



Middle East Forum on Quality & Safety in

Healthcare 2023

16-19 March, Doha

Transparency and Building Strategic Dashboards

Saturday, 14th March (10:15-11:15)



Brought to you by:

Hamad Healthcare Quality Institute

IHI Faculty
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Sr. Improvement Advisor



Conflict of Interest

The speaker for this session, Dr. Robert Lloyd, has no conflict of interest or disclosure in relation to this presentation.



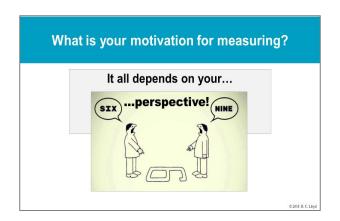
Learning Objectives

At the end of this session, participants will be able to:

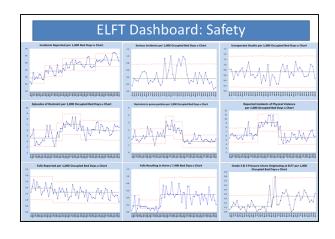
- 1. Understand the challenges with evaluating healthcare performance
- 2. Describe the evolution of the Strategic Dashboard
- 3. Explain the components of a Strategic Dashboard
- 4. Clarify the role of Benchmarking

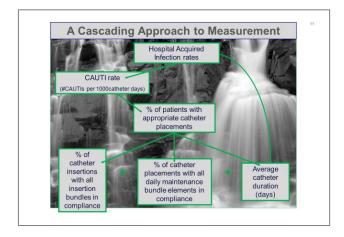


What is the motivation for developing your Strategic Dashboard(s)?

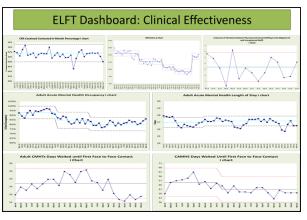












The Three Faces of Performance Measurement

Aspect	Improvement	Accountability (Judgment)	Research	
<u>Aim</u>	Improvement of care (efficiency & effectiveness)	Comparison, choice, reassurance, motivation for change	New knowledge (efficacy)	
Methods: • Test Observability	Tests are observable	No test, evaluate current performance	Test blinded or controlled	
• Bias	Accept consistent bias	Measure and adjust to reduce bias	Design to eliminate bias	
Amount of Data	"Just enough" data, small sequential samples	Obtain 100% of available, relevant data	"Just in case" data	
Flexibility of the hypotheses	Flexible hypotheses, changes as learning takes place	No hypothesis	Fixed hypothesis (null hypothesis)	
Testing Strategy	Sequential tests	No tests	One large test	
Determining if a change is an improvement	Analytic Statistics (statistical process control) Run & Control charts	No change focus (maybe compute a percent change or rank order the results)	Enumerative Statistics (t-test, F-test, chi square, p-values)	
Confidentiality of the data	Data used only by those involved with improvement	Data available for public consumption and review	Research subjects' identities protected	

Adapted from: Lief Solberg, Gordon Mosser and Sharon McDonald, Journal on Quality Improvement vol. 23, no. 3, (March 1997), 135-147.

In the name of Quality let's rate and rank...

So, in the name of Quality let's rate and rank providers using annual or quarterly data!







Dr. Atul Gawande, "The Bell Curve"

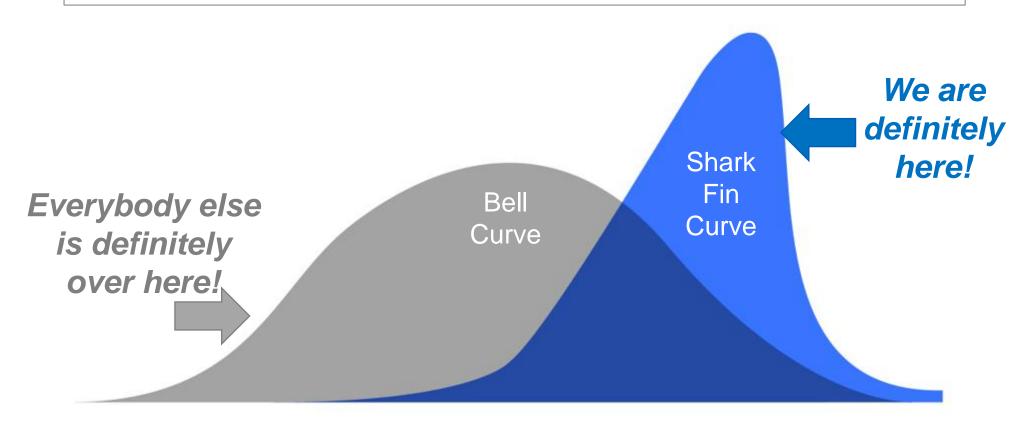
The New Yorker, December 6, 2004

"It used to be assumed that differences among hospitals or doctors were generally insignificant. If you plotted a graph showing the results, people expected that the curve would look something like a shark fin, with most places clustered around the very best outcomes. But the evidence has begun to indicate otherwise.

What you tend to find is a bell curve: a handful of teams with disturbingly poor outcomes for their patients, a handful with remarkably good results, and a great undistinguished middle."



The Bell Curve vs the Shark Fin Curve

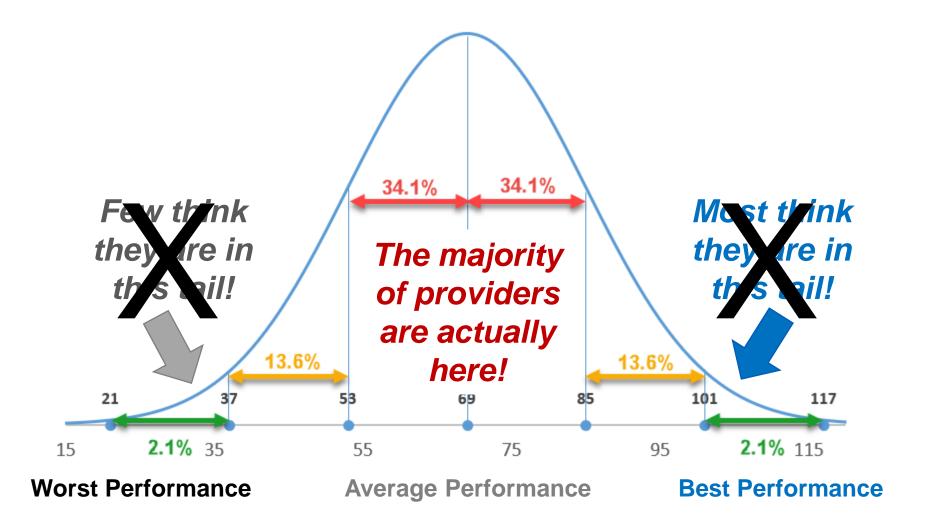


Worst Performance

Average Performance

Best Performance

But in reality, hospital and doctor distributions look more like this!



The Countries with the "Best" Health Care Systems!

The Health Care Index is a statistical analysis of the overall quality of the health care system, including health care infrastructure; health care professionals (doctors, nursing staff, and other health workers) competencies; cost; quality medicine availability, and government readiness.

It also takes into consideration other factors including, environmental, access to clean water, sanitation, government readiness on imposing penalties on risks such as tobacco use, and obesity.

The ranking looks at <u>89 countries around the</u> world on five different health variables.

Countries With The Best Health Care Systems, 2021

Rank	Country	Health Care Index (Overall)	Infrastructure	Professionals	Cost	Medicine Availability	Government Readiness
1	South Korea	78.72	87.16	14.23	83.59	82.3	87.89
2	Taiwan	77.7	79.05	13.06	78.39	78.99	65.09
3	Denmark	74.11	90.75	30.01	82.59	92.06	96.3
4	Austria	71.32	86.18	20.25	78.99	88.23	91.8
5	Japan	70.73	78.77	21.6	74.88	74.18	93.2
6	Australia	67.99	92.58	17.37	96.22	67.51	89.91
7	France	65.38	77.86	13.24	71.82	55.1	81.38
8	Spain	64.66	86.28	34.25	75.81	83.82	96.8
9	Belgium	64.63	72.48	24.51	68.68	64.78	94.9
10	United Kingdom	61.73	88.63	14.66	75.61	90.25	88.41

Source: <u>CEOWORLD Magazine</u> – "Top Stories - Stats Gate - Revealed: Countries With The Best Health Care Systems, 2021."



The World Health
Organization's last global
report ranked these 10
countries as the most
advanced in medicine with
the best healthcare in the
world:

- 1. France
- 2. Italy
- 3. San Marino
- 4. Andorra
- 5. Malta
- 6. Singapore
- 7. Spain
- 8. Oman
- 9. Austria
- 10. Japan

Source: World Health Organization, Measuring Overall Health System Performance for 191 Countries

Which country has the best healthcare system in the world?

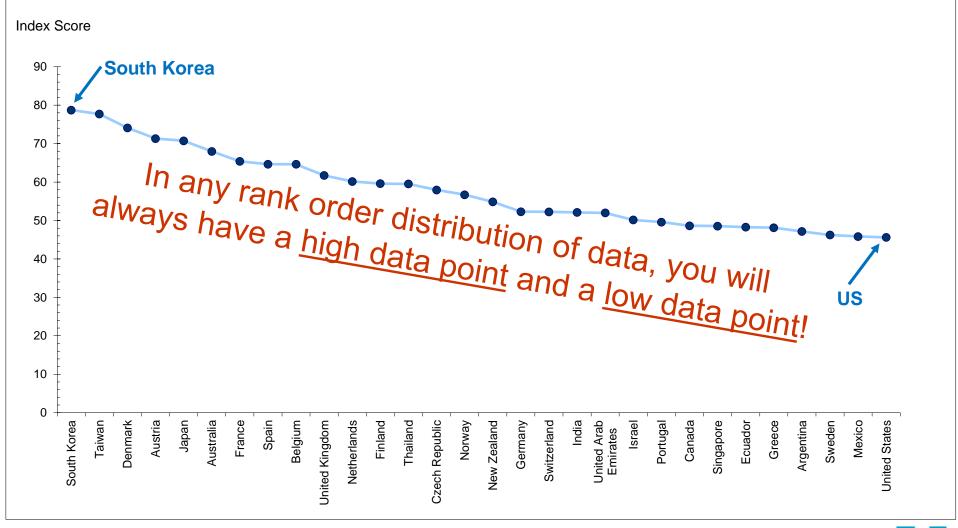
Switzerland comes top of the Euro Health Consumer Index 2018, and it's firmly above the eleven-country average in the Commonwealth Fund's list too. Feb 15, 2022

What country is #1 in healthcare? Best Healthcare in the World 2022					
Country LPI 2020 Ranking CEO World					
Denmark	1	3			
Norway	2	15			
Switzerland	3	18			
Sweden	4	28			

Sooooo, which country is THE BEST?

