams that show potential causal relationships within systems. For example, a simple systems diagram of hospital consolidation might look something like Figure 1.

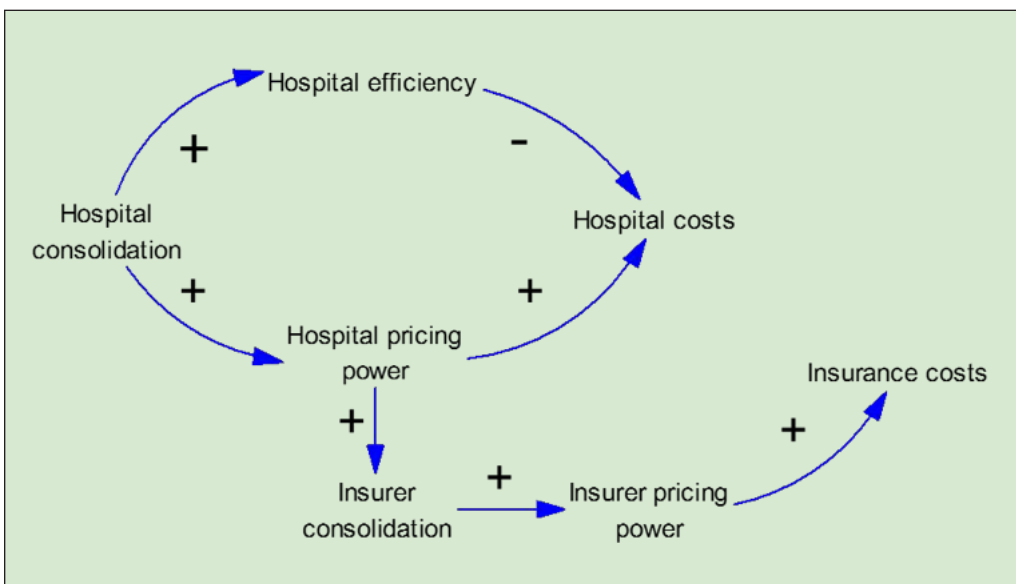


Figure 1:
Hospital consolidation.

In this representation, hospital consolidation might lead to improved efficiency, but it might also lead to increased pricing power. The actual effect on hospital costs would depend upon the relative strength of consolidation on efficiency and pricing. In addition, increased hospital pricing power via consolidation might encourage increased insurer consolidation, leading to increased insurer pricing power. If the hospital consolidation effect is stronger on pricing power than on efficiency, then both the hospital and insurer consolidations might lead to higher costs.

This kind of systemic formulation of a complex issue can help focus research efforts (i.e., Is this model correct or not and how strong are the effects?), inform policy development, and guide strategy development by industry stakeholders. In addition, it can help us identify potential unintended consequences. The Patient Protection and Affordable Care Act (ACA), for example, encourages the coordination of care by aligning hospitals and physicians in accountable care organizations (ACOs). Providers have responded to this regulatory change by increased consolidation to gain scale for initiatives such as population health management and assumption of risk.



If consolidation does indeed have an impact on pricing as represented in Figure 1, then we might want to incorporate the effects of consolidation into the results that we expect from the ACA. Figure 2 shows the ACA as a response to the problem of unsustainable healthcare costs. It suggests that, if the ACA encourages consolidation, and if consolidation leads to increased pricing power by providers, then we may see an unintended consequence of the ACA become increased pricing power of providers. If the higher costs associated with increased provider pricing power exceed the savings achieved due to better care coordination, then the ultimate effect of the ACA could be rising costs.

The ACA, of course, touches many aspects of healthcare, and the benefits of better care coordination and greater access might outweigh any increased costs. Nevertheless, we ignore the potential unintended consequence of higher costs at our own peril, particularly since unsustainable healthcare costs were the *raison d'être* for the ACA. In systems thinking, the pattern of an intended outcome (such as better care coordination), being accompanied, and perhaps overshadowed, by a potential unintended consequence (such as higher costs due to greater provider pricing power) is sometimes referred to as a “fixes that fail” pattern.

