FOREWORD

"Once upon a time," may be the four most powerful words in the English language. They capture attention and introduce a story, which is the best way to explain a new and complicated idea, especially an idea that refutes conventional wisdom

This book reports such a story—told by doctors, nurses and hospital administrators—of how a new idea, called "systems thinking," helped to transform the way they understood and organized their work and allowed them to dramatically improve over sixty sick hospitals: saving lives and reducing costs and patient suffering.

Astounding and significant as that is, the story also offers a solution to America's biggest and most pressing domestic problem: healthcare. Every lawmaker, civic leader, employer and informed citizen knows four facts about healthcare: (1) healthcare is the biggest domestic problem they face; (2) healthcare financing costs are spiraling out of control; (3) many millions of Americans have no health insurance; and (4) these leaders do not agree or know how to fix these problems.

More and more Americans are aware of another four facts: (1) that personal and family healthcare costs are crippling; (2) that as hospital patients they are not the center of attention; (3) that hospitals are dangerous places because hospital-acquired infections are among the top five causes of death in the United States; and (4) that people feel helpless about this and have no idea what to do to improve the situation. Many hospital administrators, physicians, and nurses know four additional facts: (1) that most American hospitals are sick; (2) that they are crippled by inadequate and outdated management practices, unnecessary duplication of services and astounding waste; (3) that hospitals generate many avoidable, often deadly, mistakes—including countless "near misses," that is, mistakes that almost happened; and (4) that it is in hospitals where the turnaround in healthcare costs and safety must begin.

Like any great change, it begins with a new idea, one which we said defies conventional wisdom.

The compelling and urgent impetus behind our book and its companion PBS documentary is more than significantly increased patient safety and reduced healthcare costs, as important as they are. It is the story of an important new idea, systems thinking. It is a story of how systems thinking could be transported from the factory floor of an automobile plant and used to improve safety and costs. We believe it is crucially important for all Americans to understand systems thinking, realize its immediate practicality, and recognize that it is being successfully used in improving organizations from schools to hospitals to government offices, manufacturing plants and families. Many more urgently need it.

Here is a summary of the story.

Once upon a time, there were two hospital systems, one run by a nun, the other led by a bureaucrat. Their doctors, nurses and administrators were well educated and deeply committed to healing the sick. They did their best and worked overtime trying to improve the healthcare services they provided. Yet things kept getting worse.

Every day, more and more patients acquired new infections at the hospitals. There were medical errors. Patients suffered and died unnecessarily. Enormous wastes of time and supplies and potential errors were hidden in traditions, habits and conflicting regulations. Costs kept spiraling upward, mistakes kept happening, and the healthcare professionals and administrators were ever more concerned and frustrated.

They knew they were not alone because they saw a steady stream of books, magazines and newspapers reporting that U.S. hospitals are expensive and dangerous, potentially deadly places.

Their situation seemed hopeless. However, the leaders were open to new ideas.

Administrators at one Midwest hospital system in the late l980s found out about systems thinking and began to use it. It worked. Deaths, suffering, waste and errors were reduced. In the late l990s a group of hospitals in Pittsburgh joined with insurance companies and employers to try to improve their services, while they still competed for patients.

How they did it is one of the most fascinating parts of the story. They found an auto manufacturer who taught them systems thinking and its new way of looking at their work. Patient safety began to improve dramatically. Doctors and nurses in both hospital systems reported they found their work more rewarding.

Systems Thinking

The term "systems thinking" may sound complicated and technical, as if only scientists or mathematicians could grasp it. However, you don't need a college degree to understand systems thinking.

When applied to a complex organization such as a hospital, systems thinking simply means focusing on the organization as a whole—and transforming it as a whole—rather than paying attention only to its various parts or departments. This is what the doctors, nurses, and administrators in our story learned to do. Instead of just concentrating on their own job, typical of people in most organizations, they began looking at how all of the

different people and technological devices in their hospitals worked together on behalf of the patient. Once these people learned systems thinking, they applied it to heal sickness, reduce failure and mistakes, and eliminate waste at every level in their hospitals.

In this book, doctors, nurses, administrators, aides—regular people—tell in their own words how they overcame doubts that they could provide "perfect patient care," identify errors, reorganize how they worked together, learn a new systems way of thinking, develop "new eyes" to design better and better methods, and get to the roots of problems.