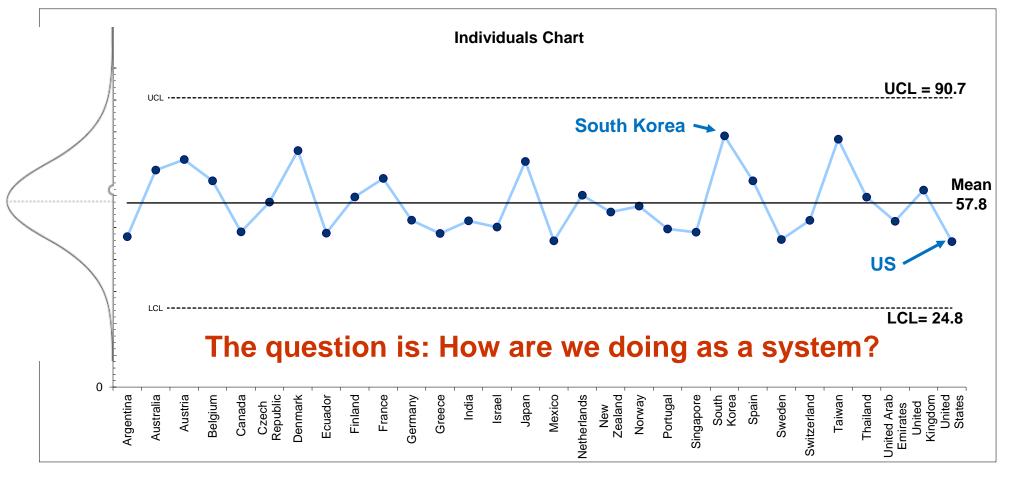
It all depends...

Health Index Scores of the Top 30 Countries





Health Index Scores of the Top 30 Countries



Countries in Alphabetical Order by Index Score

This chart reveals that the 30 countries produce a <u>common cause system</u> which is <u>stable and therefore predictable</u>.

Conclusion: No country is better or worse in terms of performance on the Health Index Score.

How long will this measurement madness go on?

The push for measurement will only increase and transparency will serve as a guiding principle!

The Theory and the Prediction

If the staff, the public, the press and political leaders have more data on the performance of healthcare providers then the top performers will be rewarded and serve as exemplars and the poor performers will be motivated to improve.

Do you agree?

If not, then what is your alternative theory and your prediction?





↑★☆



HOSPITAL SAFETY GRADE

Expanded coverage in the Chicago Tribune Business report

Do hospital ratings bring clarity or confusion?

Patients left to judge credibility of rankings groups — and array of data

By JORDAN RAU Kaiser Health News

How good is St. Mary Mercy Livonia Hospital in Michigan? Depends on whom you ask.

The Leapfrog Group, a nonprofit that promotes patient safety, gave the hospital an A. The company Healthgrades named it one of America's best 50 hospitals.

But the Joint Commission, a nonprofit that accredits hospitals, and U.S. News & World Report omitted St. Mary from their best-hospital lists. Consumer Reports gave it an average safety score, 47 points out of 100, citing high numbers of readmissions, poor communication with patients and excessive use of scans. Medicare, which has a new program rewarding hospitals for meeting certain quality measures, is reducing St. Mary's payments by a fraction this year.

Evaluations of hospitals are proliferating, giving patients unprecedented insight into institu-

EXAMPLE

St. Mary Mercy Hospital

Livonia, Mich.



nia. Consumer Reports examines the number of patients who die or are readmitted, infection rates and Medicare patient surveys of their experiences. Leapfrog looks at data from its surveys of hospitals, the consistency with which hospitals followed safe surgical practices and frequencies of infections and some types of patient harm. Healthgrades analyzes detailed Medicare records to find death and complication rates for 27 procedures and conditions.

"Ratings and ranking programs certainly offer people information they can use to make their hospital selections, but we don't recommend relying on any one of them completely," Jennifer Kennedy, a spokeswoman for St. Mary Mercy, said in an email. "None are able to tell the whole story or paint a complete picture of the care that is delivered."

Opinions and options

Dr. John Santa, who directs Consumer Reports' health ratings, said consumers benefit from different vantages for health care just as they do for cars or electronic devices, and the competition spurs each rating group to get better.



ST. MARY MERCY HOSPITAL



Highly Ranked A Top 50 Hospital

> ... and not at all ... as average ... Unranked: **ConsumerReports** ISNEWS The Joint Commission

So, what or MICHIGAN OHIO Miles 25 It's been ranked highly... you THELEAPFROGGROUP A top 50 hospital

who do believe?

An Average Hospital

An Unranked Hospital



AARP

American Association of **Retired Persons**

> 66 of the "Top" **Hospitals** in the US.

Leapfrog's **April/May** 2013 Rankings

Top Hospitals



- Allegheny **General Hospital** Pittsburgh, Pa.
- Baystate **Medical Center** Springfield, Mass.
- Bellevue **Hospital Center** New York, N.Y.
- Beth Israel Deaconess **Medical Center**
- Boston, Mass.
- Billings Clinic Billings, Mont.

- Brigham and Women's Hospital
- Boston, Mass.
- California Pacific **Medical Center** San Francisco, Calif.
- Central Maine **Medical Center** Lewiston, Maine
- The Christ Hospital Cincinnati, Ohio
- Cleveland Clinic Florida
- Weston, Fla.

- Detroit Receiving Hospital/University **Health Center**
- Detroit, Mich.
- Dublin Methodist Hospital Dublin, Ohio
- Englewood Hospital and **Medical Center**
- Englewood, N.J. Fairview
- Southdale Hospital Edina, Minn.

- Geisinger Medical Center
- Danville, Pa.
- Grinnell Regional **Medical Center** Grinnell, Iowa
- Hackensack University Medical Center Hackensack, N.J.
- Harper-Hutzel
- Hospital Detroit, Mich.
- Homestead Hospital Homestead, Fla.

- Indiana University **Health La Porte** Hospital
 - La Porte, Ind.
 - Inova Fair Oaks Hospital
 - Fairfax, Va. Inova Loudoun
 - Hospital Leesburg, Va.
 - JFK Medical Center of Atlantis Atlantis, Fla.
 - Kaiser
 - Permanente Multiple locations

"Preventable hospital errors are a terrible danger to American families and a huge driver of unnecessary health costs," says Leah Binder, president and CEO of The Leapfrog Group, a Washington, D.C.-based nonprofit that assesses hospitals on national standards of safety, quality and efficiency.

To draw attention to the tragic reality of cases like McClinton's, AARP THE MAGAZINE has teamed up with Leapfrog to showcase what some of the most innovative hospitals are doing to prevent errors. With its Hospital Safety Score, Leapfrog rates institutions on 26 measures of safety-including "never events," infection rates from IV and catheter lines, secondary infections, and hospitalacquired conditions like pressure ulcers and air embolisms using data it compiles from the Centers for Medicare & Medicaid Services, the American Hospital Association and the Leapfrog Hospital Survey.

One surprising standout: Virginia Mason. In fact, for the past seven years Leapfrog has consistently given the hospital



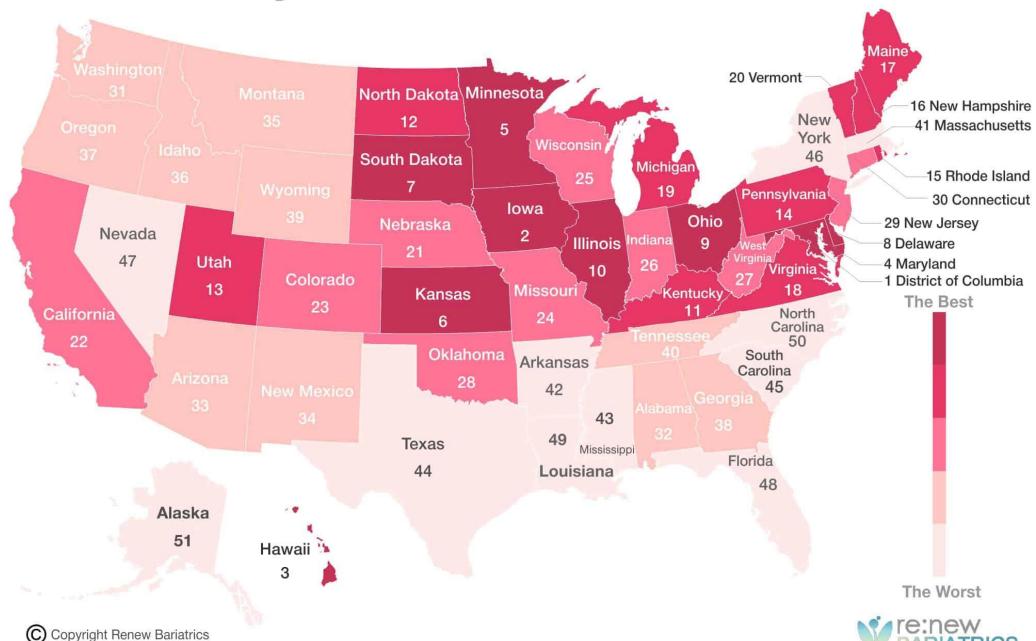
8 very different rating and ranking methodologies used to create the following composite rankings.

Sources for the Ratings and Rankings

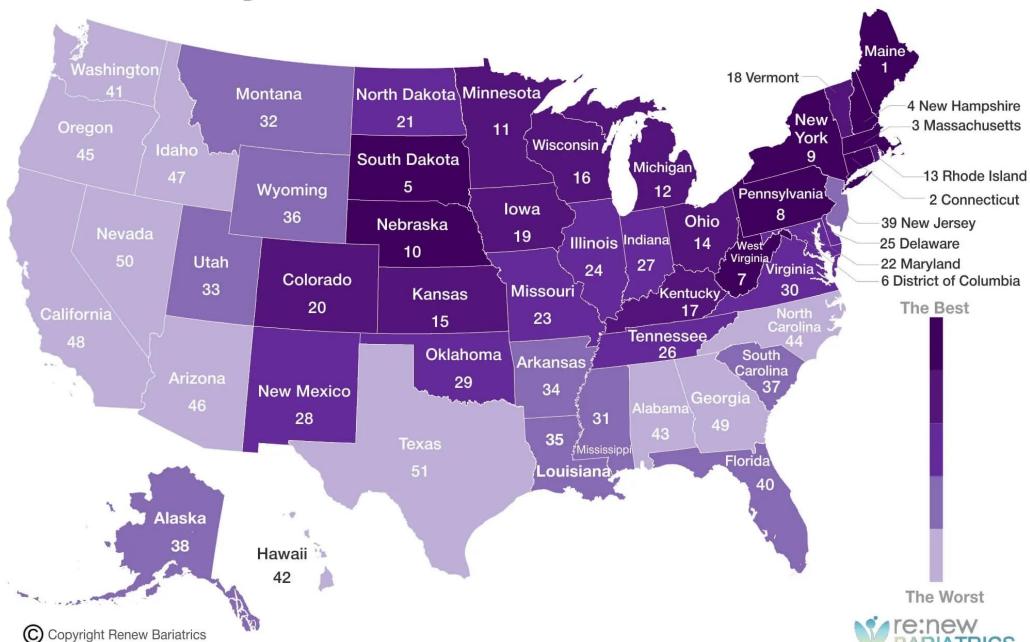
- U.S. News. https://money.usnews.com/money/retirement/slideshows/top-10-us-placesfor-healthcare?slide=5
- U.S. News https://www.usnews.com/news/best-states/rankings/health-care
- Huffington Post. https://www.huffingtonpost.com/gobankingrates/10-best-and-worststates b 9030422.html
- Healthcare. https://www.healthcare.gov/get-coverage/
- 2016 State of Healthcare Quality Table of Content. http://www.ncqa.org/reportcards/health-plans/state-of-health-care-quality/2016-table-of-contents
- Center for Medicare and Medicaid Services. https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityMeasures/index.html
- Healthcare Quality: How Does Your State Compare? Agency for Healthcare Research and Quality, September 2015. https://www.ahrq.gov/research/data/state-snapshots/state-snapshots-infographic-txt.html
- National Healthcare Quality and Disparity Report. Agency for Healthcare Research and Quality, https://nhqrnet.ahrq.gov/inhqrdr/



