

Chapter One

The Mess We Are In

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Health care in America tends to be inconsistent, badly organized, often inefficient, inadequately supported by basic care improvement tools, too often both unsafe and operationally dysfunctional, deeply data deficient, and -- with all of those challenges and all of those functional problems -- far too expensive. We clearly need to improve the delivery of care in some important areas of care delivery in this country. We also need to spend less money on care.

Let's start with some macro numbers about health care costs in America.

We spend nearly 2.8 trillion dollars a year to buy health care in this country.²⁴

That is a huge amount of money. If our health care economy was its own country, it would be the fifth largest country in the world.²⁵ We spend more taxpayer-generated dollars on health care than any other country in the world and then -- in addition -- we also spend far more money in private, non-governmental dollars to buy health care than any other country in the world²⁶ -- so we win twice.

Or we lose twice -- depending on how you feel about spending major amounts of money on health care.

That massive cash flow really is a mixed blessing.

Why is it mixed?

Health care is a very robust part of our economy. People in the health care portion of our economy tend to do well financially. Health care creates a lot of jobs²⁷ and almost all of those jobs are both local and well-paying. Health care paychecks flow into just about every local economy in America. Our hospitals alone are the largest non-governmental employers in the country.²⁸

We also have a thriving American industry for the manufacture of medical equipment and supplies. We actually have a healthy and positive balance of trade for our medical technology sales. That is a good thing. We continue to be a world technology leader for care and that is a very good thing for our economy.²⁹

We also lead the world in health care IT.³⁰ Our health care systems companies tend to be the largest health care systems companies in the world and those companies also generate both good local jobs and a positive balance of trade.

That Huge Cash Flow Is a Mixed Blessing

So health care -- from a pure economic perspective -- is clearly a mixed blessing. It creates great jobs and it destroys budgets. It saves lives, and it crushes people economically. The costs of care create great incomes for health care workers and for health care businesses and those same exact costs of care have eaten away the purchasing power of American families, crippled some state and local budgets, and bankrupted a lot of American patients. Surprisingly, there is no link between the cost of care and the quality of care -- and some of the most expensive care sites and some of the most expensive care procedures have the highest levels of patient damage and the highest rates of patient mortality.³¹

Sepsis care, for example, has been an area where the highest cost care sites have also -- far too often -- had the highest death rate for their patients.³² That outcome alone, clearly tells us that we have a major opportunity to improve the business model we use to buy care in this country and it also tells us that we are spending too much money for significant aspects of care.

Overall, care costs are obviously very high, and going up for the country.

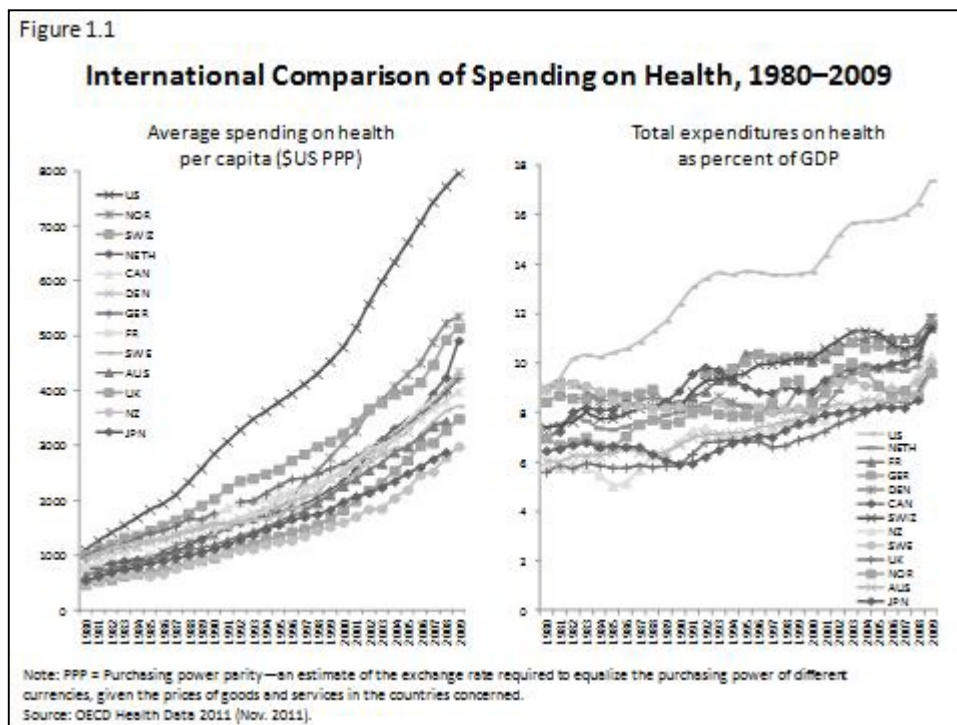
Health care premiums that are needed now to buy full benefit levels for a family of four in America already significantly exceed the total minimum wage for an American worker.³³ The pure new health care costs that have been channeled into our health insurance premium increases every year have literally more than offset the average worker's complete salary increases for more than a decade.

We Spend More Than Other Countries for Care

Don't Let Health Care Bankrupt America: Strategies for Financial Survival

Other countries also spend a lot of money on care and have problems with their own growing costs of care, but we are very obviously a significant outlier when it comes to health care costs in any and all cost comparisons with the rest of the world.

Our health care spending now outstrips the rest of the world by significant margins. The chart below shows our health care spending measured as a percent of our GDP spent on care compared to the health care spending in the rest of the world for the past couple of decades. Our cost increases have clearly exceeded everyone else's health care cost increases...by a significant margin.



Likewise -- the premiums that are paid to buy health insurance in America clearly exceed the premiums paid in the other countries who also use private health insurers to pay for care for their people.³⁴

We need to better understand health care premiums as we figure out our solutions in this country for care costs and care affordability. An amazing number of people in this country don't understand the basic cash flow factors and economic forces and the basic arithmetic realities that create health care premiums.

Health care premiums everywhere in the world where private health insurance plans are used to finance care are basically the average cost of care for a defined insured population.

Premiums Are Actually the Average Cost of Care

That's a very important point to know and remember. Premiums are -- very simply stated -- the average cost of care.

Premiums for health insurance coverage are calculated in every country by figuring out the total cost of care for an insured set of people and then dividing the total cost of care for those insured people by the number of people who buy the insurance. So when drug prices go up in a country, the price increase for the drug is paid by the insurer. That payment for that price increase directly adds to the average cost of care that is being paid by that insurer to buy care for their specific insured population. Since premiums for health insurance are based on the average cost of care, that means that premiums for health insurance go up with every prescription drug price increase.

Prices paid for pieces of care basically create the premium levels that are charged by health insurance everywhere -- including the U.S.

Other countries currently pay a lot less for the very same prescription drugs than we do -- as you will see in some details in chapter three of this book -- so their health insurance premiums are also a lot lower.

We currently pay more than anyone in the world for our prescription drugs.³⁵ That particular fact is relatively well known in health care policy circles. There have been a number of very public discussions about the fact that we pay more than other countries pay for prescription drugs.

Other Countries Spend Less for Pieces of Care

What many people do not know, however, is that the other industrialized countries also spend a lot less than we do for almost all other pieces of care. The average price charged for a CT scan in this

country is \$500.³⁶ No other country has an average cost for that same scan that exceeds \$300.³⁷ The average cost of a day in the hospital in this country has now exceeded \$4,000.³⁸ Other than Australia -- who now charges \$1,400 a day -- no other industrialized country has an average cost per day for hospital care that exceeds \$1,000.³⁹ Almost all other industrialized countries charge less than \$900 for a day in the hospital. We pay a lot more. Five percent of the U.S. prices actually exceeded \$12,000 per day.⁴⁰ Those price differences for drug costs, scans and hospital days are not outlier price comparisons. Those are actually very typical price differences between us and everyone else. We pay a lot more for the same pieces of care compared to the prices paid for each piece of care in rest of the world.

As chapter three points out, we Americans spend more money on health care than any country in the world by a wide margin. We spend more by the patient, more by the piece, and we pay more by the condition than anyone on the planet.

Care Is Inconsistent and Can Be Dangerous

Those higher costs that are spent on care would arguably be less damaging and less painful as a total expense category for our country if our health care delivery approach wasn't so flawed and so dysfunctional in so many ways and places. Paying a lot of money for care would not be as big a problem if the care we bought with that large amount of money was consistently great care. Care is, unfortunately, not consistently good in far too many settings and it is also clearly not consistently safe across all care sites in this country. There is a lot of available research data that proves that statement about inconsistent and unsafe care in this country to be true. The Institute of Medicine Quality Chasm work needs to be read by anyone who believes that our care is consistently high quality or safe. Those comments about problematic care quality and inconsistent care safety in this country may make some people who read this book unhappy. We really do not want the data about unsafe care in this country to be true. We all want to believe that care everywhere in America is safe

-- and we all want to believe that care everywhere in America is consistently based on best practices and current science.

Quite a few public speeches and presentations actually make that statement and say, definitively, that the best care in the world is here -- in this country.

A significant number of political speeches cite the "magnificence" of American health care as though those statements about the highest quality for care being delivered here was an irrefutable truth.

So what is actually true?

How safe and how good is our care?