Media sound bites and ideologically driven political arguments about the ACA will continue. However, the prominence of healthcare in the U.S. economy, and the importance of it in our day to day lives, suggests that

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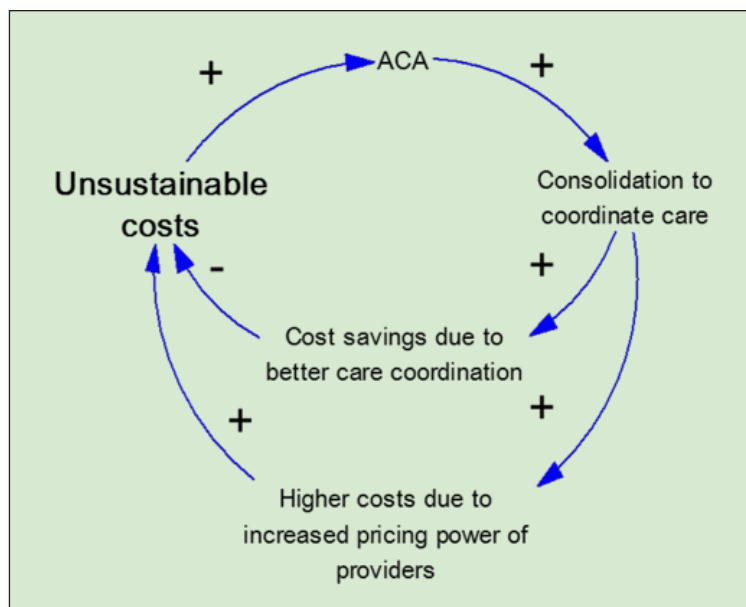


Figure 2:
Affordable Care Act
(ACA) reconsidered.

deliberate consideration of the systemic effects and potential unintended consequences should provide a more holistic (and effective) framework for evaluating the impact of this and other legislation. In addition, a systemic perspective can inform strategy development and identify business opportunities for numerous industry stakeholders.

While the consideration of potential unintended consequences can prove valuable, it also presents the practical problem of attempting to include second and third order effects into strategy analysis or policy development. This is complicated by another characteristic of complex systems—unclear boundaries.

Unclear boundaries

The often-cited international comparisons showing America's extraordinarily high level of healthcare spending and poor performance on public health measures such as life expectancy suggest that Americans do not receive good value for the amount of money that they spend on healthcare. However, they may also suggest that we should consider broader social issues that influence health status in our analysis of healthcare spending. We need to consider explicitly the appropriateness and clarity of the boundaries we place around what we define as constituting "the system" under examination.

For example, in 2013, the life expectancy at birth was 72.3 years for black males and 76.7 for white males; the 4-year gap in 2013 was an improvement, but not a dramatic improvement, over the 6-year gap in 1960. Access and provision of healthcare may play a role in this difference, but a complex set of socioeconomic factors clearly plays a role as well. A simple systemic view of health outcome disparities might look something like the diagram in Figure 3.

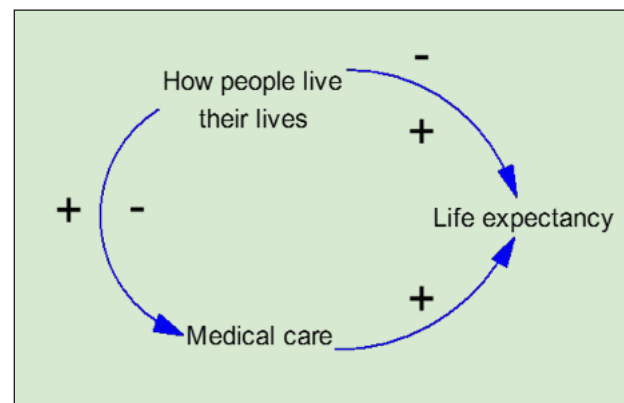


Figure 3:
Life expectancy.

