PREFACE TO DATA SANITY: A QUANTUM LEAP TO UNPRECEDENTED RESULTS

This book remains an ongoing labor of love that began in 1994. It summarizes the wisdom I have obtained by applying, relentlessly, quality improvement philosophy.

As so many of us have painfully discovered, true progress can seem virtually glacial (more about that in the Introduction). If there is to be the "quantum leap to unprecedented results" in the book title, the time has come for people in improvement roles to be far more pro-active in working cooperatively in true partnership with boards, executive management, and physician leadership in addition to staff. I hope this book will provide you with both a catalyst and conduit to do this. It demonstrates a new way of thinking via a common organizational language based in process and understanding variation to motivate more productive daily conversations...for everyone. This shift in thinking will take nothing less than a shift to a vision of "the transformed organization" with improvement actually "built-in" to organizational DNA. I'm providing an innovative roadmap that most of you will find quite challenging; but the rewards awaiting you are many.

DATA INSANITY CONTINUES UNABATED

The rampant waste caused by poor *everyday* organizational use of data continues. Many high level executives have no idea of the vast potential that exists to have their organizations take "a quantum leap to unprecedented results" through the common language alluded to in the last section. I call it "data sanity" – new, more productive conversations in reaction to the everyday use of data and the resulting meetings and actions.

In executives' defense, given their experiences with business school statistics courses and the statistics taught by the consulting groups many hire, I must say this lack of awareness truly isn't their fault! It's time for people working in improvement to own this fact, stop the excuses, stop training that is nothing short of legalized torture, stop tolerating the executive attitude of "give me the 10-minute overview," and *do* something about changing their perceptions of improvement and, especially, statistics. To be fair, many people in improvement have had the exact same experiences with statistics in required courses, on-line belt training, and project facilitation training and are naively passing on the only experience they know. All of this is the wrong focus – *and the wrong material*. Implicit in these is an approach that is "bolt-on" to the current ways of doing work.

I hope to show you an intriguing alternative that can be hardwired or "built-in" to your current culture. All it requires of participants are the abilities to: (1) count to eight, (2) subtract two numbers (this "advanced" technique could involve some borrowing), (3) sort a list of numbers, (4) use simple multiplication and addition, and (4) think critically, which is missing in most training.

The time is far overdue to stop the everyday madness of meetings where data are involved, much of which I like to call MBLC ("Management by Little Circles") – poring over data tables drawing "little circles" and demanding explanations for why a number is different from either its predecessor or an arbitrary goal. Unfortunately, in these meetings, there are as many different sets of circles as there are people in the room! And then there are other meetings where pages and pages of data displays such as bar graphs, trend lines, "traffic light" and variance reports are handed out – which will be shown in Chapter 2 to be virtually useless – that make a person wish, "When I die, let it be in a meeting. The difference between life and death will be barely perceptible."

All this activity – in addition to the activity that actually produces these reports and analyses – is waste, pure and simple! In fact, it is far worse than that. Well-meaning, but incorrect conclusions and actions resulting from these meetings unwittingly inflict damage on good, hard-working front-line people, demoralize culture, and actually make things worse, certainly no better. I challenge Lean practitioners to recognize this as a source of waste and calculate its cost.

Chapter 2 – the biggest improvement from the last edition – is targeted to boards, executives, and middle management to show the unknown and untapped power of some *basic* tools that will cause a *profound* change in conversations...and results. It is also targeted to improvement professionals. This is your chance to learn *how to stop boring these powerful people to death* and, instead, become willing allies in getting them desired results *beyond their wildest dreams*.

The 10 Lessons in Chapter 2 are designed to show how routine meetings with everyday data can be transformed – and create the awareness that you are swimming in more daily opportunity than you (and your leadership) ever could have imagined. It will create far more impact than many current "bolton" projects that fall into the trap of using vague teams generating vague data on vague problems resulting in vague solutions...and getting vague results (put focused attention on *anything* and it improves). I am talking here about "built-in" transformation – that will make such projects more focused on key strategic areas (Chapter 9). Your job will become far more interesting – and effective.