There Are Wide Variations in Care Quality and Care Safety

The answer is a bit painful. What is actually, provably and measurably true is that there are wide variations in care quality and care outcomes in this country. Death -- everyone can agree -- is an important and relevant quality measure. Inside American health care today, death rates vary hugely. Multiple examples of differences mortality rates by care sites are described later in other chapter and at several other points in this book. Care outcomes vary, people die as a result. Care processes in this country are often flawed and processes are too often splintered and incomplete. One major shortcoming of American care delivery today -- a shortcoming that far too often results in poor care and damaging care outcomes -- is the fact that too much of the care delivery in this country tends to be uncoordinated, unconnected and functionally unlinked. Caregivers actually have a very hard time, in many settings, simply coordinating basic care. That inability to coordinate care is true for far too many patients and too many care settings. We need to recognize the fact that there are woeful lacks of coordination and those deficiencies create particular problems for our many patients with multiple medical conditions who badly need coordinated care. We need to understand the reality of that situation. We also need to know why it happens. That lack of care coordination between our caregivers doesn't happen because our caregivers don't want to coordinate care. That weak performance level for care coordination in so many settings exists because we have a major

tool deficit for that task. We need to understand that deficit. We need better tools for our caregivers. We simply don't have the very basic tools in place today that are needed to coordinate care for most patients who need care coordination. Our tool deficiency is a major functional problem that is addressed multiple times in this book. The current business model we use to buy care actually creates some of those tool deficiencies.

Seventy-five percent of the health care costs in this country actually come from our chronic care patients, and most of those costs come from patients who have co-morbidities -- multiple diagnosis and multiple diseases.⁴¹ Those patients need their caregivers to work together and to be fully informed about the full array of care being received by each patient. The current business model we use to buy care does not pay for caregiver linkages, caregiver coordination, or the use of linkage tools by caregivers -- so those tools do not exist and they are not used.

We clearly need a business model for care, an economic reality for caregivers, and a robust care support tool kit that reflects that basic medical need for coordinated care for those patients and their caregivers.

Patients With Comorbidities Often Get Care from Unlinked Doctors

Because our care sites tend to be separate, stand-alone business units, patients in this country who have co-morbidities almost always get their care from multiple stand-alone doctors. Having separate doctors for each medical condition isn't inherently a problem -- as long as the doctors who share a patient can coordinate care and share information about the patient with one another. In this country, however, it is rare and often very difficult for those doctors to share information with each other about the patients they share simply because there are no tools or mechanisms to do that information-sharing work in most care settings.

Doctors in this country are also not paid money to coordinate care with each other in most care settings. No cash, no coordination. The fundamental truth about care delivery that is discussed in more detail later in this book is that we deliver the care that generates a payment. We do not deliver care that doesn't generate a payment. It is breathtakingly

obvious that the caregivers and the care sites in this country tend not to do things that aren't listed on an approved fee schedule. The fourth chapter of this book deals in more detail with that issue and explains how the fee schedules we use to buy care actually dictate the delivery of care with some amazing leverage and impact.

We Also Have a Major Data Deficit

Data is also a problem. We also very clearly have a major data deficiency as well as a tool deficiency. That data deficit problem also seems hard to believe at this point in our history -- but it is also very true. We have amazingly poor and inadequate data about many aspects of care. Patients in this country have a very hard time making data-supported choices and data-supported decisions about both their personal, personal care and their personal caregivers.

Caregivers Also Have Data Deficiencies

That data deficiency problem isn't limited to patients. Caregivers in this country far too often do not personally know how well or how badly they, themselves, are doing as providers of care. The caregivers do not know how well they are doing because there is so little comparative data available at any level about care. We are almost data free in major areas of care where good data could help us improve both the quality and the affordability of care. Multiple studies that have been done have made that point very clear. This book gives a dozen important examples. Data can transform care. Data can save lives. But we do not have enough data about many aspects of care today. Care delivery data in this country tends to be inconsistent, incomplete, frequently inaccessible, and the thin and sometimes fragile layers of care related data that do exist in many care settings are far too often very sadly factually inaccurate, functionally inadequate and inconsistently available.

Quality Problems Are Far Too Common

Quality problems are far too common, as well in the current infrastructure of American care delivery. We don't have a deficit of quality problems. We have a surplus of quality issues. Look at the comparative quality data that does exist for several areas of care. Care quality varies a lot. That fact cannot be refuted. The variation in care quality today is significant and it is very relevant. As this book points out in multiple places, your personal likelihood of dying as a patient can increase by a factor of ten if you personally pick the wrong care site for your care.⁴² Being ten times more likely to die based on your choices of caregiver or your choice of care site is something that a patient being treated for a disease or a health condition should know. You only get to die once. There are no redos and restarts and do-overs for actual death in the functional context of today's health care. Cryogenics isn't at the point where we can freeze dead people and then do a restart later when care gets better. So death is a relevant quality measure for care and we should look at what that very fundamental measure tells us. It tells us that death rates vary by a lot.

We Don't Use Mortality Information Often or Well

We know that to be true, but we don't use that information often or well. Those major variations in care quality and those often amazingly large variations in death rate that do exist are not on our current radar screen for either our governmental policy makers or for the purchasers of care.

For obvious functional, operational and primary logistical reasons, the twin problems of bad and inconsistent care outcomes and weak and inconsistently available care data are very much linked. It is very hard to make care better in any setting when even the caregivers who are directly providing that care far too often don't know that their own care is inadequate, dysfunctional problematic and or actually dangerous care. We need a robust set of data about care outcomes and about best practices for patients, and we need that data even more as a tool for the actual

care delivery infrastructure. As noted above, the differences in outcomes between care sites and care approaches are very real. The death rate for heart surgery can vary by a factor of ten.⁴³ The death rate for sepsis can easily triple or quadruple between the best care sites and the least effective care sites⁴⁴ -- and the likelihood of being damaged for life by sepsis at least doubles at the worse care sites.⁴⁵ The mortality rates for cancer patients can also double or triple depending on the care team and the care sites.⁴⁶ We know that those differences in that very basic outcome measure -- death -- do exist -- but even that very basic piece of outcome data is far too often not available to either the patients or to the providers of care in any useful way.

Care Outcomes Vary Widely

These concerns are not speculation or idle theory.

We know for an absolute fact that the outcomes of care do vary significantly in key areas. So does care safety. This book makes multiple references to those outcome inconsistencies and those safety problems. That level of inconsistency in key areas is really unfortunate. When we spend \$2.8 trillion dollars on care⁴⁷, safety should not be an issue. When we spend that much money on care, care should be safe. That is particularly true and particularly important because we actually do know how to functionally deliver safe care. It can be done. Doing better in those key care–outcome performance areas isn't a theory or a pipedream or wishful thinking. We know that it actually is possible for care sites to do much better on safety and we know that to be true because there are some care sites that have directly targeted those issues, and those care sites have addressed those performance shortcomings and safety malfunctions with care reengineering and with systematic care improvement approaches.

The care sites in this country that do that care improvement work in a systematic way actually do have significantly lower mortality rates. Lives are being saved. Those care sites have lower infection rates. These sites and their care teams damage far fewer people. They kill fewer people. Care safety enhancement can be done. But the sad truth is that

most care sites in this country have not gone down those paths. As noted earlier, data deficits are a huge part of the problem. Far too many care sites are data free in important areas of care performance.

So as a country, we have weak data and we have inconsistent care and we have often problematic care outcomes. As bad as these issues are, that isn't the full set of care deficiencies that we need to resolve.

It's Hard for Doctors To Be Current on Medical Science

We also, interestingly, far too often do not do a very good job of keeping up with best medical science. That is also both sad and unfortunate. Medical science changes and improves regularly. The unfortunate truth is that we and our caregivers both also tend to have inconsistent access to current medical science across American care sites and care settings.⁴⁸ Caregivers often can't keep up with medical science. That particular information deficit also surprises a lot of people.

Most people who get care have the comforting belief that their own personal caregiver is very much personally "keeping up" and is entirely current about the most relevant medical science relating to their personal care. That belief by patients about their caregiver "keeping up," unfortunately too often is not functionally accurate.

The science of medicine improves regularly. That is the good news. The bad news is that far too many caregivers in this country simply can't stay abreast of medical best practices or even with current medical science developments.

The IOM Is Studying Inconsistency

The Institute of Medicine -- the organization of senior medical and health care leaders, thinkers and researchers that has been charged by the U.S. government with taking an ongoing overview look at American health care performance and health care operations -- has been deeply concerned about these issues and has studied those medical science "keeping up" issues relative to care delivery in this country quite a bit in recent years. The results have been sobering. As noted earlier, the IOM

has concluded in a couple of key reports that care in America is too often inconsistent.⁴⁹ The IOM has also concluded that care delivery in this country is far too often dangerous.⁵⁰ More recently, the IOM has also reported that care delivery in this country is far too often not consistently based on the most current science about either care delivery or care processes.⁵¹ The IOM studies on these issues are cited in the endnotes to this book. They are clearly worth reading if you have any doubts about whether those problems about best use of medical science exist in this country.

The IOM has a taskforce set up right now to help the country figure out how to keep care scientifically based across all American care sites. The clearly defined goal of the current IOM task force is to have 90 percent of health care in this country based on medical science by the year 2020.⁵²

Is Ninety Percent Science-Based Too Little or Too Hard?

That is a fascinating number.