In this diagram, "how people live their lives" represents the combined impact of the various social and economic factors that influence longevity. Those factors, in addition to influencing life expectancy, influence the consumption of, and spending on, medical care. The use of broad public health metrics such as life expectancy to judge the efficacy and effectiveness of spending on healthcare services may lead to overstating the role of medical care and understating the role of "how people live their lives."



Similarly, overemphasis of the role of medical care on an outcome such as life expectancy may increase the risk of our allocating medical resources in a way that fails to improve health and that generates other unintended consequences. For example, if we frame diabetes as primarily a medical problem to be solved with medical interventions, we may divert attention away from lifestyle factors that influence diabetes. As a result, we may end up treating diabetes as an acute and expensive medical problem, rather than focusing on lifestyle interventions to prevent and/or control it in the early stages.

In short, the combination of unclear systems boundaries with dynamic interconnectivity and feedback produces a great deal of complexity and interacts with other characteristics of complex systems—such as nonlinear cause and effect, tensions among stakeholders, and difficult tradeoffs. These tradeoffs carry particular importance whenever we attempt to change a system. We will discuss these characteristics in Part II of this article.

► Section 4: What Happens When We Try to Change a Complex System Without Consideration of the Complexity and Systemness?

Daniel Kahneman has observed that when people are presented with complex problems, they tend to solve simpler problems. Based on our own experience, we would also suggest that when people apply simple solutions to complex problems, the result often amounts to shifting or reallocating the burden from one part of the system to another.

Health insurance affordability, for example, is a longstanding problem in the United States, and the ACA addresses the problem by using health insurance exchanges and subsidies to expand coverage. Although decreasing the number of uninsured and providing better access to care certainly qualify as well-intentioned social goals, we still need to understand and address the root cause of the problem (very high costs) and ask whether the long-term effect of coverage expansion through subsidies solves the problem or makes it worse. Figure 4 shows the use of health insurance subsidies as a “shifting the burden” pattern. In this representation, the high cost of health insurance encourages the use of subsidies (a symptomatic fix), which in turn enables otherwise unsustainably high costs. More fundamental payment reform would be more complex and take much longer, so the reliance on subsidies, being easier, receives primary

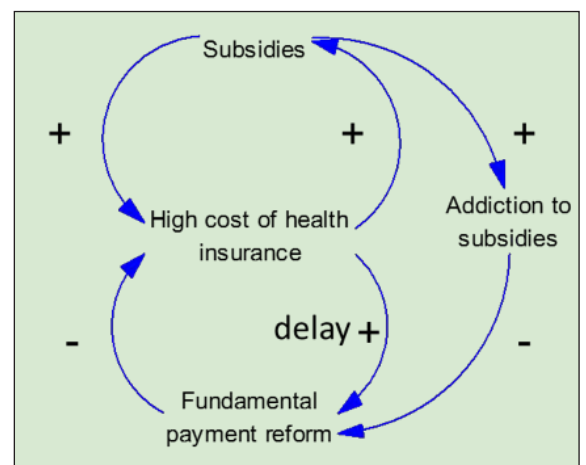


Figure 4:
Addiction to subsidies?

emphasis. At the same time, the provision of subsidies creates an addiction by numerous stakeholders (e.g., those insured through subsidies, providers who see a reduction in bad debt because more people are insured, insurers who can expand their markets, etc.). This shared addiction to subsidies generates combined stakeholder pressure to maintain them and decreases the urgency to make more complex and difficult payment reforms.

Given the above, the questions about how to change the system change along with the determination of the most likely foci of change. Which fundamental reforms might actually obviate the need for subsidies? How and when might subsidies be phased out? How will we deal with the problem of stakeholder addiction? Overall, what fundamentals drive the high cost of health insurance, and how can we influence them?