"PLOT THE DOTS" AND WATCH THE CONVERSATIONS CHANGE

Once again, please stop delivering or studying statistical training that continues to be nothing short of legalized torture. The wrong things are being taught, perpetuated...and misused. Some of the biggest myths perpetuated relate to the concept of Normal distribution, which will rarely be mentioned in this book. Statistical training needs major surgery. It should no longer teach people statistics, but instead *teach them how to solve their problems...* and make *lasting* improvements by thinking critically. Organizational education is another major revision in this edition and will be discussed in Chapter 9.

As the final lesson in Chapter 2 will show, leaders can no longer continue to abdicate their responsibility for learning basic methods for understanding and dealing with variation. And it's also time that promotions reflected a person's willingness to use them routinely, be successful with them, and teach them to their direct reports.

I will still spend a lot of time on the use and interpretation of the statistical techniques of *run charts* and *control charts* of process data. I continue to be amazed at the awesome power of simply "plotting the dots," as are the audiences I address. Trust me: An increased emphasis on "process" in the context of understanding variation will develop your intuition as to proper tool use – and you won't need as many (Many traditional tools are covered in Chapter 8). One other purpose of this book is to show the importance of *critical thinking* in conjunction with the use of simple tools...and respect for "the process."

LOGIC + HUMANS = CHANGE? THINK AGAIN!

Chapters 3 and 4 (formerly Chapters 4 and 5 in the previous edition) have been streamlined to essential leadership skills and a context that will create an atmosphere where improvement can flourish. However, as shown in Exhibit 1.2 in Chapter 1 and described further in Chapter 9, a crucial phase in transformation is to create a critical mass of 25 to 30 percent of leadership employing both data sanity principles and the leadership skills of Chapters 3 and 4.

Ongoing change continues to be relentless in people's everyday lives with the perceived need being "even bigger... even better... even faster... even more... right now!" Given this and the economic woes of the past five years, people's anxiety levels still guarantee that "You name it...and *somebody*'s mad!"

I hope this book can give you the skills see your job through a newer (and saner) lens – and to anticipate and manage the inevitable "disgustingly predictable" resistance you *will* encounter – without getting an ulcer (my leadership mantras in Chapter 3 should help). My wish is for you to use its principles to gain the support – and respect – of your organizational culture.

THERE IS NO "MAGIC BULLET"

Be careful: Books and consultants continue to try their best to seduce you with (ultimately disappointing) easy answers, templates, and fancy Japanese words – and this book isn't one of them. I do, however, promise you realistic, practical answers that may not initially seem easy, but will address deep causes, get your desired results and hold these gains...if you do your homework.

At this moment, a technique called "rapid cycle PDSA" (Plan-Do-Study-Act) is ubiquitously being touted as the "cure all" – and it might be...if used in conjunction with the principles in this book. If any of you have tried it and are frustrated, *you have good reason*. Take a look at my article series in the Resources of Chapter 8. If you read this book and learn its lessons about "human variation," I promise you success in dealing with rapid cycle PDSA's lurking realities.

SO, SPECIFICALLY, WHAT ARE THE CHANGES IN THIS 4TH EDITION?

The main changes in this edition are the elimination of the former Chapter 3 on Balanced Scorecards and radical revision of Chapters 2 and 9.

Projects are still very necessary for organizational improvement, but they must be seen in the context of cultural transformation. And Data Sanity will catalyze this process and the use of everyday data to create the time to do effective, more strategic projects.

This edition's **Chapters 1 through 4** remain a needed executive overview and leadership development plan of what it takes to commit to using "improvement" to transform an organization. It is meant to be read by boards, executives, physician leadership, middle management, and people having formal improvement responsibility. I hope this book will help you begin to create a common language amongst these groups and motivate their need to become allies in leading improvement, mentoring the front-line in this language, and dealing with the predictable resistance that *will* be released.

These chapters are also designed as an education for people with formal improvement responsibilities to motivate their responsibility and gain organizational credibility to educate, relentlessly, the executives, board, and middle management by showing them how to get results.