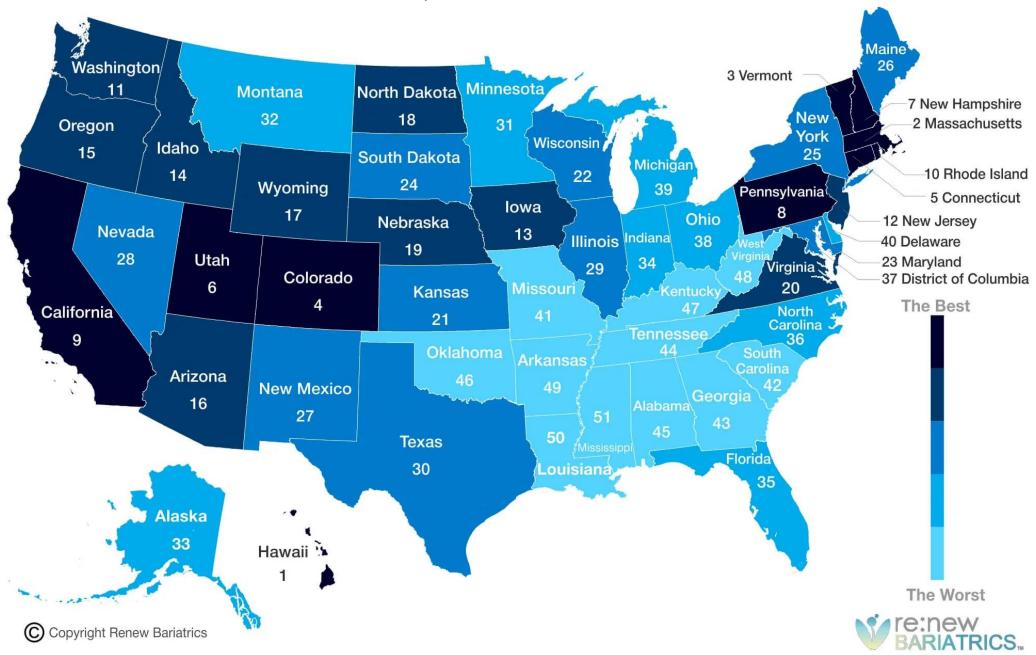
Affordability



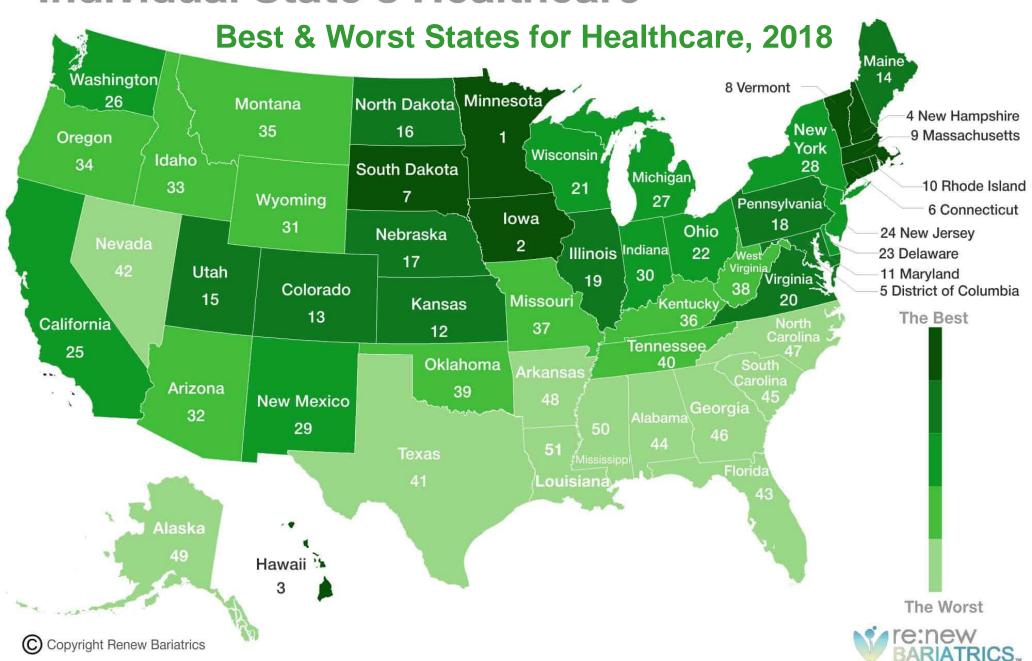
Availability



Healthcare Results, Outcomes



Individual State's Healthcare





U.S. News 2022-2023 Best Hospitals Honor Roll

- 1. Mayo Clinic, Rochester, Minnesota.
- 2. Cedars-Sinai Medical Center, Los Angeles.
- 3. NYU Langone Hospitals, New York.
- 4. Cleveland Clinic.
- 5. (tie) Johns Hopkins Hospital, Baltimore.
- 5. (tie) UCLA Medical Center, Los Angeles.
- 7. New York-Presbyterian Hospital-Columbia and Cornell, New York.
- 8. Massachusetts General Hospital, Boston.
- 9. Northwestern Memorial Hospital, Chicago.
- 10. Stanford Health Care-Stanford Hospital, Stanford, California.
- 11. Barnes-Jewish Hospital, St. Louis.
- 12. UCSF Health-UCSF Medical Center, San Francisco.
- 13. Hospitals of the University of Pennsylvania-Penn Presbyterian, Philadelphia.
- 14. Brigham and Women's Hospital, Boston.
- 15. Houston Methodist Hospital.
- 16. Mount Sinai Hospital, New York.
- 17. University of Michigan Health-Ann Arbor.
- 18. Mayo Clinic-Phoenix.
- 19. Vanderbilt University Medical Center, Nashville.
- 20. Rush University Medical Center, Chicago.

"For more than 30 years, the mission of U.S. News & World Report's annual Best Hospitals rankings has been to help guide patients, in consultation with their doctors, to the right hospital when they need care."

"While disrupting life and health care in many ways, the COVID-19 pandemic has only reinforced U.S. News' long-standing commitment to helping patients across the nation find the best hospital for their needs."

Source: US News & World Report homepage.

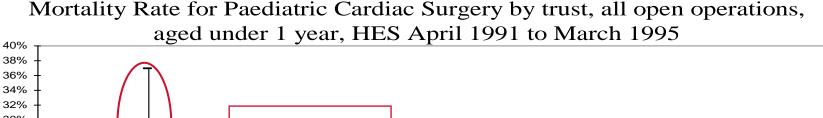
So, what does this tell us about quality, safety, efficiency, effectiveness, patient and staff engagement, equity or improvement right now?

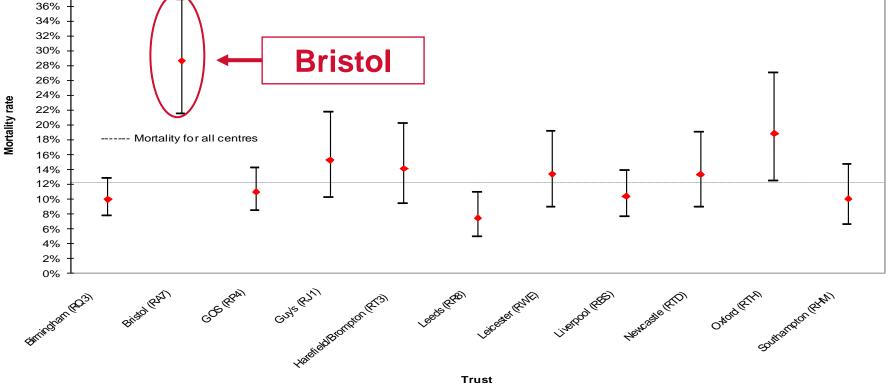




The Bristol Inquiry

Death and morbidity rates following surgery were consistently high







80p Wednesday March 16 2005 Published in London and Manchaster quardian co.uk

ine Guardian

Hospitals deny patients facts on death rates

Guardian investigation under freedom of information extracts first data on heart surgeons and reveals successes and failures of system

Sarah Boselay, John Carvel and Rob Evans

tion they need to make an in-quate data. formed choice about heart surgery, a Guardian lovestiga- multaneous applications un- ingrandrisk assessment; tion has discovered.

the deaths of babics at the time national data about the Bristol Royal Infirmany, fol- individual mortality rates of against two surgeons whose in the NHS. success rates were not as good. The exercise, unprec-

The information should Ten yours after the Bristol have been available by last babies scandal, patients are year; but many hospital treats bility for particular deaths; still being denied the informa- are still not collecting ade. Hisspitals which diverted

der the Freedom of Informa-The Kennedy inquiry into tion Act to extract for the first

as colleagues at other chil- edented in its smle, has found:

make their death rates public. cannot agree among them- which would allow patients to their consultants results. selves about which surgeon exercise informed choice on should be assigned responsi- the basis of knowledge about

would reveal to patients the died. proportion of high and low SUPPOSIS.

2001 that adult heart surgeons and the cardiac consultants denof the medical profession, getting real information about wanted the data in the public surgeon's own figures - which doctors' clinical record.