Ninety percent is a very clear goal. It is worth thinking, however, about what that ninety-percent goal for the IOM task force really means and what that goal tells us about the current state of science relative to American health care. To some people, a goal to have 90 percent of the care delivered in this country based on medical science by the year 2020 seems both very low and very slow. Some people believe that specific 90 percentage target is programmatically weak and unacceptably inadequate to be a primary performance goal for medical science applicability and the use of science by the caregivers of our country. But the task force that is doing the work on that issue actually felt that 90 percent goal was both ambitious and aggressive. They believe that goal was aggressive and even optimistic because the research that was looked at by the taskforce to learn how well we actually do today in keeping up with medical science and with medical research showed that major portions of the care we deliver and receive every day in this country does not meet that science-based standard now. The number of care decisions and care procedures

today that do not meet that science-based care delivery standard is far less than that 90 percentage goal that was set by the IOM task force.⁵³

That fact shocks a lot of people. It alarms patients when patients learn that those medical science-related problems might exist.

We all want best care. We all want and need our care teams to be scientifically current. If we want to solve that problem, we need to first recognize that being current is a problem in many care settings today.

Why Isn't Care Based On Best Science?

Why isn't care consistently based on best science now?

Why are so many caregivers challenged relative to keeping up with the most current medical science?

That question is worth asking and answering at this point in this book.

The answer is pretty simple.

We haven't made that "keeping up" goal either a priority or a requirement for either delivering care or paying for care. Being current and following best science clearly is not rewarded or incited by the business model we usually use today to buy care. Because keeping up is hard to do -- and because it isn't part of the business model we use to buy care -- it is relatively inconsistently done.

We Don't Have Good Tools for Keeping Up

Again, we have a significant tool deficit.

We simply have not built and implemented the basic mechanisms and tools that we need to make keeping up easy to do. Our caregivers who do want to keep up with current medical science and with current best practices frankly usually don't even have access to the basic tools that are needed to be current about the full range of scientific and functional developments in the science and delivery of care.

That seems hard to believe, but it is true. It is another basic functionality deficit. It is another missing tool. It is another failure that results from the business model we use to buy care. We clearly have

another major tool deficiency relative to having basic tools in place that can help caregivers simply keep up with current medical science.

That keeping up deficit should be unacceptable to us all. It should be unacceptable because it does not need to exist. There is no good reason today at this point in our history and at this point in the world of technology -- with all of the technological functionality that is now available to create systems related and systems supported toolkits -- with an ever expanding availability of a wide array of electronic communication and electronic data access tools -- for us not to have a robust set of “keeping up” tools easily available for use by all health care practitioners. The internet is now at our disposal everywhere. There is no good reason today not to have fully functional, easy to access electronic medical libraries that are made available to all caregivers when our caregivers need current and best care information for any patients or care related issue or decision.

That access to current information can be done. A few large and well organized care delivery teams have shown that it can be done and that the tools to do the work can help caregivers be current in the science of care. But we have not chosen to put those tools in place for all of our caregivers and care quality in this country suffers in too many instances as a result.

We Have a Tool Gap, a Data Gap and a Science Gap

We have a tool gap. We have a data gap. We have a medical science gap. And we have a significant business model deficit relative to the use and the existence of several badly needed health care connectivity tools. Money is clearly at the root of each of basic gap problems. Rather -- the lack of focused money is at the root of those particular problems. We simply have not put those needed care improvement tools in place for our caregivers in most care settings because no one pays for those tools to exist and no one pays for them to be used.

In settings where the cash flow we use to buy care actually pays for those tools, they exist -- and they help transform care. Examples later in this book explain how the death rate for HIV patients was cut in half

using team care and connectivity tools. The death rate for stroke patients was cut 40 percent using team care and connectivity tools.⁵⁴ Broken bones in seniors were reduced by over a third using team care and connectivity tools.⁵⁵ Team care can do some amazing things relative to better patient outcomes. So can data-supported care. We need to make data-supported care a goal of business model we use to buy care. The benefits of data-supported care are particularly evident when the data is electronic. When the data about care is not electronic -- but simply stored in paper medical records -- all of the gaps listed above are exacerbated by that inadequate data source.

Paper Medical Records Are Dangerous and Dysfunctional and Bad

The truth is -- paper kills. A number of care strategists use that phrase to discuss the health care dark problems. Why do those experts say that paper kills?

They say that because most medical records in this country are still maintained purely on paper...and care suffers as a result.

We still use paper medical records in most medical care sites.

Very functional and well-designed computerized medical record systems exist and these systems are widely used -- but most medical information in this country is still stored in paper files.

That seems hard to believe, but it is true. That isn't good at multiple levels. Paper medical records are a communications and logistical nightmare. Information about patients that is kept in paper file folders is isolated, insulated, inaccessible, sometimes illegible and almost always significantly incomplete.

We Need Patient Data To Be Patient-Centered and Electronic

One of the very best government investments that have been made by our government over the past decade has been to subsidize funding of the actual implementation of electronic medical records in a growing number of care sites. That funding was included in the economic recovery funding legislation in 2009. That funding approach requires the care sites

to computerize care information and then use the information in a “meaningful” way. That electronic medical record tool legislation was a very smart thing for the government to fund. We very much need care data to be on the computer. We really can’t make care better in many ways until we have better data about care and until we can share the electronic data for each patient when that information needed by a caregiver to deliver patient focused care.

Improving the level of consistent data availability and making health care data electronic will have the same kinds of positive impact on health care data flow that railroad tracks and interstate highways have had on transportation infrastructure and traffic flow in this country. Putting care data in a computer does not somehow -- all by itself -- magically improve care -- but having electronic data gives us tools and the essential information flow tracks that we can use to improve care. That electronic medical record support and expansion agenda for this country points us in a very good direction, and it gives us badly needed tool we can use to get important things done in care delivery. It isn’t enough, however, to simply have health care data on the computer. We also need the computers to share data with one another. We need to be very sure the electronic data is sufficiently connected so that it can be used by the caregivers when it is needed for patient care.

Isolated Electronic Files Are As Bad As Isolated Paper Files

Having isolated electronic files for patients is just as bad and dysfunctional as having isolated paper files. But when the data about patients is both computerized and made available in an interconnected, patient-focused way to all of the caregivers who deliver care to a given patient, care can get better very quickly. Having data on the computer and then creating access to that data allows us to create mechanisms that we can use to track and improve care outcomes and care processes in ways that paper-based data files could never hope to do.

So we are moving in the right direction relative to the availability of electronic data. But most medical files are still on paper and that is a bad

thing. Far too often, inadequate, incomplete and dysfunctional patient care results from care supported only by paper files.

Multispecialty Medical Groups Lead in Patient Data Sharing

Most care sites today can't share data about patients they share. Some care sites, however, can and do share their patient data now. It can be done.

The various multispecialty physician group practices that exist across the country have almost universally addressed those data linking issues long ago. The multispecialty medical groups basically solved those data access problems by creating tools that both computerize the data and make it available to the entire care team when needed to provide care.

Doctors who practice today in large multispecialty medical groups can usually share data and information about the patients they share. Those multispecialty groups have always appreciated the scientific advantage that results from shared data. Most of the multispecialty groups in this country have entirely eliminated their paper medical records. The larger and more complex medical groups now almost all use computerized medical records to both share information and to keep their patient information current and constantly available.

However, that level of electronic data sharing between doctors who share patients is still only true in a minority of American care settings. So that lack of that data sharing is another major tool deficit. Most doctors who share patients today cannot easily share information about their patients with other doctors and care suffers as a result.

Most patients in this country generally do not know that particular sad fact about our care information linkage and our data-sharing gaps and communications deficits to be true until the patients, themselves, need shared care. Then the data gaps between caregivers often loom large in a very negative way. Most patients don't discover or understand that data link problem until they, themselves, actually need care from multiple caregivers. What that happens patients usually learn both directly and quickly that their own individual care information from their

multiple caregivers is painfully and dysfunctionally unlinked and unconnected.

Horror stories about American caregivers who can't get even their most basic levels of information shared for the patients they share are far too common. We have all heard those horror stories from patients and we have heard them from their families. Most people who are patients who have serious medical problems and who have multiple doctors often have an urgent need for data sharing by their caregivers and those patients far too often suffer from that dysfunctional non-system of data storing. Patients often end up carrying armloads of their own paper medical records from care site to care site -- and they too often find that the care site that they give their data to are often badly equipped to actually use that data from the other care sites when patients carry it to them.

We Need Better Care Connectivity

We clearly can do better in these areas. It is silly and wrong for us -- in this day of easy computer connectivity and massive electronic databases -- to accept and simply continue those connectivity inadequacies as a functional reality of American care delivery. Our payers -- the entities that purchase health care in America -- need to collectively insist that the care sites of this country install the right set of connectivity tools so we can make care safer, more effective, more connected and more affordable. Major health plans and government agencies should facilitate that data sharing and support it financially. The good news is, as we stated earlier, that we actually do have the tools to do that work now. We just don't use those tools in most care settings. In the care setting where they exist, care gets better.

We Have an Informed Choice Deficit

We need to solve the data deficits, the connectivity deficits, and the ongoing access to medical science deficits -- and then we need to put in place processes that will allow patients to make their own care choices based on key performance factors relating to care.

We also very clearly have an informed choice deficit. We don't have good processes in place to help patients make informed choices about their own care options. Those tools exist. Some are wonderful. Those patient-choice facilitation tools aren't used in most care sites. We have a tool deficit for patients in that regard. We have an equivalent parallel deficit relative to caregivers knowing both the most current medical science and how well they are doing as caregivers relative to the outcomes and the comparative consequences of the care they deliver.

All of those performance challenges -- weak data, bad care linkages, inconsistent science, and business models that don't pay for patient-focused team care -- create major suboptimal consequences for care delivery and create care problems for patients. The consequences are that care delivery does not perform at a consistently high level -- and our care infrastructure does not achieve the same results in all settings. The bad news is -- some care results vary highly.