Chapters 3 and 4 address the continued woeful lack of understanding of the cultural and leadership issues involved in transforming to a culture of improvement – and creating the culture where improvement can thrive and be "hardwired." It is a synthesis of an approach based in the resultsorientated cognitive psychology. In my consulting practice, it has proven itself over and over again to be simple, practical, and robust both in terms of understanding and dealing with organizational behaviors and individual workers' behaviors. It also provides a catalyst for one's leadership development.

This edition's **Chapters 5 through 10** (formerly 6 to 11) contain the deeper knowledge of data concepts (including keeping data collections simple and efficient), plotting data statistically, and, most important, how to apply critical thinking to a situation. This is the in-depth knowledge required for people who have more formal responsibility for improvement.

Chapter 8 (former Chapter 10) has been rearranged with a changed focus. It has shifted from using "bolt-on" individual projects as a context for quality to "built-in" projects aligned with key strategic issues as a context for improvement. It also takes a realistic view of teams and their inevitable problems that we've all experienced, both as members and facilitators. Taking a key concept from Lean, there is an extensive discussion of the wisdom and need for process standardization – and how it actually leads to more effective innovation. And, yes, the additional improvement tools are in there. Appendix 8A shows examples of their application to everyday situations, but is more advanced than the lessons in Chapter 2. This is the work that a leader in improvement would do "behind the scenes."

Chapter 9 considers organizational education in a much deeper context than the previous edition. It uses Exhibit 1.2 for its roadmap. It has been thoroughly revised with a new emphasis on using education as "teachable moments" to solve everyday problems with one caveat – the important problems

aren't necessarily the ones that walk into managers' offices. The most important problems are the ones of which no one is aware.

WELCOME!

My hope is that I can motivate you to keep learning and imbibe passion for wanting to make a difference...and have the wherewithal to keep a tenacious attitude going way beyond learning "the tools" to truly make a difference. It is a most interesting journey.

Using my language of **Chapter 3**, I hope this book will be an "activating event" to change your current "beliefs" about 'improvement,' resulting in "consequential behaviors" that will lead to your desired "results." I wish I could say that it was "as easy as abc"...but it isn't.

So, welcome, my newfound companion and colleague, to a transformational journey, and I hope you will respond to and learn from the many challenges that await.

DAVIS BALESTRACCI - DATA SANITY: A QUANTUM LEAP TO UNPRECEDENTED RESULTS

INTRODUCTION: SOME REFLECTIONS ON THESE PAST 5 YEARS SINCE THE 3RD EDITION

What's changed these past five years since my last edition? Once again, everything...and nothing.

IT'S TIME TO MOVE FROM "QUALITY AS BOLT-ON" TO "IMPROVEMENT AS BUILT-IN"

I remember back in the early '90s when I was writing the first edition of this book (1994), Total Quality Management (TQM) was on its last legs and Continuous Quality Improvement (CQI) was the new fad. And then Reengineering crept in for a little while, but then it became all about Six Sigma (and its ensuing sub-industry of statistical belt training). The presence of Lean caused some "guru vs. guru" wars. An uneasy alliance called Lean Six Sigma seems to currently predominate with some non-trivial smatterings of Toyota Production System.

Lessons still not learned

My respected colleague Ron Snee talks about six common mistakes that continue to be made despite what has been learned in the last 30 years:

- Failing to design improvement approaches that require the active involvement of top management
- Focusing on training rather than improvement
- Failing to use top talent to conduct improvement initiatives
- Failing to build the supporting infrastructure, including personnel skilled in improvement and management systems to guide improvement
- Failing to work on the right projects—those that deliver significant bottom-line results
- Failing to plan for sustaining the improvements at the beginning of the initiative

I remain more convinced than ever that any solid improvement theory comes from the late W. Edwards Deming's teachings (see Neave in Resources). He died in 1993 and each new fad *du jour*, unbeknownst to it, seems to incorporate more principles of Deming's teachings albeit piecemeal.