Heart surgeons have been in money the government allo- the spotlight because of the The Guardian used 36 si- cated to improve record-losep- Briatol scandal, which led to the striking off of two doctors. · Hospitals that are unable to The GMC investigated the give risk-adjusted data, which cases of a bables of whom 25 the publication of heart sur- figures show all heart surgeons. Also were unless from the open-

Chalce will be the buzzword lowing disciplinary action all cardiar surgeons practising risk operations undertaken by of the health debate at the general election, but although The disclosure of individual patients may be able to choose surgeous' mortality data is the the hospital with the smarter dren's heart units, prempted. One London teaching hos-first step towards admitting, waiting rooms or larger car, told the Society of Cardiotho-rious, questions, around the the government to demand in pital where trust managers the public into the secret ear-park, they are nowhere near made Surgeous in 2001 that he damendeed by the trust. The

publication of death rates, for fear that some will be stiernstised as worse than others. they take the hurder cases, to the excreme by some trusts. where deaths are more likely.

the rickler cases.

domain by hist year. The soci- we have used - put him well Many ductors object to the ety has worked hard to collect within the norm. and validate risk-adjusted data that allows for the likelihood of St Mary's in London, has not some deaths, but has been frus- kept separate figures for the when the truth may be that trated by the law priority given

The Guardian's two-month They cite New York, where investigation reveils that trust in the deaths for consultants geons' mertality figures but one are within the limits of uting the stree at the time. St caused some to shy away from acceptability defined by the so- Mary's chief executive, Julian diety - their denth rates forest. Nettel acknowledged that their But publication has been in- stray far from the average. extrable stars Alsa Milborn. Many are excellent in the case who was then health scenetary, of the one putter, there are se-

It has emerged that the trust, operations carried out by visiting locating for holfdays. These have been included data collection was not as good. as it should be.







THE MID STAFFORDSHIRE NHS FOUNDATION TRUST PUBLIC INQUIRY

Chaired by Robert Francis QC

Mid Staffordshire NHS Trust inquiry report published

- Causing death or harm to a patient 'should be an offence'
- 'Duty of candour' should be imposed on NHS staff
- Senior staff who breach code of conduct 'should be disqualified'
- No sacking of 'scapegoats' or reorganising the NHS
- Cameron creates new post of chief inspector of hospitals
- PM apologises for care scandal at Stafford hospital
- Read the key points
- Read the main news story: Report calls for sweeping changes
- Read more: Mid Staffs hospital scandal: explainer
- Read the full report
- Read all our Mid Staffs coverage



2013



Death-rate figures reveal best, worst of our hospitals

Information Act used to obtain data showing hundreds of lives could be saved each year



Martin Johnston health martin.johnston@nzherald.co.nz

everal hundred lives would be saved each year if some of New Zealand's highest public hospital death rates were brought down to those of the betterperforming district health boards.

A Herald investigation has found that the Waikato District Health Board has had among the highest in-hospital "standardised" mortality rates in recent years.

In a five-year period, it had the highest rate for three years.

In those years, its standardised rate - an estimate that gives a fairer comparison than raw data - was significantly higher than the national average.

"Mortality as well as safety, we take it very seriously," said the DHB's chief operating officer, Jan Adams.

The Health Ministry has identified the Waikato rate as a problem, but has also commended the health board for the efforts it is making to get to the root of the issue.

Figures comparing hospital death rates are routinely available to the public in Britain and Canada, and Australia has endorsed using this kind of information as an indicator of healthcare quality and safety.



Waikato Hospital has been high in the mortality rate figures.

Picture / APN

In New Zealand, the details have not been readily available, and the fiveyear figures for the Herald investigation were obtained from the ministry under the Official Information Act.

They show considerable variation between hospitals, but also an overall downward trend.

 In the 2010/11 year, just under 8000 admitted inpatients and day patients - 1.48 per cent of total discharges died within 30 days of admission to hospital.

This was down from 1.68 per cent in 2006/07.

Most hospital deaths cannot be avoided, but overseas research suggests several hundred a year in New Zealand may be preventable.

The ministry said comparing hospital mortality rates with other countries was complicated by different calculation methods, but Australian states tended to have a similar method and rate to New Zealand's.

The Auckland and Waitemata health boards generally had rates at the lower end nationally in the five years of data, while Counties Manukau was mostly in the mid-range.

Rotorua's Lakes DHB was also generally in the middle, while Northland ranged from mid-range to among the lowest. Bay of Plenty tended towards the upper end.

Further south, Capital & Coast was mostly among the lower-rate boards, but Canterbury usually had one of the higher rates.

Experts debate whether standardised hospital mortality rates can be used to evaluate and compare the quality and safety of healthcare in different hospitals.

But in its annual report last year. the ministry made an explicit link between hospital mortality and quality of healthcare.

After an epidemic of healthcareinduced harm was identified in New Zealand a decade ago, numerous schemes to improve the safety and quality of care have slowly taken root.

In a week-long series starting today, the Herald looks at some of these lifesaving schemes.

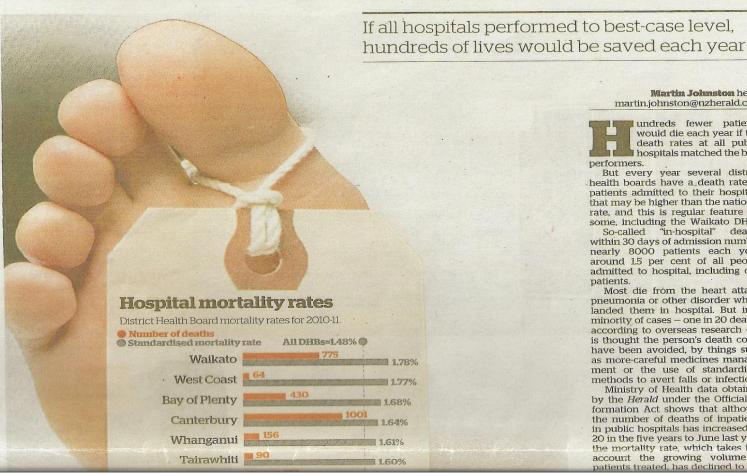
Some, such as the surgical checklist, are simple, and some, such as changes to prevent common errors in the prescribing and dispensing of potentially toxic medicines, are more complex.

The Herald also talks to families who have lost loved ones to hospital errors that might have been avoidable.

They are bewildered by the paperwork mix-ups and overlooking of clinical information that have contributed to their personal tragedies and feel they have been denied justice.

Special report Saving lives: Part one of a five-part series

Life and death on our hospital frontlines



Martin Johnston health martin.johnston@nzherald.co.nz

undreds fewer patients would die each year if the death rates at all public hospitals matched the best

But every year several district health boards have a death rate in patients admitted to their hospitals that may be higher than the national rate, and this is regular feature for some, including the Waikato DHB.

So-called "in-hospital" deaths within 30 days of admission number nearly 8000 patients each year, around 1.5 per cent of all people admitted to hospital, including day patients.

Most die from the heart attack, pneumonia or other disorder which landed them in hospital. But in a minority of cases - one in 20 deaths, according to overseas research - it is thought the person's death could have been avoided, by things such as more-careful medicines management or the use of standardised methods to avert falls or infections.

Ministry of Health data obtained by the Herald under the Official Information Act shows that although the number of deaths of inpatients in public hospitals has increased by 20 in the five years to June last year, the mortality rate, which takes into account the growing volume of patients treated, has declined to 1.48

The **BIG** Question is about Value!

"There is a real paradox in American health care today, we spend more than anyone else in the world on health care, though our results are not better... There are growing questions about value. ... Are we really getting a good return on investment?"

Ken Kizer, President National Quality Foundation Addressing business leaders on March 18, <u>2004</u>



Where do you stand on transparency?

Level Frequency of Transparency	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1. <u>Greater transparency is needed</u> across all healthcare settings and providers.					
2. Patients should be able to compare hospitals as easily as they do cars and other products.					
3. Results on hospital outcomes (mortality, infections, falls, med errors, etc.) should be made public <u>once a year.</u>					
4. Results on hospital outcomes (mortality, infections, falls, med errors, etc.) should be made public <u>twice a year.</u>					
5. Results on hospital outcomes (mortality, infections, falls, med errors, etc.) should be made public <i>four times a year</i> .					
6. Results on groups of doctors (surgeons, GPs, intensivists, dentist, etc.) should be made public once a year.					
7. Results on <u>individual doctors</u> should be made public <u>once a year</u> .					

Where do you stand on transparency?

Content Topics for Transparency	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
8. All <u>clinical outcomes on hospital performance</u> should be made available to the public .					
9. <u>Operational outcomes on hospital performance</u> (wait times, referral times, access) should be made available to the public .					
10. <u>Patient satisfaction results</u> for each hospital should be made available to the public .					
11. <u>Financial results</u> (including salaries) for each hospital should be made available to the public.					
12. Mortality rates for individual surgeons should be made available to the public.					
13. Infection rates for individual physicians should be made available to the public.					
14. Errors and harm rates for individual physicians should be made available to the public.					
15. <u>Salaries of individual physicians</u> should be made available to the public.					

The Goal: To Build a Learning System for Improvement

"An adequate information system has to include information that makes executives question their assumptions about current conditions. It must lead them to ask the right questions, not just feed them the information they expect."

"That presupposes first that the executives know what information they need. It demands further that they obtain that information on a regular basis. It finally requires that they systematically integrate the information into their decision making."

Peter Drucker. "The Information Executives Truly Need" HBR, January - February, 1995.

A Learning System Requires <u>both</u> Data or Information

"Data refers to raw facts and figures which are collected as parts of the normal functioning of the hospital. Information, on the other hand, is defined as data which have been processed and analyzed in a formal, intelligent way, so that the results are directly useful to those involved in the operation and management of the hospital."

Charles Austin, *Information Systems for Hospital Administration*. Health Administration Press, 1983.

"How the Right Measures Help Teams Excel"

Christopher Meyer, HBR, May - June 1994

"Many managers fail to realize that traditional measures, which focus on results (or outcomes), may help them keep score on the performance of their business but do not help a multifunctional team monitor the activities or capabilities that enable it to perform a given process. Nor do such results measures tell team members what they must do to improve their performance."

The Role of Management

"How the Right Measures Help Teams Excel" Christopher Meyer, HBR, May-June, 1994.

Managers should:

- Create the strategic context and direction for measurement.
- Set strategic goals and boundaries.
- Make sure each team understands its purpose and how this purpose fits in with the strategic objectives.
- Not dictate what measures a team should use.
- Provide training and resources for the teams to accomplish their objectives.
- Participate in team reviews.
- Not micro-manage the teams through command and control tactics.

Building a Cascading System of Measures



A Cascading Approach to Measurement Percent of patients recommending your care Promptness/TLC Medication administration Order med Prepare med Dispense Administer med to patient med

A Cascading Approach to Measurement Percent inpatient mortality Hospital Acquired Infection rates Percent compliance with "bundles" VAP bundle CL bundle Hand washing Pressure bundle ulcer bundle

A Cascading Approach to Measurement

Hospital Acquired Infection rates **CAUTI** rate (#CAUTIs per 1000catheter days) % of patients with appropriate catheter placements % of catheter % of catheter Average insertions placements with all catheter with all daily maintenance duration insertion bundle elements in (days) bundles in compliance compliance

Dialogue #1 Do you have a Cascading System of Measures?