We have a very serious information deficit about those life-threatening variations in care outcomes.

Death Rates Vary

As noted above, death is a good and relevant measure of care outcomes and care effectiveness.

We need people to understand the fact that the death rates for various categories of care vary from care site to care site and from care team to care team. So do other key care outcomes.

If we were delivering care in the most responsible way, we would expect that both patients and care teams knew that those differences exist and knew what the differences are.

Both patients and caregivers today tend to have the belief that all care delivered by licensed caregivers or by licensed care sites is roughly of equal value and equal effectiveness. People also tend to believe that their own personal caregiver is likely to be one of the care delivery resources who are most likely to produce an optimal care outcome for them as a patient. Most data-free caregivers tend to have very similar positive opinions about their own skill sets and their personal care

delivery effectiveness. That is human nature for both patients and caregivers. People generally have a very strong tendency to trust their own caregiver and to believe that the care that is being delivered at their care site is among the best possible set of care delivery processes and approaches.

In our current non-system of care, the truth is that care outcomes actually vary widely and sometimes wildly from site to site and from caregiver to caregiver. We need to understand that reality. Care will actually not get better in any consistent way until we face that reality. We need to have the individual insight, the collective political courage and the functional capability to look clearly at a wide range of key issues relative to care performance variation and that will not happen until we begin with basic data about care performance.

To look clearly at the truth about the variable consequences of care, we need to know the truth about that variation.

If we do decide to look at those issues of significant variation in care outcomes and care functionality, where should we start?

Mortality Rates Are a Good Place To Focus

As noted above, death is a good place to start. Mortality rates have been mentioned several times in this book already.

We need to start with some relevant measurements -- and there are several good reasons why mortality rates give us a very workable foundation to begin the process of making comparisons relative to care performance levels.

For starters, we can measure death. There are several other measurable levels of relative care delivery performance data that can be very useful -- but death is an important and a highly relevant care outcome. Death rates do vary enough in a number of areas of care that measuring death rates can tell us a lot about the quality of care in various care sites and care teams.

The differences in mortality rates are not insignificant.

Your chance of dying from heart surgery literally increases by a factor of ten if you get your care at a higher risk surgery site compared to

having your surgery done at a lower risk, better performing surgery site.⁵⁶

Ten times is a lot.

Making a care site decision that increases your personal risk of dying from a major surgery by a factor of ten might not be a good thing for a patient to do. Patients should have information about these relative death rates, and that information should be required by the people who buy care. Chapter Four looks at those issues in more detail.

Likewise, sepsis is the number one cause of death in American hospitals. Sepsis kills more patients in hospitals than stroke, heart disease, or cancer.⁵⁷ The least effective hospitals have almost one in three sepsis patients die. The best hospitals lose less than one in ten of their sepsis patients.⁵⁸

Sepsis is the largest single one cause of death in American hospitals, so those are very relevant differences in sepsis mortality rates. Those are also differences that you should know if you are choosing a hospital for your care. You should know that the hospitals with the worst death rates for sepsis also have the highest percentage of patients who are damaged for life by that condition.⁵⁹

Sepsis performance levels clearly belong on a patient choice scorecard. Those issues are discussed more fully in chapter four of this book.

Infection rates are another very good area where comparative performance measurement makes sense. Nearly two million people get a hospital acquired infection every year in an American hospital.⁶⁰ Pressure ulcers happen to quite a few patients. Your personal chance as a patient in a hospital setting of getting a damaging, disfiguring and potentially fatal pressure ulcer varies by more than four times depending on which hospital you choose for your care.⁶¹ That variation in your likelihood of being damaged or even killed by a pressure ulcer happens based simply and purely on the hospital site you have chosen for your hospital care. In the very worst performing sites, your risk of getting those horrible ulcers and being damaged, disfigured, crippled or killed by them actually increases by a factor of ten compared to the performance of the best sites.⁶²

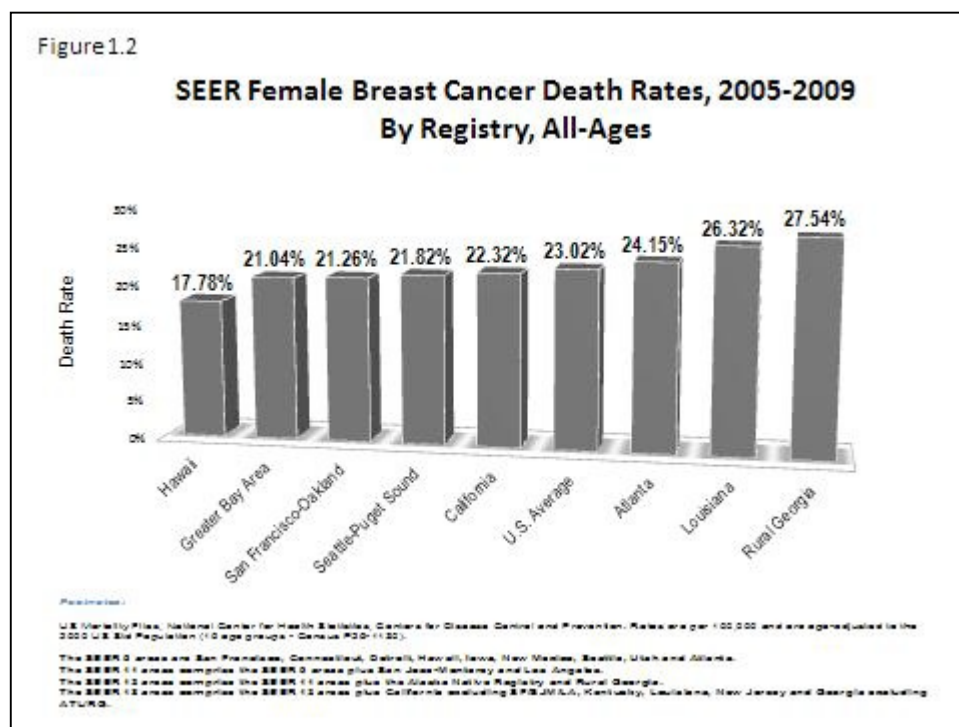
The second chapter of this book has charts that show differences in heart surgery deaths rates and sepsis outcomes between care sites. As a patient, those levels of performance differences should matter when you chose your care site.

Cancer Survival Rates Vary As Well

Right now, that kind of information is almost invisible to patients. People don't ask for that data because people believe that all care sites have about the same success levels. That is not true. All care is not the same. Success rates vary. Your personal cancer survival rates actually vary hugely depending on the site and the care team you chose for your care. Hardly anyone knows that these differences exist. The very best care teams now achieve a breast cancer survival rate upwards of 95 percent. The average care sites have survival rates for their breast cancer patients that run under 90 percent. Some of the lower performing breast cancer success programs actually run closer to 80 percent survival rates.⁶³ There are entire regions of the country where the average survival rate for all breast cancer patients is close to 80 percent. ⁶⁴ So your personal chance of dying of breast cancer also more than quadruples depending on the cancer site you chose for your care. Only a very small number of cancer patients get any data from anyone telling the patient what those relative performance levels are.

Quite a few cancer care sites now participate in the SEER cancer care reporting process. Being part of the SEER reporting agenda is a major step forward for both care improvement and care site accountability. The SEER data shows us that there are major differences in mortality rates between care sites for a number of cancers. The variation in survival rates are probably even greater in all of the cancer treatment sites that do not participate in the SEER reporting process. The cancer sites that don't participate in SEER may often be the sites that do not have the best cure rates. In any case, these measurable differences in cancer survival rates based on the care team and the site of care are an important fact for cancer patients to know. Not all care is equal. Care approaches matter. Care teams matter. Cancer is a treatment area where

the care approaches vary quite a bit, and the care outcomes for cancer patients can vary by a lot. If you are personally a cancer patient, important pieces of data about relative care outcomes can be very relevant. The next few charts show several variations in the cancer death rates that are reported to SEER by various care sites for several categories of cancer. The differences are real and significant. What is fascinating -- and not entirely unexpected -- is that care patterns and care outcomes for cancer care not only vary by care sites -- they even vary by states and by geographic regions within states.



That next chart shows the variation in average death rates for several states for breast cancer. Most people have no clue that cancer survival rates not only differ from care team to care team -- the survival rates also differ significantly from state to state. Different states actually have very different average mortality rates for that condition.

Those variations in death rates would not exist between those areas if all cancer caregivers in this country were following similar or identical best practices for their cancer care. The point made earlier about the value of the Institute of Medicine work that is being done to

help create care consistency around medical best practices is reinforced by that amazing variation in death rates for various types of cancer. Some of those geographic areas clearly need better collective access to the most current science and to best practices relative to cancer care.

As hard as it is for patients to believe, care patterns are sometimes based more on regional care cultures than they are based on pure and current medical science. That particular piece of information can be both startling and disconcerting for patients. The truth is geographic care culture differences do happen. Look again at the last chart. Only 17 percent of the patients in Hawaii die from breast cancer. In rural Georgia, the death rates from that same exact cancer currently averages 27 percent. The differences are even greater when you look at the comparative results from some of the individual care teams and the caregiving organizations. At the well-organized, scientifically current, fully multispecialty integrated care systems like Kaiser Permanente, the Mayo Clinic, and the Cleveland Clinic, the death rates for patients with that particular cancer now run lower than 10 percent.⁶⁵ The death rate from that cancer at the Kaiser Permanente care sites is less than half of the Hawaii death rate -- based on last year's SEER data.