The basic tools and statistical theory underlying them, for all intents and purposes, have barely changed. In this new edition, if anything, I have made their applications even simpler. Deming himself – through his development of his System of Profound Knowledge at the end of his life as a context for improvement – considered his approach to be a *theory of management* that needed to be built-in to an organization's DNA.

I agree with Snee's observations and just haven't seen much progress on the six mistakes above. I hope this book can make a modest contribution to remedying this. *My goal remains to create organizational cultures where the words "quality" and "statistical" are dropped as adjectives from programs because they are "givens."*

And, by the way, YOU are the "top talent" to which Snee alludes!

BEYOND "BOLT-ON" PROJECTS TO AN INTEGRATED "BUILT-IN" STRATEGY TO ATTAIN ORGANIZATIONAL GOALS

In one of Dr. Donald Berwick's most underrated annual plenary talks at the Institute for Healthcare Improvement's (IHI) forum ("Why the VASA Sank"), he said:

"I want to see health care become world class. I want us to promise our patients and their families things that we have never before been able to promise them...I am not satisfied with what we give them today...And as much respect as I have for the stresses and demoralizing erosion of trust in our industry, I am getting tired of excuses...

"To get there we must become bold. We are never going to get there if timidity guides our aims...Marginal aims can be achieved with marginal change, but bold aims require bold changes. The managerial systems and culture that support progress at the world-class level...don't look like business as usual.

"1) Bold aims, with tight deadlines; 2) "Improvement" as the strategy; 3) Signals and monitors -- providing evidence of commitment to aim, giving visible evidence of strategy via management of monitors; 4) Idealized designs; 5) Insatiable curiosity and incessant search; 6) Total relationships with customers; 7) Redefining productivity and throughput; 8) Understanding waste; 9) Cooperation; 10) Extreme levels of trust.

"The lesson about the Vasa is not about the risk of ambition. It is about the risk of ambition without change, ambition without method."

What is the Vasa? It was a Swedish war ship built in 1628. It was supposed to be the grandest, largest, and most powerful warship of its time. King Gustavus Adolphus himself took a keen personal interest and insisted on an entire extra deck above the waterline to add to the majesty and comfort of the ship and to make room for the sixty-four guns he wanted it to carry. This innovation went beyond the shipbuilder knowledge of the time...and would make it unstable. No one dared tell him. On its maiden voyage, it sailed less than a mile and sank to the bottom of Stockholm harbor.

By the way, Dr. Berwick's speech was given in 1997. Look once again at his 10 challenges and ask, realistically:

So what's changed?

I know my answer and I wonder – has improvement become an industry getting better at building quality improvement Vasa's? Especially because of Six Sigma, is this industry justifying its existence by creating a culture of "qualicrats?" (a term coined by Jim Clemmer, www.jimclemmer.com):

"The quality movement [has given] rise to a new breed of techno-manager—the qualicrat. These support professionals see the world strictly through data and analysis, and their quality improvement tools and techniques. While they work hard to quantify the 'voice of the customer,' the face of current customers (and especially potential new customers) is often lost."²

So what is the quality profession doing to change that perception? If anything, I see it adding more tools and creating more fads *du jour*, promising instant results to attention-deficit executives who continue to spout what Jim Clemmer calls "passionate lip service" about improvement.

Do improvement leaders even recognize that they have to change that perception? I think it's time to "connect the dots" for executives regarding the integration of improvement into organizational culture. The process of doing this will have serious implications (1) for management and leadership of people (the organizational hiring, development, and promotion processes) and (2) needed changes to the "bolton" culture of many improvement leaders and how they currently interact (or not) with executives. And when improvement leaders do get such an opportunity, they must *stop boring them to death* and, instead, *solve their biggest problems*.

Improvement methods may come and go, but the need to improve performance and the bottom line never goes out of style. And for those of you who are willing to take a much broader view of your role, this book is for you – and designed to help keep you employable.

BASIC STATISTICAL LESSON #1 STILL HASN'T CHANGED: "GIVEN TWO DIFFERENT NUMBERS, ONE WILL BE LARGER."