Assess your organization's cascade of dashboards and measures

- ➤ Does Corewell Health have a cascading system of measurement? Or, are the measures unrelated and fragmented?
- How long do your dashboards stay in place? Do they have continuity or are they here one day and gone the next?
- Are your dashboards regularly reviewed by an appropriate oversight group? For example, are there dashboards that the Board, senior leaders and managers regularly review? Do staff get to review dashboards?
- ➤ Do your dashboards cascade from the top down (macro level) or percolate up from the staff (micro level)?

Building a balanced set of measures

Mentoring Strategic Change in Health Care



An Action Guide

Chip Caldwell

with Forewords by Donald M. Berwick, M.D. and A. Blanton Godfrey "In spite of a general agreement by most senior leaders of the critical need for a strategic measurement set, some organizations stop short of establishing quantifiable measures of all dimensions of their strategies, except financial.

They would do well to mimic the same logic they follow in their financial accounting system for their strategic requirements."

Chip Caldwell, 1995, p. 97

Components of a Balanced Set of Measures

$$S + P + C^* = O$$

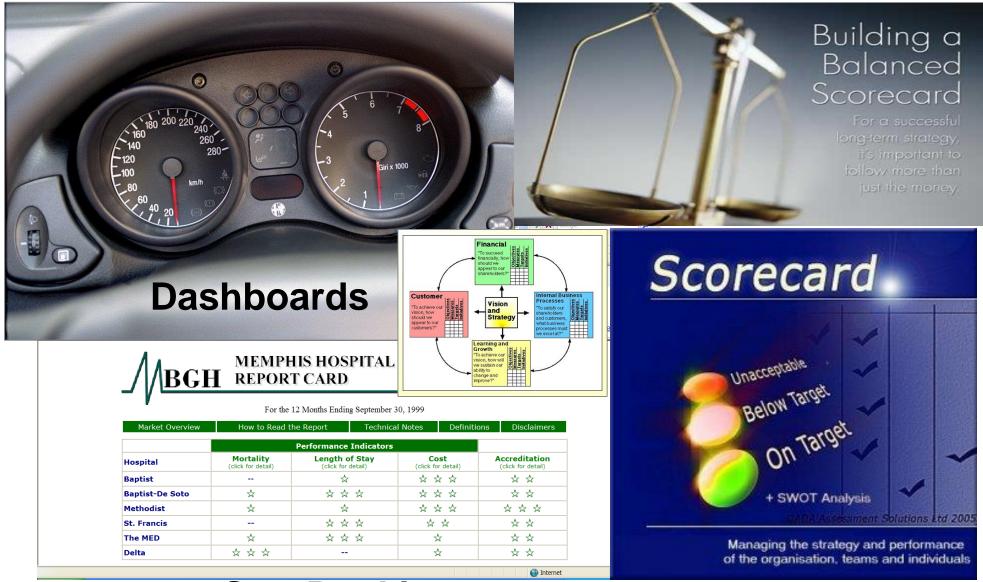
Structure + Process + Culture = Outcomes

Does your organization's strategic measures reflect a balanced set of measures?

Source: Donabedian, A. *Explorations in Quality Assessment and Monitoring. Volume I: The Definition of Quality and Approaches to its Assessment.* Ann Arbor, MI, Health Administration Press, 1980.

*The Culture component was added by R. Lloyd and R. Scoville to highlight the important role culture plays in driving the Outcomes.

Options for Organizing Your Measures



Star Rankings

Defining Scorecards, Report Cards and Dashboards

- <u>Balanced Scorecard</u> began as a recommended set of measures that went beyond the traditional management focus on financial measures to answer the question "What classes of measures should <u>senior managers</u> use?"
- <u>Report Cards</u> emerged as a variation on the Balanced Scorecard (usually data for judgment).
- <u>Dashboards</u> provide a means to synthesize key measures. They initially answered the question "What methods should senior managers use to <u>interact</u> with key measures?"
 - Show data in graphical displays
 - Use drill-downs to deeper levels (disaggregate, stratify)
 - Use timely data, relative to your decision-making cycle
- You can use dashboard methods (dynamic approach) to display and structure measures listed in a Balanced Scorecard or Report Card (static approach).

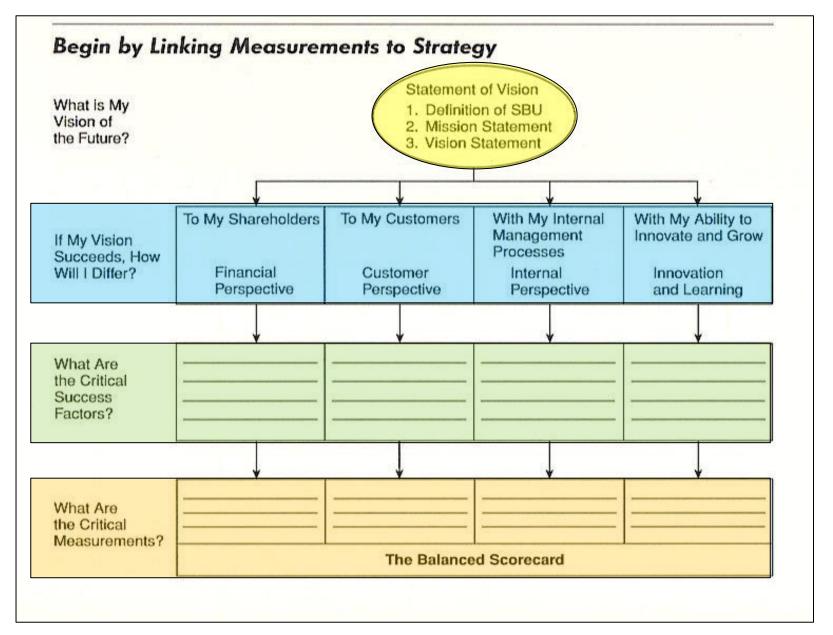
Appreciation is extended to Kevin Little, Ph.D., IHI Improvement Advisor, for sharing his ideas on this topic.

Background on The Balanced Scorecard

- Balanced Scorecard was developed in the early 1990's by Drs.
 Kaplan and Norton and first described in the in the Harvard Business Review.
- Kaplan and Norton have continued to develop the concept since 1992, extending the initial measurement system into a <u>strategy</u> <u>management system</u>.
- A key aspect in deployment is linking the measures to <u>strategies and</u> actions that will drive improvement in the measures.

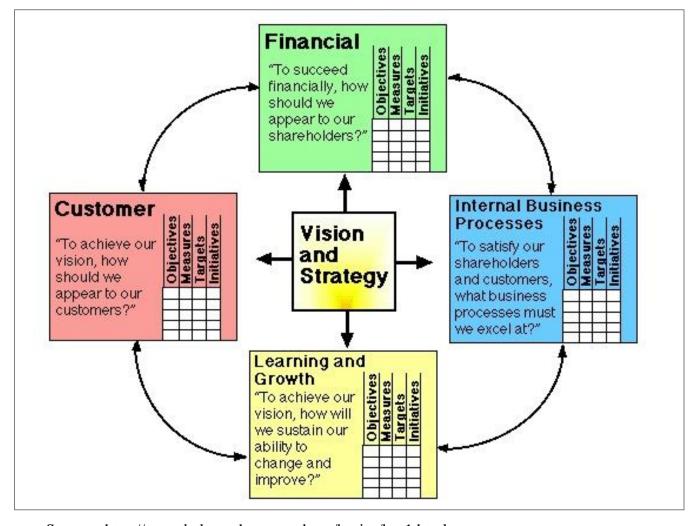
References

- R.S. Kaplan and D.P. Norton (1992), "The Balanced Scorecard—Measures that Drive Performance," *Harvard Business Review*, Jan-Feb 1992, pp. 71-79.
- R.S. Kaplan and D.P. Norton (1993), "Putting the Balanced Scorecard to Work," *Harvard Business Review* Sept-Oct 1993, pp. 134-137.
- R.S. Kaplan and D.S. Norton (1996), "Using the Balanced Scorecard as a Strategic Management System, " Harvard Business Review, Jan-Feb 1996.
- R. S. Kaplan *Conceptual Foundations of the Balanced Scorecard.* Working Paper 10-074, Harvard Business School, Harvard University, 2010. Originally prepared for C. Chapman, A. Hopwood, and M. Shields (eds.), Handbook of Management Accounting Research: Volume 3 (Elsevier, 2009).



R.S. Kaplan and D.P. Norton (1993), "Putting the Balanced Scorecard to Work," Harvard Business Review Sept-Oct 1993, pp. 134-137.

The Kaplan & Norton's Balanced Scorecard



Source: http://www.balancedscorecard.org/basics/bsc1.html





JOURNAL ON QUALITY IMPROVEMENT

Nelson, G. et al April 1995

Report cards are useful when they help purchasers and regulators measure the "right things in the right way"; likewise, providers need instrument panels to help them "fly right."

Performance Measures and Measurement

Report Cards or Instrument Panels:

Who Needs What?

EUGENE C. NELSON, DSC, MPH PAUL B. BATALDEN, MD STEPHEN K. PLUME, MD NANCY T. MIHEVC, PHD WILLIAM G. SWARTZ, MS A great deal of literature has been written on Scorecards, Report Cards and Dashboards.

CHAPTER 5

Lloyd. R. September 2019

Organizing Indicators into a Strategic Dashboard

ost quality improvement (QI) teams will create more than one indicator. If your organization has 10 to 15 improvement teams this means that you could be looking at managing somewhere between 50 to 120 indicators (assuming that each team creates 5 to 8 indicators, which is usually at the low end of what teams want to track). So, how do you go about organizing multiple indicators? First

Each row in Table 5-1 represents a single indicator. The columns identify the major pieces of information that need to be summarized about each indicator. **TABLE 5-2** provides an example of a completed measurement plan for a team working to improve the medicines management process. Three key concepts provide the focus for the team (i.e., volume, patient safety, and efficiency). Each concept will be captured by:



Instrumental Panel and Dashboard Image



<u>Decision making . . . Dynamic . . . Empowering</u>

Who uses them? Cockpit crew (pilot, copilot, navigator)

Who interprets? Cockpit crew

Focus?

Utility?