So there are obvious differences in the survival rate for various cancers by care site, and there are even very real differences in survival rates by state. We need to recognize that those difference exist and then we need to collectively look very closely at the sobering fact that none of those significant differences in care outcomes or in survival rates is relevant in any way to the business model we use today to buy care. We do not buy care well.

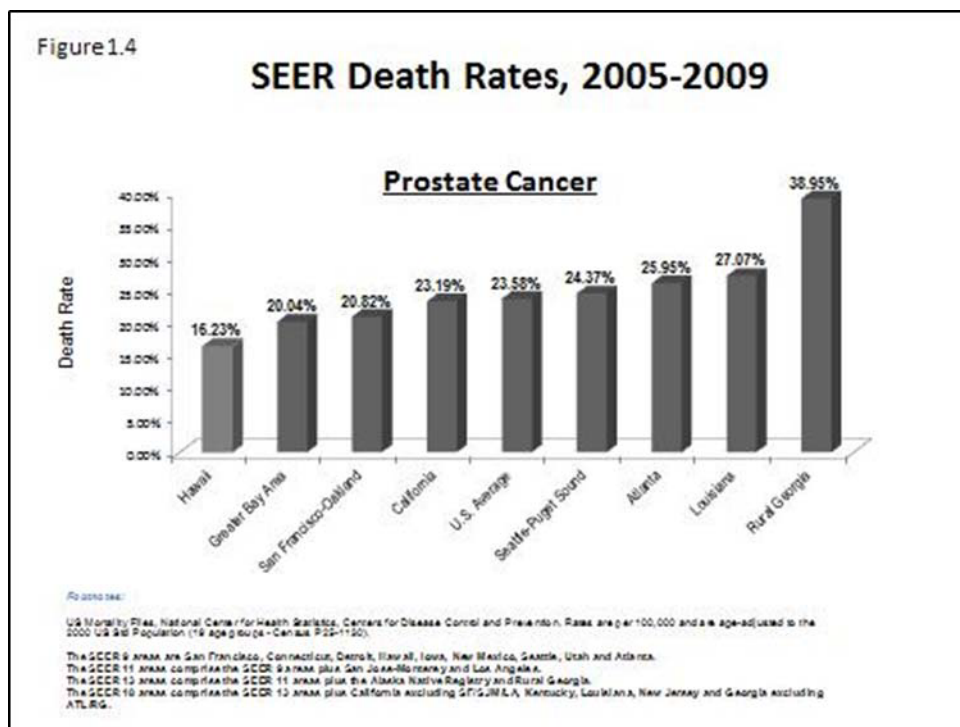
We don't base our payment for cancer care today in any way on the outcomes of that care. In fact -- the relationship between the cost of that care and the outcomes is sometimes absolutely the reverse of what you would want to see in a well-designed business model for care. Some of the highest cost care sites have life expectancies for cancer treatment that are clearly inferior to some of the lower cost sites. The business model we use to buy care would not survive in any other industry. We don't pay for cure. We buy cancer care by the piece and we pay for procedures. We currently pay the cancer care businesses cash by the

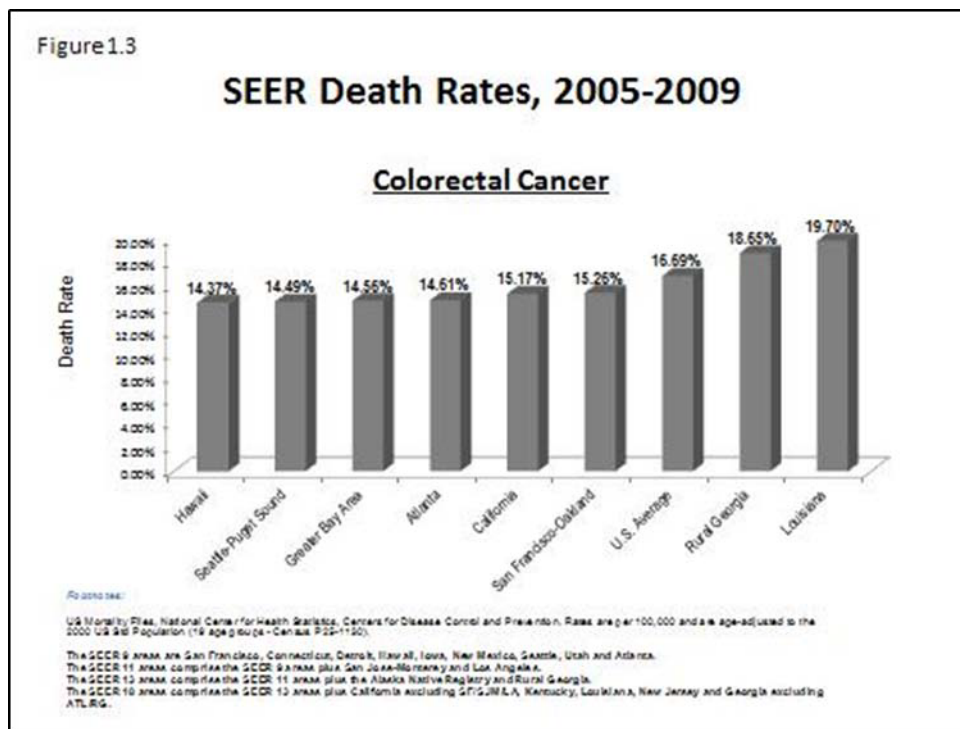
piece to do procedures -- and we do not pay to save lives. We pay for services -- not results. And we don't even reward better results when they do exist. Some of the procedures that are used by some of the lower performing care sites are clearly more effective in creating cash flow for the business site than in creating cures for the care site. That is obviously a flawed, inferior, and dysfunctional way to purchase cancer care.

If you personally have cancer of some kind, and if you want to survive, information about the success levels of various caregivers can be highly relevant to your life. You should look to getting cancer care from care teams that continuously improve their cancer care. You may actually improve your chances of survival by moving to a state with better cancer outcomes. Care results differ by care site, the state where you receive care, and the results even differ by region within a state.

In the state of Georgia, for example, the patients in rural Georgia and the patients in the city of Atlanta, have very different mortality rates.

The next chart shows the death rates by states from two other cancers -- with mortality levels and life expectancy data shown, again, for several geographic areas. Prostate cancer and colorectal cancers are among the most common cancers in the country.





Those charts also show the mortality results for those cancers that are achieved by some of the best care sites in the SEER database. As was the case with breast cancer, the death rates for those same cancers in the best performing SEER sites are significantly lower than the national average survival rate for the cancers.

One of the things we can conclude from all of that data is that when care is delivered in a systematic and science-based way by an integrated care system like Kaiser Permanente, or the Mayo Clinic, results for these care teams tend to be significantly better than the results from the average community cancer sites.

A SEER-format study done of the cancer death rates for Kaiser Permanente for Southern California, for example, showed a mortality rate of under 10 percent for prostate cancer. That is a number far below the national average.⁶⁶

So why would a care team like the caregivers of Kaiser Permanente have better cancer survival rates? Early detection and best science are both more likely to happen in a care team setting.

Kaiser Permanente is an integrated care system that has medical best practices embedded into its care support systems. Kaiser Permanente has one of the largest electronic medical record support systems in the world and the Kaiser Permanente care team places a very high priority on early detection of cancers. Kaiser Permanente also places a very high priority on using the best care protocols to cure the cancers once they are detected. The results of that early detection and that best practice medical approach are shown on the following charts for prostate and colorectal cancer. Focused care improvement strategies have their obvious positive results. Systematic cancer care detection and treatment in that integrated care context clearly results in a death rate in that particular care system that is significantly lower than the national average for those cancers.

So, major differences in outcomes exist for the care of basic cancers. Unfortunately, that information about differences in death rates is invisible to cancer patients it is also invisible and to most care sites that treat cancer patients. That information also isn't part of the business model that we use in this country for purchasing cancer care.

Cancer isn't alone in having variable care outcomes.

That same level of mortality rate variation that exists for cancer care happens for other areas like heart care, diabetes care, and stroke related care. Your personal chances of dying from a stroke or a heart attack or an amputation are all significantly higher if you go to one of the higher risk care sites for your care. Again, your personal risk of dying from a stroke can literally double depending on your site of care.

Better Care Isn't Accidental -- It Is Intentional

An important thing for us all to remember is that better care isn't accidental. Better care is also not simple serendipity or blind luck. Better care is very deliberate and intentional. The best care sites not only have better survival rates for those key conditions -- the caregivers at those best sites work to continuously improve their survival levels. The best care teams use data, process engineering, best science, and process reengineering approaches in a very deliberate and intentional way to

make care better. Stroke death rates have gone down consistently at the best care sites...and that has happened because those sites are committed to continuously improving their care. Those death rates have decreased because those intentional, deliberate, and organized care sites use a combination of data, care tracking, and care improvement to make care better.

At many other care sites, the stroke death rate hasn't dropped at all over the past few years. Some sites have gotten worse. In a very perverse and unfortunate way, the business model we usually use to buy care in this country tends to generate more cash flow to the care sites that deliver the worst care. Death rates vary and those variances can be very perversely rewarded from the perspective of creating cash flow for caregivers.

The worst sites can often charge the most money for care because the patients in those settings generally need care longer and because those patients in the least effective sites spend more time in the most intensive care settings.