Does one need a huge salary to make that distinction, then either reflexively say, "Good job!" or throw some semblance of a tantrum saying "I don't like it! **This is unacceptable!! Do something about it!!!"** in response?

What if it were possible to create a culture where people know that the deeper and more important questions to ask are:

- "Is the *process* that produced the second number the same as the *process* that produced the first number? May I please see a chart of the data in its time order?"
- And, if a number is different from a desired goal, "Is this variation from the goal due to common cause or special cause? May I please see a chart of the data in its time order?"

According to Mark Graham Brown (see Resources), proper organizational use of data has the potential to reduce senior management meeting time by 50 percent and eliminate one hour of a middle manager's time every day poring over useless data — *Time that can then be spent on organizational transformation* using the principles in this book and generating more time for your front-line to do what it likes best — patient care.

THE IMPACT OF IHI'S "100K LIVES CAMAPAIGN": A NEW JOURNEY BEGINS OR CONDONING "VAGUE" AS A STRATEGY?

Although controversial in some academic circles, IHI's December 2004 – June 2006 "100K Lives Campaign" was a huge boost to health care improvement *awareness*. The trouble is, if you put focused attention on *anything*, it will improve. The following situation made me suspicious.

The day the results of the campaign were announced, I was giving a seminar for the Michigan Hospital Association, and I asked if any hospitals represented were part of the campaign. Quite a few hands went up. So, I then asked how they felt about their results and their level of executive commitment: Dead silence. One brave person raised her hand and said, "Our executives were nowhere to be seen during it, except to cajole us for results, but they all seem to have the time to go to Atlanta and sip champagne," to which I saw nodding heads and heard snickers. What is wrong with this picture?

Campaigns such as this remind me of my respected colleague Brian Joiner's warning: "Vague solutions to vague problems yield vague results" (see Resources). *I am not faulting IHI's efforts*, but what were the deeper motivations of the organizations that joined – a true passion for improvement or peer pressure to look good supported by the aforementioned "passionate lip service?" In my opinion, executive lack of visible passion for excellence remains the major barrier to health care transformation. If only it was as easy as Captain Jean Luc Picard of *Star Trek: The Next Generation* saying, "Make it so." It's not. And, yes, I know, the current way of running the business is perceived as taking up over 100 percent of their time. There's a way to fix that – *data sanity*.

TIME FOR CULTURAL "HARDWIRING"

The Front-line Wants Answers...Not More Models

Understanding work as "processes" or "systems" is a revelation to most people...as well as an initial counter-intuitive leap in thinking. Front-line workers tend to see their job as a bunch of isolated activities uniquely tailored to each customer interaction. And they are very proud of how *hard* they work. To them, *that's* quality. "And-it-already-takes-up-100%-of-my-time-to-the-point-where-I-can-barely-keep-up-with-it-thank-you-very-much!"

Deming would set a trap right at the beginning of every one of his four-day seminars. He would glare at the audience and ask, "What's it going to take to take an organization to unprecedented levels of quality." He could always count on one person to stand up and say, "By everyone doing their best," after which Deming would give the person his famous scowl and growl, "They already are – and that's the problem!"

Improvement Activity Has Not Necessarily Translated into Lasting Impact

Dr. Berwick gave a very heartfelt speech at the 1999 IHI annual Forum, "Escape Fire," about a horrific experience he had with the health care system because his wife, Ann, had contracted a mysterious illness (Contained in his book *Escape Fire* (see Resources)). In one of my occasional chats with Dr. Berwick, I asked him, given the success of the "100K Lives Campaign," if his wife were in the hospital now (it was seven years later), would the same thing happen? His answer was "I have absolutely no doubt, yes."

So what's changed?