Systems thinking is not a panacea that can erase every mistake, but it is a tool for seeing a world that can be improved and solving many organizational problems. In this way, it helps create a society better able—than it has been—to deal with the constant changes and growing complexity in our 21st Century world.

Uncertain World

One hundred years ago, most people accepted that the world was an uncertain place in which extreme weather, disease, and political events unexpectedly disrupted lives. People were upset but not surprised that bad things happened.

Today with technology that helps us predict a good deal of the weather, prevents many diseases, air-conditions our homes and cars, takes us to the moon, etc., many of us have come to believe we can create a certain world and control it.

Unconsciously, we like to believe that technology can forestall bad events and when it doesn't, it's only because someone failed to take appropriate measures. We believe we can get back into control as soon as we discover whom to blame—and get rid of them. However, that doesn't work.

Paradoxically the great advances in technology, communications, transportation and growth of organizations have not improved our ability to predict outcomes. Often these advances create unintended and unwelcome consequences more difficult to foresee or to control. Simple examples of this increased complexity are more deadly terrorists, huge multi-national companies that no single government can regulate, a bacterium resistant to antibiotics, infants with special needs who would not have survived 20 years ago, and older, sicker patients who would have died in the hospitals of the l980s, etc.

Unintended Consequences

All these changes demand new thinking to cope with these unintended consequences of complexity and new inventions occurring throughout society. Hospitals are the frontlines of this paradoxical change where good and bad effects need to be sorted, managed and improved. Systems thinking can do that.

The stories in this book are about managing —not controlling— an uncertain world and learning to predict outcomes and to produce what you intend.

Authors

I am a journalist, and my co-author is a scholar. I, the journalist, produced an NBC documentary in 1980, "**If Japan Can... *Why Can't We?***" It introduced systems thinking to the West and described how an American statistician, W. Edwards Deming, taught the Japanese to use it and work smarter not harder to produce continually improving automobiles and electronic goods. ("**If Japan Can...**" was named by **The Washington Times** as the second most influential documentary in the history of motion pictures and television in 2005.)

It took me ten years to begin to understand this new mindset Dr. Deming was described. That was in spite of the advantage of working with him the last 13 years of his life to explain these ideas in the 32-volume Deming Video Library. I gradually understood the many pieces of his philosophy, e.g. continual improvement, no blame or fear, cooperation rather than competition, etc. But even after I saw how groups or organizations of people working together with these rules and good leadership could be greater than the sum of their parts, it was difficult to explain. My breakthrough came when I videotaped a conversation between Dr. Deming and Dr. Russell Ackoff, Professor Emeritus at the University of Pennsylvania and author of seminal books on systems thinking. I finally understood that theirs was a different worldview of how to organize people and work to be more effective, efficient and personally rewarding.

In the late 1990s, I began to work with Dr. Louis M. Savary, a statistician, theologian and author, to study the systems mindset and how to teach it, particularly in the workplace. We concluded it can be most effectively communicated experientially, which is why we have written this book featuring the personal experiences of medical professionals as they learned systems thinking and began to apply it every day in hospitals.

Western Difficulties

Systems thinking can be difficult for Americans and other Westerners. Western scientific thinking, which asks questions about the truth of the world and mounts experiments to test its theories, provides an essential element of systems thinking. However, it is only

one element in the foundation or infrastructure of this revolutionary mindset.

Unlike the limited individualistic, single-focused, pragmatic, direct cause-and-effect approach of the scientific method, the systems mindset is about relatedness, interdependencies, and deep-seated causes. Instead of focusing on actions, it focuses on interactions—what happens between individuals and between teams, groups, and departments.

A system cannot be grasped by analysis, the backbone of scientific thinking. Analysis takes wholes, e.g., a machine, a piano, etc. apart and looks at the actions of the parts—how things work. In analysis the whole is equal to the sum of the parts. On the other hand, synthesis studies the interactions—why things happen. Systems thinking requires analysis and synthesis and the ability to appreciate a system's intangible and beyond-linear qualities, its greater whole, as well as the larger system of which it is a part. In synthesis, the whole is the product of the interactions of its parts. An easy example is a champion sports team, which is greater than the sum of its parts. Sadly most teams and organizations, even families or people, add up to less than the sum of their parts.