Both Patients and Caregivers Need Data

So, unfortunately, patients do not have enough information today to make good care site choices, and the care sites, themselves, are also almost data-free. Poorly performing care sites often have no clue at any level that their care results are suboptimal. In fact, the most data-free care sites in this country tend to have a very consistent belief that they are all delivering best care. That isn't intentional deception or even willful self-deception. Caregivers are all very well intentioned people. Too many data-free caregivers tend to believe that being well intentioned is the functional equivalent of being an optimal, high-performing care site. Those care sites beliefs about the relative quality of the care they are producing is often completely and even tragically wrong -- but those beliefs die very hard in those care settings without data.

So we need key pieces of data. We need to know mortality rates. We need to know sepsis cure rates and stroke survival rates. We need to know five-year cancer survival rates. We need to know that information

by the site of care and by the care teams so that care sites and care teams that do not have the best results initially can make the changes needed to subsequently achieve the very best results.

We will have that data if we change the way we buy care. Ideally, the market model for care should pay the best providers more money for better outcomes and safer care and the business model we use to buy care should channel larger numbers of patients to the care sites with the best outcomes.

Our Current Business Model Rewards Failure and Bad Outcomes

The truth is -- the business model we use to pay for care in this country doesn't work at all to reduce and improve those deadly variations in the mortality rate and in the quality of care. This point was made earlier, but it bears repeating. The hard truth is caregivers in this country generally make more collective money as an infrastructure when care goes wrong. Bad care can be very profitable. Look again at the quality data variation levels that are known today about care delivery.

Pressure ulcers are a perfect example of the perverse way we pay for care today. Seven percent of the hospital patients, on average, end up with a pressure ulcer in American hospitals.⁶⁷ The best hospital care sites in this country now have less than one percent of their patients getting pressure ulcers. The very worst care sites have upwards of ten percent of their patients getting pressure ulcers.⁶⁸

Ten percent ought to be regarded as an unforgivable number. Seven percent should also not be an acceptable percentage by hospital care teams.

Some of the very best hospital care sites have managed to go for more than a year without one single stage-two or higher pressure ulcer.⁶⁹ Not one. That is amazing patient-centered, patient-focused care.

Patients who get those ulcers are often in great pain. Some are damaged for life. Some are badly disfigured. Some die. Getting a pressure ulcer is not a good thing for a hospital patient.

So how does the business model we use now to pay for care deal with those major differences in performance for care sites relative to pressure ulcers?

Very badly or very well—depending on whether you are paying for those ulcers or charging fees to treat these ulcers.

Care actually costs a lot more at the worst care sites. Those sites get paid more money because they deliver bad care. A lot more cash flows to the very worst care sites. Patients are individually damaged at those worst care sites and the way we buy care today, the sad truth is that the cash flow for those poorly performing care sites increases significantly as their care deteriorates.

More Patients Survive at the Best Sites

By contrast -- a lot less money is spent at the best sites, and more patients survive at those best sites. The surviving patients in those best care sites also tend to suffer significantly less damage from their ulcers when those kinds of ulcers do occur. Those patients suffer less permanent damage because the care teams at those best sites do much faster and more competent interventions when ulcers happen. Care is better, faster, more focused, and much safer.

The best hospitals have care teams who intervene before the new ulcers deteriorate. So the best hospitals have patients who are much less likely to have those ulcers, and the best hospitals also have patients who are much more likely to both survive the ulcer and have full physical recovery -- suffering less lifetime damage, crippling, and scarring from their ulcers.

As noted above, those best hospitals also make a lot less money from each ulcer patient and from pressure ulcers, overall. Based on the way we buy care today in this country, the reward for doing well is to get paid less.

We actually pay the worst care sites far more money per patient. A bad pressure ulcer can add from \$20,000 to \$100,000 to a hospital bill. The average bill is now close to \$40,000.⁷⁰ A bad pressure ulcer can result in multiple additional therapies, additional treatments, and

extended recovery programs and -- relatively often -- the patients who survive really bad ulcers then also need expensive and purely remedial plastic surgery.

What is particularly frustrating for the very best care systems is that the very best care not only results in lower hospital use, it also involves doing multiple very important very specific things for their patients that are not reimbursed by a standard insurance piecework payment fee schedule.

This book has a couple of sections that explain the dysfunctional consequences and the perverse and rigid patterns of care that can result from buying care entirely by the piece -- when the pieces of care that are paid for are defined by a fixed insurer-developed and approved fee schedule. Buying care only by the piece rewards volumes of pieces. That payment approach doesn't reward care outcomes or care improvement. It simply rewards care volume. When care is purchased by the piece, it tends to be delivered by the piece and it is designed and structured to be delivered by the piece.

When care is purchased entirely by the piece, doing smart things to reengineer the delivery of care is often penalized. How is doing something smart penalized? Only the pieces of care that are defined by the fee schedule and have a "CPT" code tend to happen in the real world of care. Because that is time, the caregivers who are paid by the piece tend not to improve care by redesigning any of the basic processes of care.

Why is that issue relevant to pressure ulcers?

The work that is done in those best hospitals to keep patients from getting pressure ulcers is almost obsessive work. It is very hard work relative to screening, protecting, and responding quickly to the potential care needs of hospitalized patients. The work of preventing pressure ulcers involves multiple care steps and is very intense. None of those patient-focused intensive care steps have a billing code and are paid for by a Medicare or insurance fee schedule.

Not one of the steps involved in scanning patients, screening patients, replacing bedding for patients, or applying ointments and medications to patients at exactly the right time show up as source of

payment on any of those insurance fee schedules. Those key and essential steps do not count as billable work. So the hospitals that actually do that work who are paid only by the piece for their care receive no money from their insurers or from the government for doing that work.

By contrast, if that work is not done or if it is not done well and if a hospitalized patient gets one of those ulcers, the payers who use the insurance fee schedules to define the care they pay for will cough up an average of \$40,000 in fees to the care site for each pressure ulcer patient.

The perversity of being paid nothing for perfect care and being paid a lot of money for crippling, disfiguring, damaging, painful and sometimes fatal care is really obvious once people realize how badly we actually buy most care in this country today and how dysfunctional that fee code process is relative to buying care.

We get what we pay for. We also do not -- most of the time -- get what we do not pay for. A few great care sites have shown what can be done to reengineer care to get better results in a number of areas of care improvement. As we pay for care today, the number of sites who do that care improvement work is not very large.

The piecework way we pay for care today encourages care complexity. The way we pay for care discourages care both process optimization and efficiency-focused care redesign. The way we buy care also discourages care teams or care sites making significant improvements in care outcomes in multiple areas of care.

We almost always buy care in this country by the piece. That's our basic business model for care. We use a piecework payment model. Buying by the piece is often a very perverse way to pay for care. Each and every remedial procedure needed for an ulcer patient who already has an ulcer creates a billable event and significant cash flow is triggered for the current infrastructure of care based on that piecework payment model. Doing all the things needed to keep those ulcers from happening are not accepted as billable sources by the fee schedule that is usually used to pay for approved care -- so very few fee-based care sites do that preventive work.

Health Care Is Built Around Billable Events

Billable events are the key point to understand. Chapter Four of this book discusses that in greater detail. Health care, delivery, infrastructure and performance in any fee-based payment system are all very directly built around billable events. People who deliver care know that to be true. Billable events have immense power. Billable events sculpt and even dictate the behaviors, the functions, the structure, the infrastructure, and the operational model that creates the financial and economic realities of American health care.

More Than 1.7 Million Patients Get Infections

Bad care pays well. That isn't just true of pressure ulcers. It is true of just about every category of hospital acquired infections. It is also true of asthma crises, congestive heart failure crises, and heart attacks. Bad outcomes actually increase cash flow.

The truth is, more than 1.7 million Americans enter hospitals every year and then get an infection that they did not have on the day they entered the hospital.⁷¹ Many of these patients die. All suffer. Many are damaged. Some are crippled for life.

Those are not good infections. They are really hard on people. They happen a lot. We know how often this happens. They happen to one point seven million people every year.

How does the American system of care purchasing deal with all of the infections that are acquired at those care sites?

Perversely.

It's the same reality as the cash flow that is triggered by heart attacks, strokes, and congestive heart failures. Bad outcomes generate revenue. Infections create cash flow. Infections, in fact, usually pay really well.

No Hospital Deliberately Infects Anyone

No hospital in America would ever intentionally infect a patient. That absolutely does not happen. That will not happen. No one needs to fear that anything of that sort will ever happen in any American hospital. The ethics of basic care delivery in this country are far too strong and the morality levels of our caregivers are too high for any intentional damage or any intentional infections to ever happen in any American care site. American hospitals never intentionally damage any patients.

However -- it is also true that more than one and half million Americans actually did get those hospital acquired infections in American hospitals last year.⁷² Those patients literally did not have those infections the day they were admitted to the hospital. They happened in the hospital. So the question we need to ask is -- are those infections inevitable?

Are those infections simply something that we all need to live with as an inherent functional reality of hospital care?

The answer is -- No.

We know for a fact that the very best care sites can and do take steps to both bring down the rate of those infections and to alleviate the damage to the patients when they do occur. The very best care sites now intervene much more effectively and quickly to decrease the damage done by those infections when they do happen. Hospitals can -- with the right processes -- make those infections very rare. Some of the best hospitals have managed to eliminate some of those infections for months at a time. In some cases, the very best sites can eliminate some of those infections for entire years.

It is possible to achieve very aggressive infection reduction goals -- and yet the reality is that relatively few hospitals actually do the fully dedicated, intense, process-focused infection prevention work that is needed to make those infections disappear. That work by the hospitals can have a huge positive impact that reduces both care costs and patient damage -- but it is not the consistent level of care that exists everywhere in American hospitals today.