In another one of Dr. Berwick's plenary speeches ("Buckling Down to Change"³), he outlined 11 things needed to be done in health care – within two years:

1) Reduce the use of inappropriate surgery, hospital admissions, and diagnostic tests; 2) Improve health status through reduction in underlying root causes of illness; 3) Reduce cesarean section rates to below 10 percent without compromise in maternal or fetal outcomes; 4) Reduce the use of unwanted and ineffective medical procedures at the end of life; 5) Adopt simplified formularies and streamline pharmaceutical use; 6) Increase the frequency with which patients participate in decision making about medical interventions; 7) Decrease uninformative waiting of all types; 8) Reduce inventory levels; 9) Record only useful information only once; 10) Reduce the total supply of high-technology medical and surgical care and consolidate high-technology services into regional and community-wide centers; 11) Reduce the racial gap in health status, beginning with infant mortality and low birth weight.

What a wonderful road map - from 1993!

So what's changed?

Awareness has probably increased, but would you agree with me that these fundamental issues remain, with maybe some token progress on #6, less so #8, and, with recent emphasis on an electronic medical record, #9 is making some, but glacial, progress? Are any of these less important today? I don't think so. As I've emphasized, we need to talk about transformation, especially transformation of health care leadership.

TRUE "ROOT CAUSES"

With the increased focus on horrific hospital events and insurance companies refusing to pay for what it deems "never events" that "shouldn't" happen, the past five years have seen a growing sub-industry of root cause analyses sprout up in most organizations – led by improvement personnel. In an article from 2003 by John Dew⁴ that is no less relevant today, he says to be very careful about so-called root cause analyses. The *true* root causes usually go even deeper into cultural issues, which I would like to address in this edition (see also Chapter 1). I ask you to consider them seriously because they are also probably unintentional – good people doing their best:

- Placing budgetary considerations ahead of quality
- Placing schedule considerations ahead of quality
- · Placing political considerations ahead of quality
- Being arrogant
- Lacking fundamental knowledge, research or education
- Pervasively believing in entitlement
- Autocratic leadership behaviors, resulting in "endullment" rather than empowerment.

Improvement leaders have been forced to, and made huge strides in, speaking the language of senior management. Dew believes that in many organizations, senior management still doesn't understand the fundamental lessons of quality and, frankly, isn't interested in learning them. Could it be that few improvement leaders make it into senior management positions because senior management doesn't really believe in quality concepts?

No doubt, these are very difficult for you as leaders to read. But, let me give you a lesson about feedback discussed much more thoroughly in Chapters 3 and 4: Feedback is *a perception being shared, not a truth being declared.* If these perceptions are being created by you and your leadership team in the culture, you have to ask yourself three questions:

- 1. Is this a perception I want them to have?
- 2. If this perception continues, will we be able to achieve the organizational results to which we aspire?
- 3. How do I have to change to create the perceptions I want them to have?

Creating healthier perceptions in the culture will motivate the right actions to produce desired results. But, be aware, this process will involve some deeper understanding and visible behavior changes on your part as well (Chapters 3 and 4).

There is an article given in the link below, "Quality Turf Wars," that is almost 20 years old and could have been written yesterday. Most of my clients agree, and it has also been my experience in many organizations, these battles *will* go on right under your noses during a transition to a culture of improvement. It is only when a critical mass of 25 to 30 percent of leaders deals with these issues head on that transformation will begin to take hold:

http://www.qualitydigest.com/oct97/html/cover.html . [accessed 6/2/2014].

Chapter 1's Exhibit 1.2 is a robust roadmap for this journey. Getting through its first two phases is discussed in Chapter 9, but the material in Chapters 1 to 4 is the catalyst to make it happen faster and more smoothly.

IT'S ALL ABOUT PEOPLE

A lot of executives ask in frustration, "How do we motivate our people?" It makes me think of a Dilbert cartoon where, to improve morale, the management put everyone on antidepressants. One woman was so depressed, she took ALL of the pills! Everyone was frantic, "We need to get her to vomit. What should we do?" And someone said, "I've got it! Let's go get the mission statement from the board room and read it to her"...and they ALL vomited!

Some friendly and frank advice: If executives and management don't "walk the talk," any quality improvement effort is dead in the water...and just creates better cynics for the next grand announcement after the annual retreat. As I once said to an executive whose cultural reputation was famous for this, "I'm sorry, your behavior is speaking so loudly that I can't hear what you're saying."