In addition, we might expect that in the absence of a systems perspective, emotionality makes clear thinking and effective intervention more difficult. Fragmented, partial thinking about complex systemic issues

fosters shifting the blame and passing the buck. In this example, decreasing or eliminating subsidies, regardless of the presence or absence of fundamental payment reforms, is likely to elicit highly emotional responses by the various stakeholders, some of whom will almost certainly portray themselves as victims.

The resulting narrative will play out in a personalized and emotional tone: “If only they would do X, then all (or at least much more) would be fixed.” “X” can equal any one of various “greedy” or “careless” or “narrow-minded” stakeholders. “X” can equal focusing on a single variable such as utilization or price transparency. Or, “X” can equal adopting an orientation such as consumerism or meaningful use. These approaches, especially the first one of focusing on a given stakeholder, leads to personalization and opacity. Points and counterpoints fly. Emotions escalate and somehow what seemed clear turns cloudy. A large part of that turning occurs because the responsibility of a given player, significance of a variable, or impact of most orientations cannot match the overall power of the system. Much of that background noise, that acoustic cloudiness, comes from the system. It is, in effect, the other unnamed, unaccounted for variables washing out the impact of one stakeholder, a single variable, or a given reorientation.

Frustration mounts. The search for a scapegoat heightens. Whack-a-mole becomes a national sport. One more split screen appears filled with talking heads fighting for air time to highlight one aspect of but one surface behavior. Anxiety

“This shared addiction to subsidies generates combined stakeholder pressure to maintain them and decreases the urgency to make more complex and difficult payment reforms.”



grows and American voters and consumers of healthcare throw up their hands and return to trying to make the system as it exists work sufficiently well to care for their families without hobbling or even breaking them financially.

Questions such as what is the full cost and benefit or value of any given healthcare choice drift further from the national debate. For any of a myriad of conditions, what is, for example, the real value of a visit to an ER versus to an Urgi-center or a Skype consult? Should it be compared to an office visit or to having no medical attention and in the presence of what other variables configured in what way?

How might we go about thinking and improving a system as complex as American healthcare? Systems thinking stresses that much of what one sees follows from a collection of variables interacting. Identifying the variables and describing their interactions can increase our understanding and guide our actions. In the next issue, we will expand consideration of systems thinking principles and describe how they might inform strategy and policy. ■■■

▶ Author Disclosure Statement

No financial conflicts of interest exist.

▶ Notes

Ackoff RL, Rovin S. *Redesigning society*. Redwood City, CA: Stanford University Press. 2003.

Bierce A. *The Devil's Dictionary*. New York: Oxford University Press. 1999.

Birkmeyer JD, Finks JF, O'Reilly A, et al. Surgical skill and complication rates after bariatric surgery. *N Engl J Med* 2013; 369:1434–1442.

Davis K, Stremikis K, Squires D, and Schoen C. *Mirror. Mirror on the wall: How the performance of the U.S. health care system compares internationally*. The Commonwealth Fund. 2014.

Health, United States. U.S. Department of Health and Human Services. 2014.

Kahneman D. *Thinking fast and slow*. New York: Farrar, Straus, and Giroux. 2011.

Limbaugh RH, Lewis KE, eds. *The John Muir papers, 1858–1957*. MICROFORM, Stockton, CA: University of the Pacific. 1980. (With accompanying guide. Alexandria, Virginia: Chadwyk Healey. 1986.)

Miller JG. *Living systems*. New York: McGraw Hill. 1978.

Moses III H, Matheson DHM, Dorsey ER, et al. The anatomy of health care in the United States. *JAMA* 2013; 310:1947–1964.

Organisation for Economic Co-operation and Development. *OECD health statistics 2015*.

Senge PM. *The fifth discipline*. New York: Doubleday. 1990.

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