In some cases -- like sepsis -- the germ that causes the infection is usually acquired outside the hospital and the main job of the hospital is to diagnose the sepsis infection very quickly when it occurs and then treat the sepsis patients at warp speed. That work, to improve sepsis care, really needs to be done at hospitals all across the country.

The Number One Cause of Hospital Death -- Sepsis -- Is Often Not an Operational Focus for Hospitals

Sepsis is actually the number one cause of death in American hospitals today.⁷³ Sepsis kills. As noted earlier, sepsis infections of the bloodstream kill more patients in American hospitals than cancer, heart disease or stroke.⁷⁴ A Californian study showed that one in five seniors who died in California hospitals actually died of sepsis.⁷⁵

So sepsis is a huge and widespread problem. It kills a lot of people. It damages and cripples many more. The key is to respond to the infection quickly and well. The very best sepsis response programs in hospitals can cut the death rate significantly. Those sites can reduce the death rate from nearly 30 percent to under 10 percent and can also reduce the lifetime damage done to sepsis patients by major amounts.⁷⁶ So how does the business model we use today to buy care in this country deal with sepsis?

Very poorly. We don't reward good sepsis care in any way. We also don't penalize bad sepsis care. With only a few notable exceptions, we don't insist on best practices being in place for sepsis care. Sepsis generates a lot of cash flow for hospitals. Just like the pressure ulcers. Each patient with a bad case of sepsis can end up with a bill that is a multiple of the normal cost expected for that patient based on their original admission diagnosis and disease. A five thousand dollar patient can become a fifty thousand dollar patient or even a hundred thousand dollar patient if the sepsis infection for that patient is diagnosed slowly and if the treatment for the patient is delayed.

The Sepsis Death Rate Can Be Cut in Half

So what can be done about sepsis? At least half of the sepsis deaths can be prevented.

Speed is the key. As noted earlier, the key issue for sepsis actually isn't prevention. The issue for sepsis is immediate intervention.

The very best care sites know that sepsis responds really well to rapid diagnosis, rapid response and rapid care. Sepsis experts refer to the "golden hour" when sepsis death rates can be cut in half with the right care.⁷⁷

This is an area where process engineering and process reengineering can be magical and extremely effective.

The right care for sepsis patients involves setting up the work flow in the hospital so that the laboratory processes in the hospital run the needed sepsis tests for each suspected patient in minutes, rather than hours. The right care involves having the right medicines ready for use immediately for sepsis patients -- instead of having the pharmacies in each hospital simply putting those medicines together in a reactive way for each sepsis patient after the fact when a sepsis diagnosis has been made for the patient. In hospitals where the needed medication isn't prepackaged, the pharmacists are too often only filling those life-saving sepsis care prescriptions and medication kits as part of their normal work flow for all current pharmacy requests in their hospital. When you need to treat a sepsis patient inside of an hour to save the patient's life and when the hospital's pharmacy normal response time to fill a normal medication request from a doctor is two to four hours, that normal response time frame in the pharmacy clearly isn't optimal for the sepsis patients who need the right life-saving medication in their body immediately. The science is clear. The biology is well known. The very best hospitals very much know that speedy response is needed and so the very best hospitals simply prepackage the needed supplies for their sepsis patients to have the medication ready for each patient in minutes rather than hours.

Basic Process Engineering Saves a Lot of Lives

It isn't rocket science. That is very basic process engineering. It is basic process engineering targeted at significantly reducing the impact of the number one cause of death in American hospitals.

That sepsis quick-response reengineering approach works really well. It should be done everywhere in the world where patients get hospital care and need to be treated for sepsis. The state of New York is doing some important primary work in requiring sepsis care improvements. Other states should study their approach.

As the number one killer in American hospitals, sepsis obviously deserves special treatment by each hospital care team. Doing care right for sepsis patients literally drops the death rate from upwards of 30 percent of those patients in the most challenged hospitals to under 10 percent in the best hospitals.⁷⁸

As noted earlier, the business model we use now to pay for care pays the hospitals with the worst sepsis survival rate the most money. Those hospitals are expensive and deadly.

Most hospitals today do not have those very basic life-saving care processes in place for the number one cause of death in hospitals. That is clearly not good for all of the patients who do get sepsis in those hospitals. Hospitals have very different outcome levels for their sepsis patients. Again -- as is true for cancer mortality rates and for heart surgery survival rates -- the death rate from sepsis varies a lot based on the care site you choose.⁷⁹

We Make Five Million Prescription Mistakes As Well

We also make other medical mistakes in our care infrastructure. Some experts estimate that our total health care infrastructure squanders about 30 cents of every dollar spent by delivering inappropriate care. If that is true, that would be \$750 billion that the American public now spends every year without getting better care.⁸⁰

In addition to the problems of inappropriate care -- we have an amazingly large and undebatable problem with functional and

operational screw-up and mistakes. Care appropriateness can be an issue where multiple opinions are legitimate. Care screw-ups have no legitimate defenders.

In the real world of care delivery, operational mistakes happen at an amazing level. Studies have said that there are more than 5,000,000 prescription drug mistakes made in the delivery of care in this country each year.⁸¹ Five million is a big number. Patients are damaged by many of the mistakes. Again -- as with weak sepsis care and bad heart care -- the cash flow for the overall infrastructure of care increases when those mistakes are made.

People would like to believe that those problems do not exist. Pretending will not make them go away.

The Joint Commission's National Patient Safety committee -- a well-intentioned organization studying these issues -- now estimates that the damage level done to patients actually runs about 25 damaging events for every 100 admissions in our current infrastructure of care.⁸²

We clearly can do better. This is not the level of care delivery we should be getting when we spend two point seven trillion dollars to buy care. We need safer care, more consistent care, better coordinated care, and we absolutely need more affordable care. This book is about the cost of care... and -- as the examples above point out fairly clearly -- the really good news is that better care usually costs less.

Care is clearly less affordable for everyone when we reward bad outcomes with additional money. Care is obviously less affordable and less valuable when we reward care delivery errors with a rich flow of cash.

How can we make a difference in those areas?

We Need To Improve the Data Flow for Care

This chapter is intended to point out some of the issues that we need to address as problems for care delivery in this country.

The next chapter outlines some of the functionality and successes that we should expect and receive from the care delivery infrastructure of this country.

Before going to the chapter on how care delivery should function, we need to be very clear on one very important problem area. Data.

We have massive data deficits in our care delivery today. Data and quality are linked. Data is a basic, fundamental tool that we need to improve processes and products in any industry. Health care is no exception.

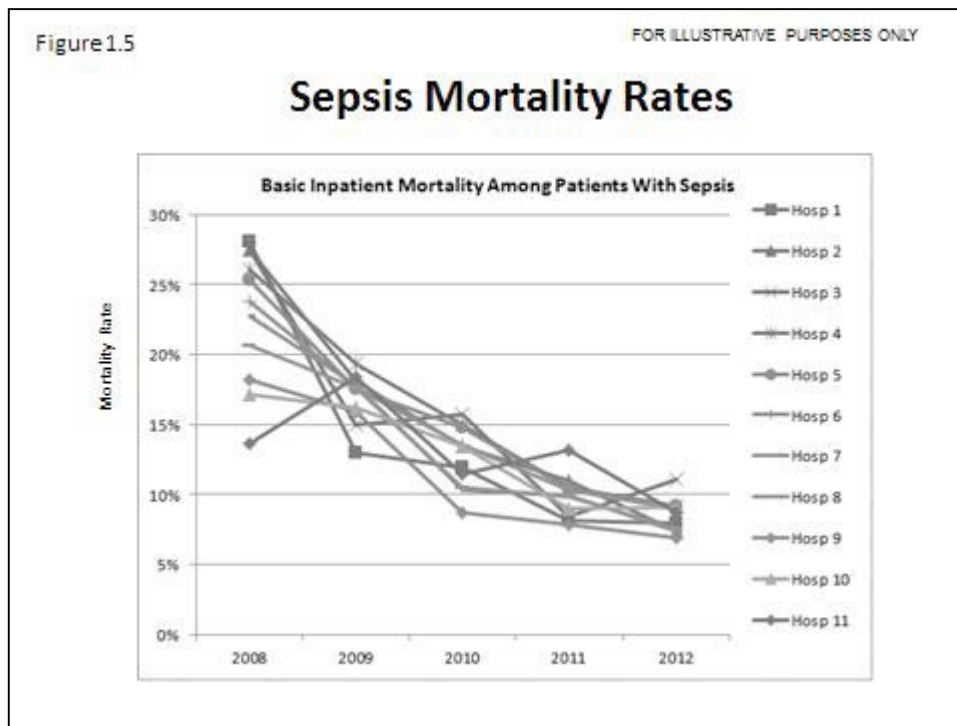
As this chapter noted earlier, we now have painfully inadequate data about care performance in far too many areas of performance. The good news is, when the right data exists, that data can have a very powerful impact on care delivery. The chart below shows the drop in the death rate from sepsis in an array of hospitals that put rapid response teams in place and spent time to put a continuous improvement process in place to refine sepsis care and make it better over time.

They started with data.

The numbers shown on the chart are the results for all of the hospitals in that care system. The care system actually tracked performance sequentially on sepsis death rates for each of the three dozen hospitals. The initial numbers for the sepsis death rate showed a variation between hospitals that more than doubled the success difference between the best and the lowest performing hospitals.

No one in that entire hospital system knew that the level of variation existed before the data was collected. All the hospitals on that chart believed they were doing great work on sepsis care. They were all extremely well-intentional people, and everyone believed they were doing great work because they were doing what they knew how to do and doing it with good intentions.