Experts have observed that this new way of thinking, the ability to grasp and appreciate a system, appears more attuned to Eastern philosophies of long-term cooperation, flow-of-life thinking and life-long learning than to Western principles of individualism, competition, quick fixes, and short-term results. Dr. Ackoff, America's leading system's teacher, says the East is learning scientific thinking more rapidly than the West is learning systems thinking. We think he is correct and that this is a serious problem for the West. Scientific thinking is easier for a systems thinker to learn than vice-versa.

This book is our effort to explain and help Americans reap the benefits of systems thinking as well as dramatically improve hospitals. When combined with scientific thinking, we believe it can produce an evolutionary leap in human consciousness and consequent effectiveness. That is beginning to happen in Pacific nations, which have a long history of appreciation for systems.

The West has been working with these ideas for more than 25 years. They have not been easy to explain or hold onto. For instance, the American automobile industry seemed to "get" them briefly in the early 1990s but soon lost them to a new generation of short-term-

thinking managers and executives more interested in profit than pleasing customers.

Don't Blame Hospitals

It must be noted at the outset that not every hospital in the United States can be labeled "sick and dangerous." A number of American healthcare facilities have remarkably improved their organizational health. We are telling the particular how-to stories of these two large hospital groups. (And not incidentally, these hospitals are becoming more profitable as they improve services and reduce waste.)

Furthermore, we do not blame healthcare workers, hospitals or the people running them for the sorry state of healthcare delivery today. Today's hospital problems are the result of a nationwide healthcare management and delivery system that may have worked well enough in earlier times but is now overwhelmed by a complexity bordering on chaos. This complexity is intensified by a continuing avalanche of breakthroughs in technology, healthcare equipment and methods, a plethora of new drugs, sicker patients, a labyrinth of insurance reimbursement regulations, people living longer, reduced hospital stays, and a dramatic rise in chronic illnesses that hospitals are unprepared to treat. And this list does not factor in the millions of Americans without health insurance, many of whom could be served if health costs were reduced.

Learning to Work Smarter not Harder

This health system failure cannot be fixed by blaming individuals. Seeing and improving the system, rather than blaming individuals is a basic tenet of systems thinking.

At first glance, systems thinking sounds un-American. This is because many of the ideas and practices that made America great in simpler times not only don't work anymore, but now actually sabotage complex organizations like hospitals and schools.

For example, " doing your best", unless you understand how your work fits into the whole hospital, can make things worse. Nurses, who used to hide wheelchairs in a bathroom to save them for their patients, were doing their best to help make things better for those under their care. In a previous era, such nurses might have been seen as outstanding, caring employees with initiative. However, a story in the book explains how today in a large hospital complex, caring nurses stashing wheelchairs in bathrooms can help defeat the

system. For example, such practices can spread diseases if the hidden chairs are not properly sanitized, cause a shortage of available wheelchairs, require new wheelchairs to be purchased, and delay many patients from getting the care they need.

Systems thinking also does away with blame and the American truism, "If it ain't broke, don't fix it." Systems' foundation is cooperation, not competition. Its outlook is long-term, not short-term. Its focus is pleasing the customer/patient and finding effectiveness and joy in work. Systems thinking has also shown that, when used to focus on satisfying customers, company profits will take care of themselves.

In typical American linear logic, 2 + 2 always equals 4. In systems thinking, however, 2 + 2 may not only add up to four, but to 3 in a bad system, or to 22 in a great system. Any system can generate effects that are more—or less—than the sum of its parts. Showing people how to create a greater whole is the underlying purpose of systems thinking, i.e., getting more for less effort, working smarter not harder.

For a systems thinker, there is never a "best" way to do a job. Every process can always be improved. A systems thinker never stops learning and seeking ways to make something better.

One More Thing

By the end of this book, you will know how a hospital or any organization can begin the process of transforming itself as well as how to identify a continually improving one. One American CEO of a major automobile corporation found the ideas of "never ending improvement" exhausting and depressing. We "can-do' Americans like to be finished with jobs and problems. That's not possible in continual improvement.

The readers we have in mind include healthcare consumers or potential patients, relatives of patients, hospital administrators, healthcare policy makers, hospital staff, physicians, healthcare insurers, employers paying for employee healthcare insurance, state and federal lawmakers, concerned taxpayers and people seeking to improve any organization.

Moreover, since everyone is a potential hospital patient, the issue of improving patient safety and care in our hospitals is vital to us all. Any one of us could be among those 200,000 patients who die each year in American hospitals, but don't have to.

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Washington, D.C.
April 2005