Present and future

Real-time monitoring, predicting the future and taking action

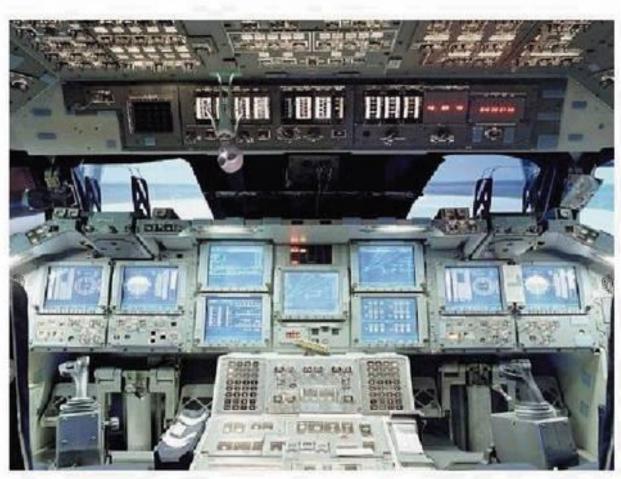
"The instrument panel or dashboard metaphor has an entirely different aura from that of the report card. It has vitality, timeliness, and a clear-cut utility that is absent from report card thinking. A key feature is providing critical, real-time information to the user to prompt wise decisions and, if need be, make rapid midcourse corrections."

Adapted from "Report Cards or Instrument Panels: Who Needs What? By Eugene Nelson, <u>et al</u>, *Journal of Quality Improvement,* volume 21, number 4, April, 1995.

What are the benefits of developing and using a Dashboard of Strategic Indicators?

- ✓ It brings together, in a single management report, many of the seemingly disparate elements of an organization's strategic agenda.
- It helps to reduce information overload, by focusing on the "vital few" indicators.
- ✓ It helps to guard against <u>suboptimization</u> by forcing senior managers to consider all the important measures together and lets them see whether improvement in one area may be achieved at the expense of another.
- ✓ It puts <u>strategy and vision</u>, rather than control, at the center of an organization's effort.
- ✓ It is based on an understanding of <u>interrelationships between functions</u>, not on the performance of individual functions or units.
- ✓ It provides an opportunity for <u>organizational learning</u> at the executive level.

But how many measures do you need on your dashboard?





Focus on the Vital Few!

There are many things in life that are interesting to know. It far more important, however, to work on those things that are essential to quality than to spend time working on what is merely interesting!

"A general rule: If a team has more than 15 measures, it should take a fresh look at the importance of each one."

Focus on the Vital Few!

"Most companies use too many measures to hold their managers and employees accountable for performance."

"People should be held accountable only for as many diagnostics measures as they can memorize. We would suggest, therefore, that the limit be **Seven**."

"Why seven? If people are given too few challenges, there won't be enough variety in their work to stimulate creativity. If people are given too many challenges, they quickly suffer from overload."

References

R. Simons and A. Davila. "How High Is Your Return on Management?" HBR, January-February, 1998.

G. Miller. "The Magic Number Seven, Plus or Minus Two: Some Limits in Our Capacity for Processing Information." *The Psychological Review,* Vol. 63, No. 2, 1956, pp. 193-214.

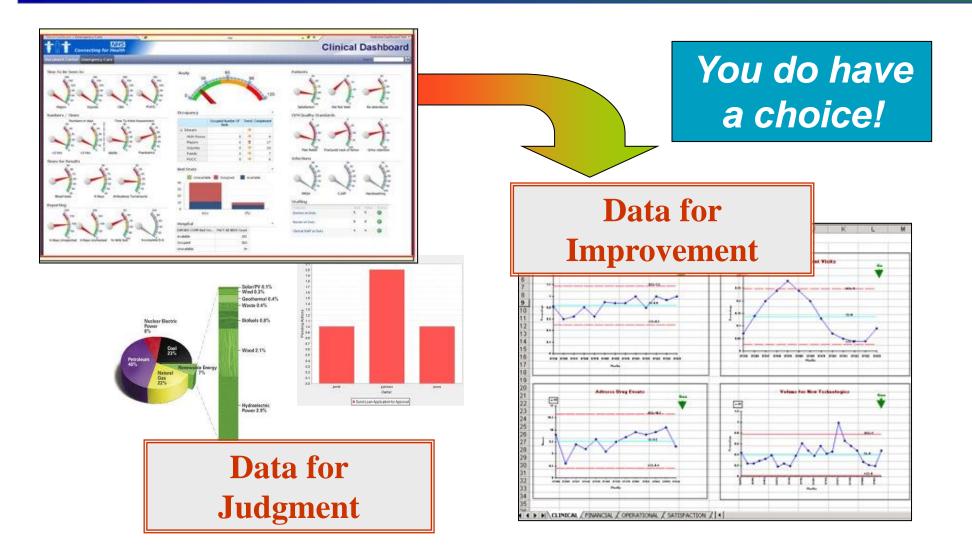
Dialogue #2 So, have you built a stealth bomber, a car, or a motorcycle dashboard?



The dashboard challenge, therefore, is to be disciplined enough to focus on the essential (or vital few) things and set aside those things that might be interesting but trivial!

How you display the data will make a big difference.

Data for Judgment (static) versus data for Improvement (dynamic)



Example of Summary Data (What do you learn from these data?)

Legend for Status of Goals (Based on Annual Goal)	FY 2009 Hospital System-Level Measures								
Goal Met (GREEN)		Goals				FY 2009 Q1			
Goal 75% Met (YELLOW)		900	Long	F1 2007	F 1 2000	F1 2003 Q1	F1 2003 Q2	F1 2003 Q.	
Goal Not Met (RED)	D005	FY 09	Term						
F =	$\overline{}$	Goal	Goal						
Patient Perspective									
Overall Satisfaction Rating: Percent Who Would Recommend (Includes inpatient, outpatient, ED, and Home Health)	1	60%	80%	37.98%	48.98%	57.19%	56.25%	51.69%	
2. Wait for 3rd Next Available Appointment: Percent of Areas with appointment available in less than or equal to 7 business days (n=43)	1	65%	100%	53.5%	51.2%	54.3%	61.20%	65.1%	
Patient Safety									
3. Safety Events per 10,000 Adjusted Patient Days	↓	0.28	0.20	0.35	0.31	0.31	0.30	0.28	
4. Percent Mortality	1	3.50	3.00	4.00	4.00	3.48	3.50	3.42	
5.Total Infections per 1000 Patient Days	\rightarrow	2	0	3.37	4.33	4.39	2.56	1.95	
Clinical									
6. Percent Unplanned Readmissions	→	3.5%	1.5%	6.1%	4.8%	4.6%	4.1%	3.5%	
7. Percent of Eligible Patients Receiving Perfect CareEvidence Based Care (Inpatient and ED)		95%	100%	46%	74.1%	88.0%	91.7%	88.7%	
Employee Perspective									
8. Percent Voluntary Employee Turnover	\rightarrow	5.80%	5.20%	5.20%	6.38%	6.10%	6.33%	6.30%	
9. Employee Best Possibl					3.80	3.96	3.95	3.95	
Operational There is no learn	1	na	ha	ra					
10. Percent (119		C.	84.0%	91.3%	85.6%	87.2%	
This is data for	i	ıda	me	nt	4.90	4.60	4.70	4.30	
Best Possibl					3.84	3.96	3.80	3.87	
not improve	n	nan	f I						
13. Percent de 110t 1111 PIOV C			Li		7.00%	6.90%	6.93%	7.00%	
Programs					0.29%	0.28%	0.31%	0.29%	
Financial Perspective									
15. Operating Margin-Percent	↑	1.2%	1.5%	-0.5%	0.7%	0.9%	0.4%	0.7%	
16. Monthly Revenue (Million)-change so shows redbut sp cause good related to occupancy	^	20.0	20.6	17.6	16.9	17.5	18.3	19.2	

Source: Provost, Murray & Britto (2010)

How Is the Error Rate Doing? (What do you learn from these data?)



The process reflects common cause variation which means this performance is stable and therefore predictable. But is this current process capable of achieving the short and long terms goals?

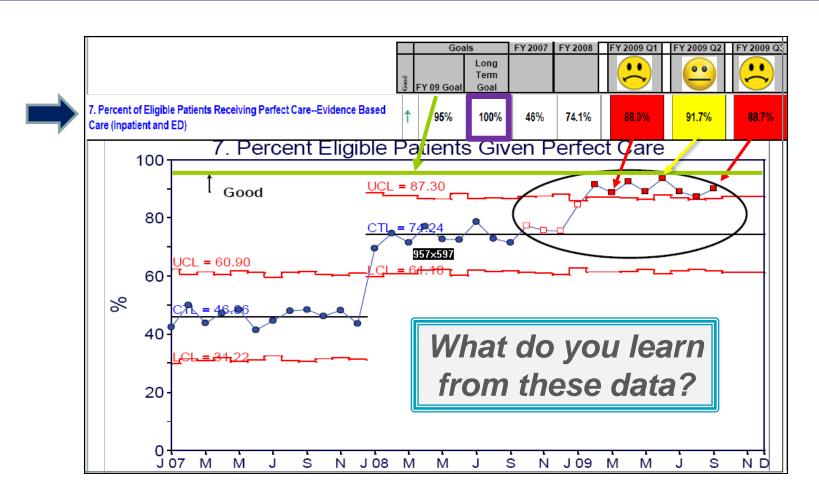
Now let's look at another measure

(percent of eligible patients receiving perfect care bundle)

Goal Met (GREEN)			FY 2009 H				FY 2009 Q2	
Goal 75% Met (YELLOW) Goal Not Met (RED)	Good	FY 09 Goal	Long Term Goal					
Patient Perspective								
 Overall Satisfaction Rating: Percent Who Would Recommend (Includes inpatient, outpatient, ED, and Home Health) 	↑	60%	80%	37.98%	48.98%	57.19%	56.25%	51.69%
2. Wait for 3rd Next Available Appointment: Percent of Areas with appointment available in less than or equal to 7 business days (n=43)	↑	65%	100%	53.5%	51.2%	54.3%	61.20%	65.1%
Patient Safety								
3. Safety Events per 10,000 Adjusted Patient Days	\downarrow	0.28	0.20	0.35	0.31	0.31	0.30	0.28
4. Percent Mortality	\downarrow	3.50	3.00	4.00	4.00	3.48	3.50	3.42
5.Total Infections per 1000 Patient Days	1	2	0	3.37	4.33	4.39	2.56	1.95
Clinical								
6. Percent Unplanned Readmissions	1	3.5%	1.5%	6.1%	4.8%	4.6%	4.1%	3.5%
7. Percent of Eligible Patients Receiving Perfect CareEvidence Based Care (Inpatient and ED)	1	95%	100%	46%	74.1%	88.0%	91.7%	88.7%
Employee Perspective								
8. Percent Voluntary Employee Turnover		5.80%	5.20%	5.20%	6.38%	6.10%	6.33%	6.30%
9. Employee Satisfaction: Average Rating Using 1-5 Scale (5 Best Possible)	1	4.00	4.25	3.90	3.80	3.96	3.95	3.95
Operational Performance								
10. Percent Occupancy	↑	88.0%	90.0%	81.3%	84.0%	91.3%	85.6%	87.2%
11. Average Length of Stay	1	4.30	3.80	5.20	4.90	4.60	4.70	4.30
12. Physician Satisfaction: Average Rating Using 1-5 Scale (5 Best Possible)	1	4.00	4.25	3.80	3.84	3.96	3.80	3.87
Community Perspective								
13. Percent of Budget Allocated to Non-recompensed Care		7.00%	7.00%	5.91	7.00%	6.90%	6.93%	7.00%
14. Percent of Budget Spent on Community Health Promotion Programs		0.30%	0.30%	0.32%	0.29%	0.28%	0.31%	0.29%
Financial Perspective								
15. Operating Margin-Percent	1	1.2%	1.5%	-0.5%	0.7%	0.9%	0.4%	0.7%
16. Monthly Revenue (Million)-change so shows redbut sp	^	20.0	20.6	17.6	16.9	17.5	18.3	19.2
cause good related to occupancy	ľ	20.0	20.0	17.0	10.5	11.5	10.0	10.2