Good intentions, it turns out, was not as useful as good data. That data about relative death rates was a golden gift for the lowest performing hospitals because it woke them up to very real and immediate opportunities that existed for saving lives. Caregivers like to save lives. People become caregivers to save lives. That comparative data helped those hospitals and those caregivers accomplish that goal at a level they could not have attained without data.



The data was needed by each hospital. Data was the key. That really is an important point to understand -- and it extends to a great many areas of care performance. People are well-intentioned everywhere. Being well-intentioned is not enough.

Each of the hospitals in that care system who improved sepsis care year by year could not begin to do that work until they had real data about their own sepsis death rates and then put together real data about each step of the sepsis related care process inside the hospital.

Those hospitals now know exactly how many minutes it took -- on average -- to get the lab test for sepsis care for each of the care units. Those hospitals know -- in minutes -- the average time it took to get the needed medications to each patient. Real processes are being measured and real processes are being continuously improved.

Care got a lot better when that total package of data-supported work was done. Lives were saved. Data anchored that process. Without honest and competent data, that work would have been impossible, and those lives would not have been saved.

Most care sites do not have that kind of data. Most care sites also don't keep track of performance for their asthma patients and their

congestive heart failure patients. Most care sites do not have the ability to have the entire data about each patient or the ability to have comparative data about all patients.

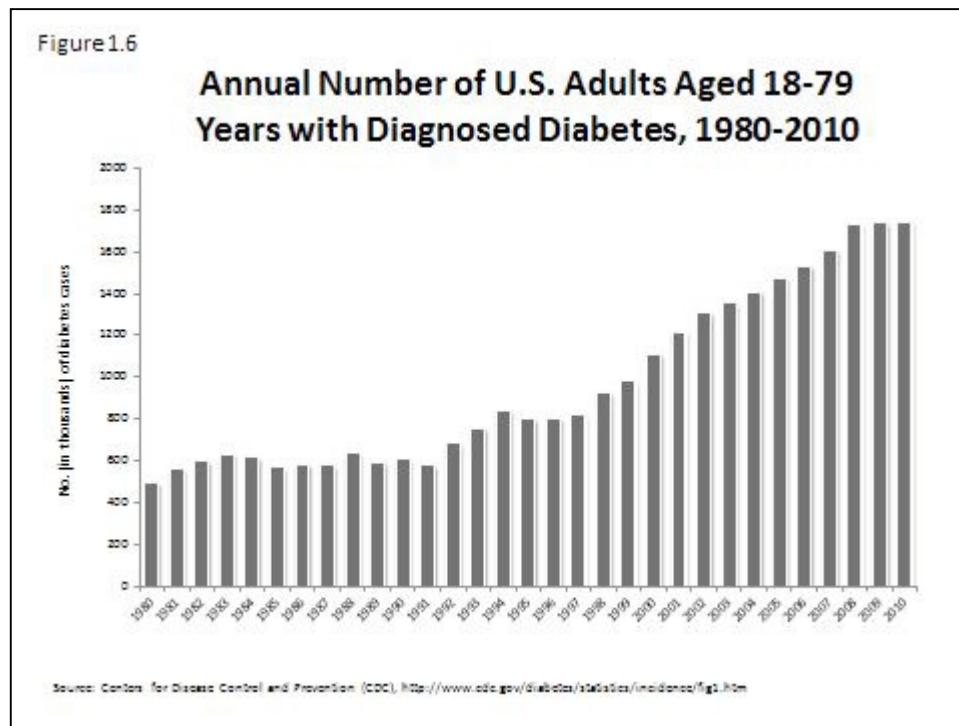
Aggregate data saves lives. Patient-centered, complete data saves even more lives. Caregivers can deliver better care when caregivers are better informed. We have major deficits relative to the tool kits needed to do that work. We need to use the business model for care to help bring these tools into care delivery.

We Need To Improve Population Health

The business model we use to buy care also does an extremely weak job of dealing with issues of population health. The introduction to this book described that problem briefly. It is a major deficiency. We are facing an explosion of obesity in this country.⁸³ Inactivity levels are also increasing and, the sad truth is, inactivity levels are now at life-threatening high levels.⁸⁴

The next chart shows the increase in the number of diabetics in America. As the introduction to this book pointed out, people with diabetes now use more than 40 percent of the total care dollars spent by Medicare.⁸⁵

Good research tells us that -- on average -- only 25 percent of all people with diabetes are getting the full care agenda they need.⁸⁶ Diabetes is the number one cause of kidney failure, amputation and blindness in America⁸⁷ -- and the sad truth is that we get care right for Americans diabetic patients less than half of the time across the full infrastructure of care in America.⁸⁸



Getting care right for diabetics should be a high priority. And -- if we really want to do the right thing at the most effective level for both diabetes costs and overall care costs in America -- we obviously also should be taking very specific steps that can go upstream in the disease development process to successfully prevent the disease. We need fewer people to become diabetic. That is possible. We can and should do very important things that could reduce the number of new diabetics in this country by half or more.

[Prevention Can Have Short-Term Rewards](#)

This point isn't theoretical or hypothetical or ideological. It is very practical work that should be done more broadly very soon. Contrary to the belief of many people, prevention is not a long-term strategy that has no short-term benefit. People used to believe that prevention interactions with patient populations would only have a payback and a positive financial return years down the road. Those people are now wrong. That long-term payback scenario was true for some earlier levels of population health improvements, but that benefit time frame isn't true

for the strategies we are building today. We now know that we can actually do some short-term behavior change work and we can achieve significant reductions in both disease levels and disease costs that happen fairly quickly because that work was done.

We now know that several basic behavioral changes can have major impact and those basic changes can result in positive financial paybacks in weeks and months -- not just in years or even decades.

Diabetes itself can actually be reversed for some patients -- just by increasing activity levels for those patients. That is extremely important information to know -- particularly in the face of another belief system that said diabetes was permanent as a health status for all type-two diabetic patients and that any positive impacts of behavior changes for prediabetic patients happened over decades and not months.

The final chapter of this book addresses several very practical strategies we can use to achieve a set of important health improvement goals.

Some very important people in Washington, D.C., are beginning to put some important programs in place to help this country deal with both the issues of inactivity and the issues of obesity. When the first draft of this book was written, those programs did not exist.

Today, they are in existence and growing in both scope and effectiveness. We will have a deficit as a country relative to improving our population health, but we are beginning to address those issue. There is reason for optimism that we will address those issues a county with an increasing level of commitment and competency.

[We Need a Better Business Model for Buying Care](#)

Overall -- looking at all the issues addressed in this chapter -- we clearly need to change the business model we use to buy care to achieve the goals we want to achieve in care delivery. We will not do better, and we will not get better until we recognize clearly and explicitly how challenged we are today in many areas of care delivery. We need to stop pretending that all care is good care and that all American care is automatically the best care.

This chapter had pointed out major differences in care outcomes and care delivery success levels. This chapter has also pointed out that care can too often be both unsafe and destructive.

We need to deal very directly with those issues.

So what should we do? We need to fix the business model of care so that we can buy what we want to buy in care delivery and spend less money in the process.

We also need to change the business model we use to buy care so caregivers can take advantage of all of the opportunities to improve care without being financially penalized for their functionalized successes.

Caregivers all tend to be good and ethical people. The people who run the major care organizations all tend to be good and ethical people. We need to remember that reality as we change the way we buy care.

We Need a Better Model for Buying Care

The people who lead all of the health care organizations and who deliver care to all our people do not underperform because they want to underperform. They underperform because the business model we use to buy care pays well for the underperformance and it actually penalizes best care in far too many ways. It is possible to cut the number of broken bones, the number of heart attacks, and the number of strokes significantly. To make the point one more time, those successes are not rewarded by the way we buy care most of the time today. Cutting the number of strokes in half is great for patients, but that reduction in strokes creates massive revenues losses for the care sites who treat stroke patients.

We need to buy care in a way that incents the best care sites to cut the number of strokes in half and then also cuts the death rate and the damage levels for the people who have strokes in half. That level of care improvement is possible. The truth is, caregivers would love to be able to deliver that care -- so we need financial models that can free the health care infrastructure and the business unit of care to do that work without being financially damaged.

Our strategy needs to be to make some very basic changes in the business model and the cash flow for care to empower and reward caregivers for giving us the care outcomes and the care costs that we need.

What Would an Optimal Care Delivery Approach Look Like?

Before proposing any changes in the business model to address the problems that have been outlined in this chapter, it clearly makes sense to achieve some clarity about what we will actually want the new business model of care to achieve.

We need to begin with the end in mind. To be really smart purchasers of care, it is a good idea to have some clarity about what care we want to purchase. That thinking about what we want to achieve needs to be done first at a macro level. What are our macro goals for care delivery? And then we need to look at more immediate level of care delivery. We need to look at both macro care issues and micro care issues. How do we want care delivery to function at the individual level for care? What are our micro goals? What do we want care to do and look like for each individual patient?

We Can Build a Model To Buy Care When We Know What Care We Want To Buy

When we get clarity on both those micro and macro points, then it becomes a lot easier to define a design a business model that buys care in a way that causes the infrastructure of care and individual caregivers to meet those goals. Let's start with a sense of how good care could be if we got all of this right.

The next chapter outlines a set of tools, processes and commitments we might want to make an embedded part of care delivery that results from the business model we use to buy care in America.

So what should the care delivery infrastructure of the future of care look like?

We need to start by focusing on the patient.