Let me suggest an article to use as a barometer for your efforts, but first, I'll give you its background. In the early 1990s, a respected colleague of mine who is considered one of the best Deming proponents in the world wrote a brilliant article about his back surgery experience entirely through the lens of Deming's improvement theory*. I suggest that you and your team read it occasionally and ask yourselves, "Could this have happened yesterday in our facility?"

http://www.qualitydigest.com/IQedit/Images/Articles_and_Columns/December_2011/Special_Health/Heero_back_surgery.pdf]

So what's changed?

MY FINAL CHALLENGE: ARE YOU READY TO SAY "ENOUGH!"?

I attended a conference in the late 1980s that gave me a pearl of wisdom every bit as applicable today. A successful improvement effort requires:

- 1) The personal will to want to change,
- 2) The **belief** that the organization is capable of change,
- 3) The **wherewithal** to undo old habits by a tenacious commitment to learning **all** aspects of quality,
 - 4) **DOING** IT!

To which I am now adding:

5) Saying "*Enough!*", then getting your leadership to say "Enough!"

Enough of attending meetings that lead to building a bridge to nowhere, enough of asking what I'm supposed to ask rather than what needs to be asked, enough of praising people who are undeserving of praise, enough of valuing form over substance, enough of accepting good when what is needed is outstanding, enough of enabling people to act as victims when they need to take personal responsibility.

Inevitably, this kind of shift doesn't happen unless a substantial number of leaders put their collective foot down and say 'Enough!' in unison." -- Mariela Dabbah

The time is *now* to:

- manifest more effective executive engagement (and development),
- use everyday "data sanity" as a philosophy and conduit for organizational transformation
- utilize data more deliberately and efficiently in improvement, and
- create an everyday culture of improvement through leadership where key results can be hardwired and built-in to cultural DNA.

"The Journey of 1000 miles begins with a single step" – Start here

One last nugget from Dr. Berwick from what might be his best speech of all time, "Run to Space" 5 (1995)

Plotting measurements over time turns out, in my view, to be one of the most powerful devices we have for systemic learning...Several important things happen when you plot data over time. First, you have to ask what data to plot. In the exploration of the answer you begin to clarify aims, and also to see the system from a wider viewpoint. Where are the data? What do they mean? To whom? Who should see them? Why? These are questions that integrate and clarify aims and systems all at once. Second, you get a leg up on improvement. When important indicators are continuously monitored, it becomes easier and easier to study the effects of innovation in real time, without deadening delays for setting up measurement systems or obsessive collections during baseline periods of inaction. Tests of change get simpler to interpret when we use time as a teacher...So convinced am I of the power of this principle of tracking over time that I would suggest this: If you follow only one piece of advice from this lecture when you get home. pick a measurement you care about and begin to plot it regularly over time. You won't be sorry.

As you will shortly discover, if you follow only that "one piece of advice" from Dr. Berwick's talk, you will indeed take "a quantum leap to unprecedented results."

As you begin (or even retrace) your quality journey, let me share some wonderful advice from the absolute best mentor I ever had (and finest human being I have ever met, who is one of the dedicatees of this book - Dr. Rodney Dueck), who smiled and said to me one time when he saw my frustration: "Davis, just think of it all as entertainment."

¹ Donald M. Berwick, Escape Fire (San Francisco, CA: Jossey-Bass, 2004), 127-154.

² Jim Clemmer, Technomanagement: A Deadly Mix of Bureaucracy and Technology,

http://www.clemmergroup.com/technomanagement-a-deadly-mix-of-bureaucracy-and-technology.php

³ Donald M. Berwick, Escape Fire (San Francisco, CA: Jossey-Bass, 2004), 11-42.

⁴ John Dew, "Root Cause Analysis: The Seven Deadly Sins of Quality Management," *Quality Progress*, September 2003.

⁵Donald M. Berwick, *Escape Fire* (San Francisco, CA: Jossey-Bass, 2004), 61-94.

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