Source: Provost, Murray & Britto (2010)

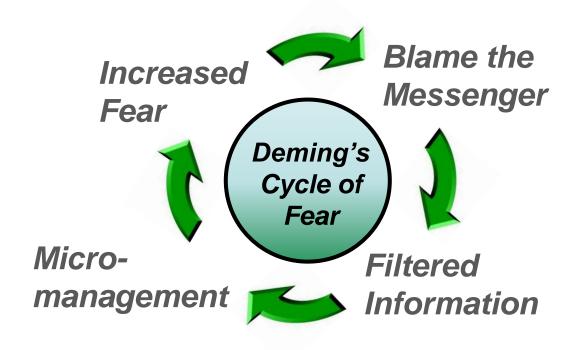
How is Perfect Care Doing Now?



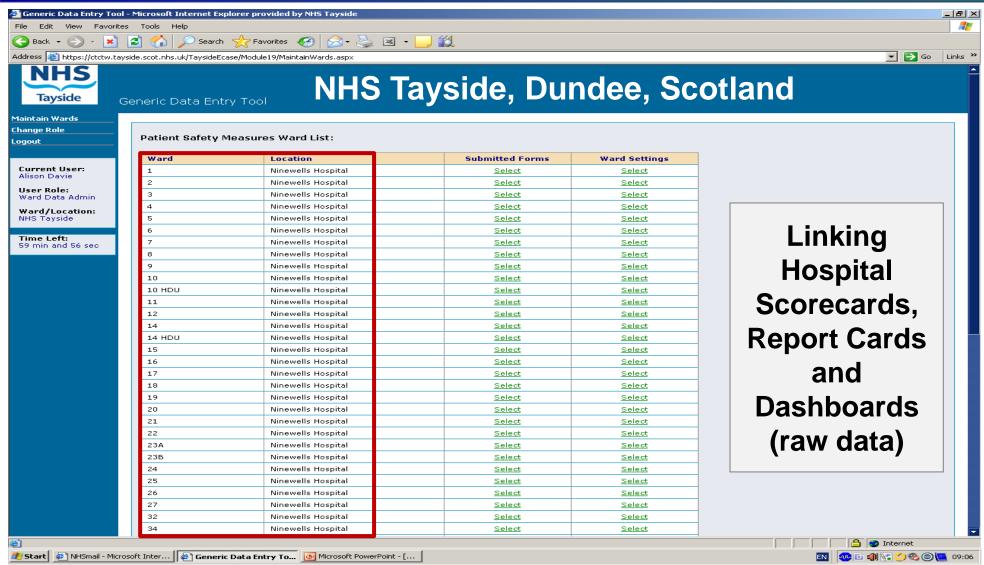
Source: Provost, Murray & Britto (2010)

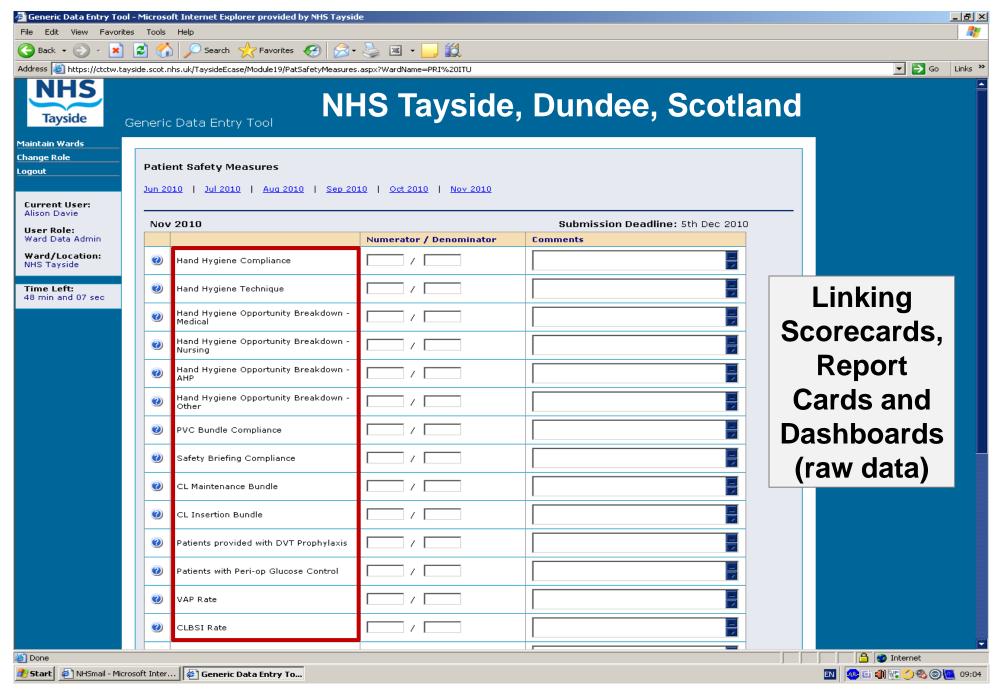
Unintended consequences of using Scorecards and Report Cards

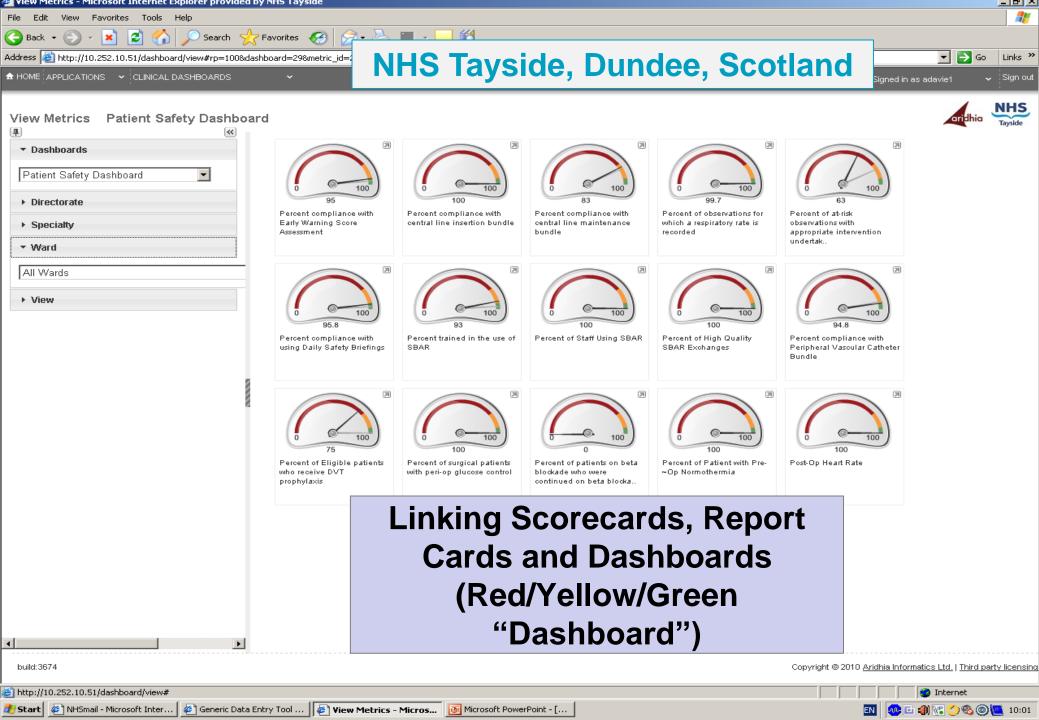
Source: William Scherkenbach. The Deming Route to Quality and Productivity. Ceep Press, Washington, DC, 1990, page 71.

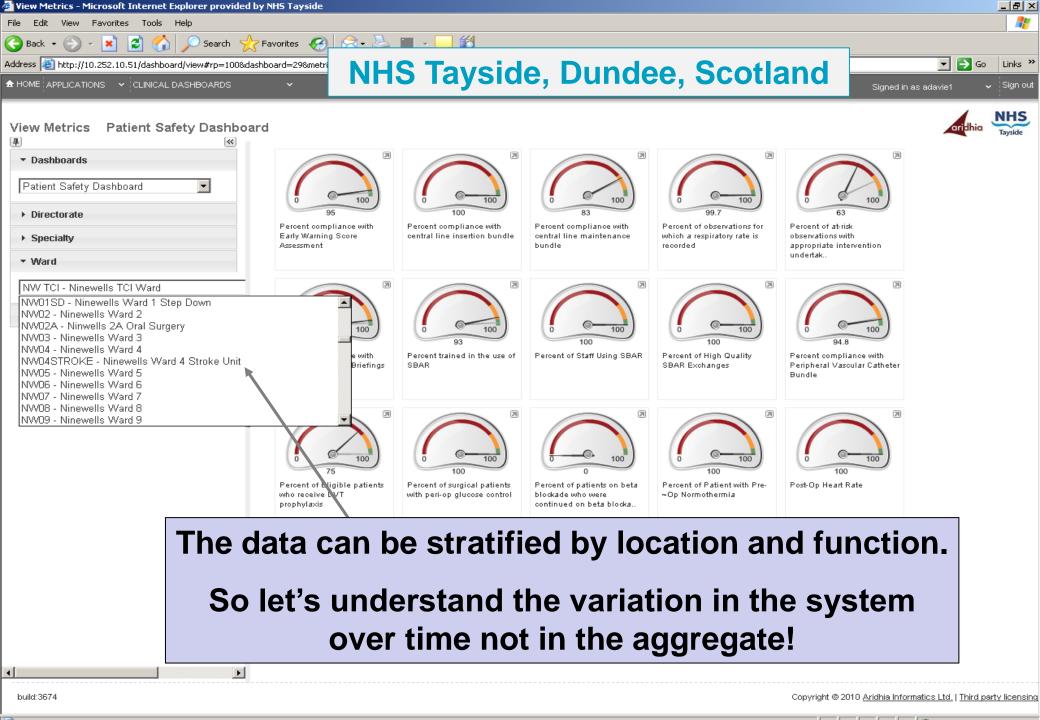


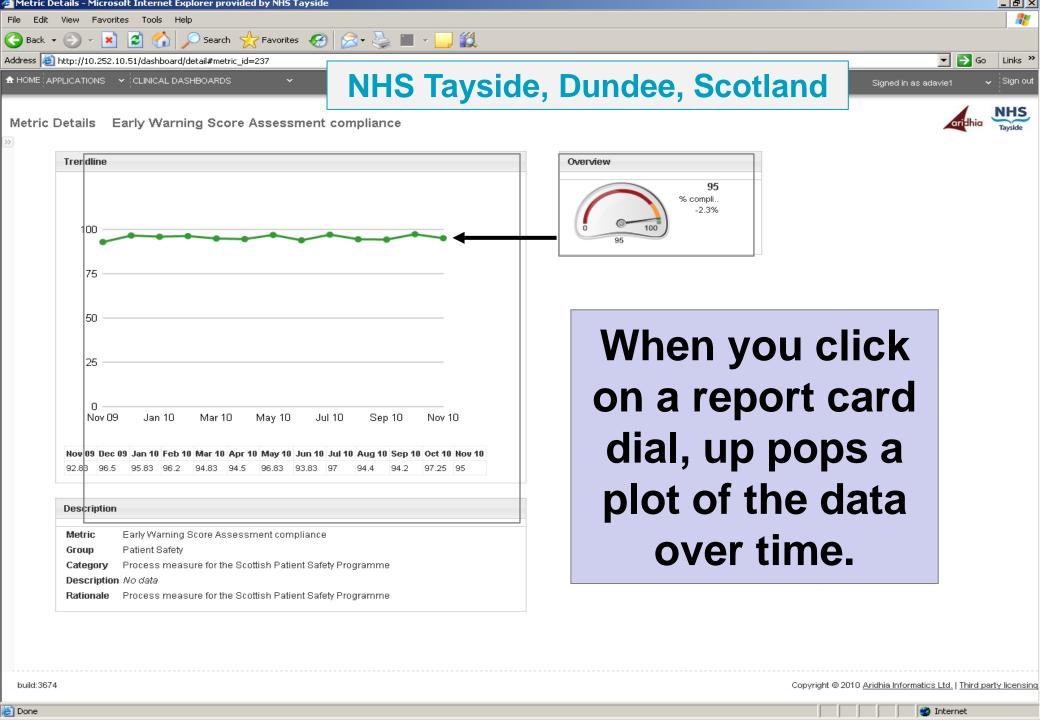
Moving from Data for Judgment to Data for Improvement

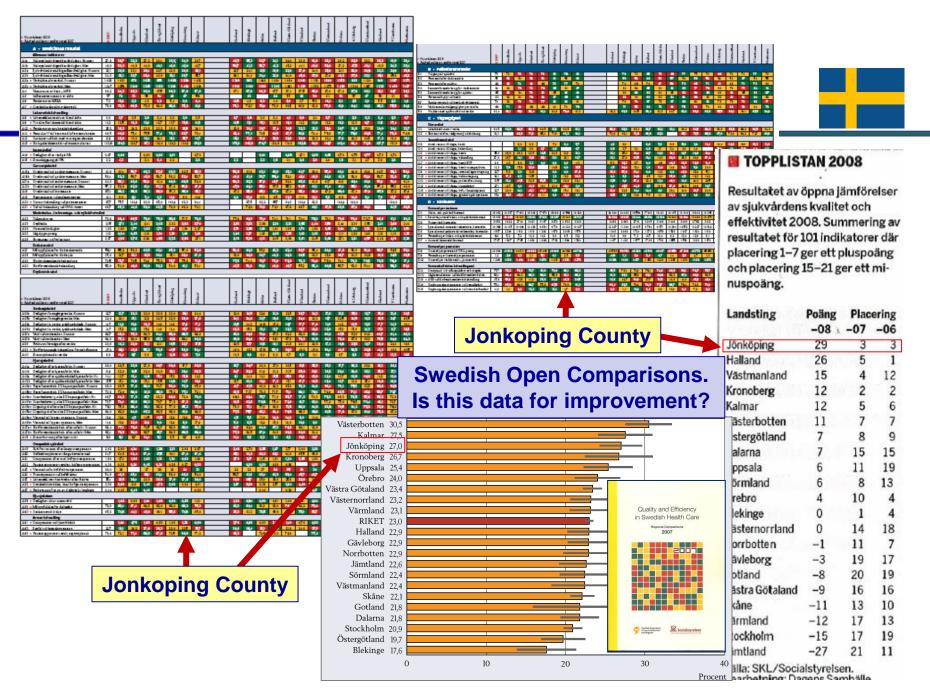


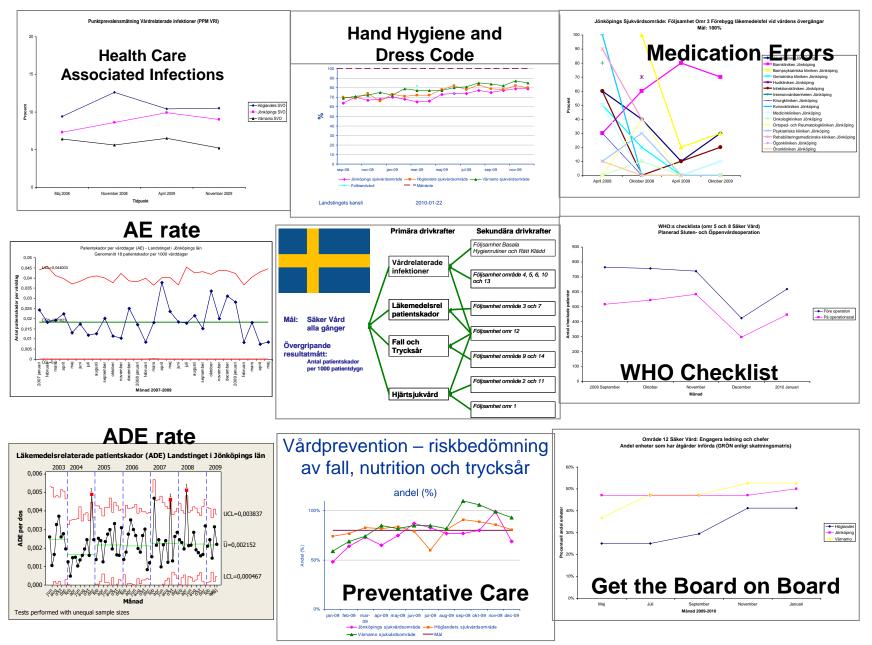






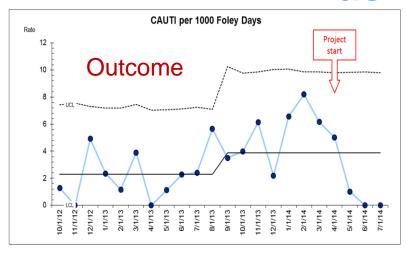


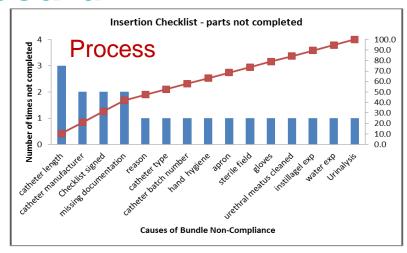


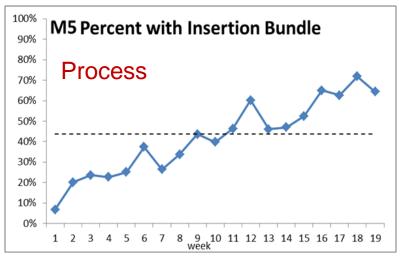


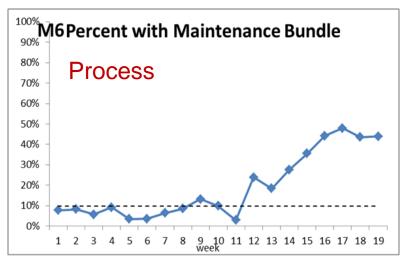
The Alternative to the R/Y/G Charts

Using Small Multiples to Display your Dashboard



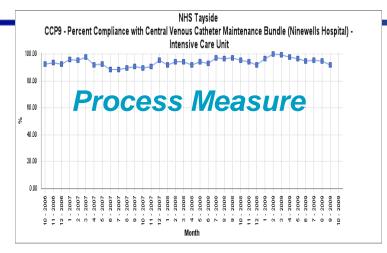


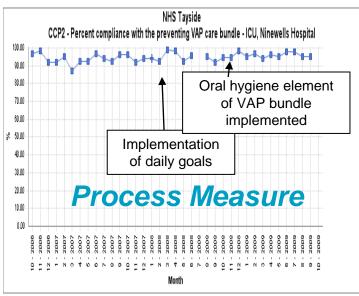




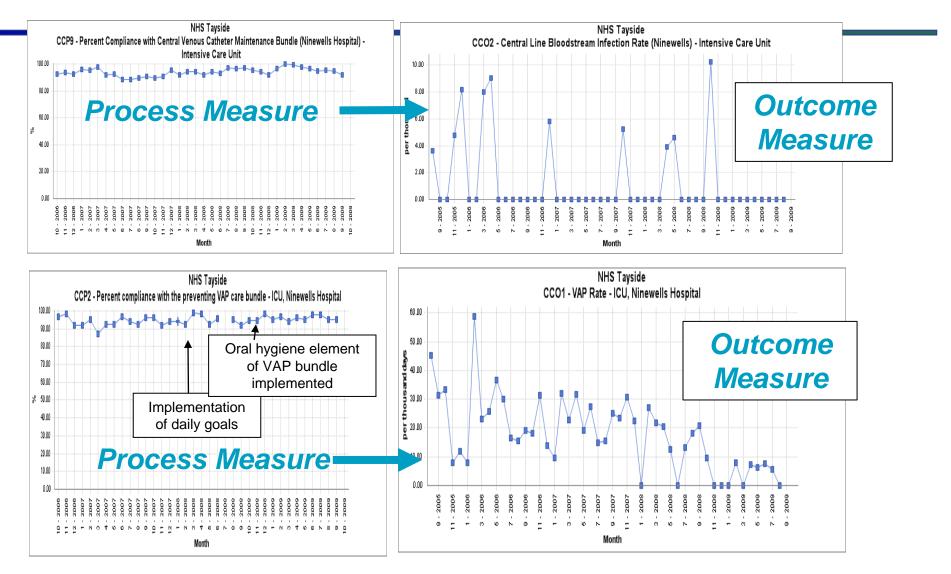
CAUTI Dashboard (Outcome & Process Measures)

A CRITICAL CARE DASHBOARD allows you to explore relationships





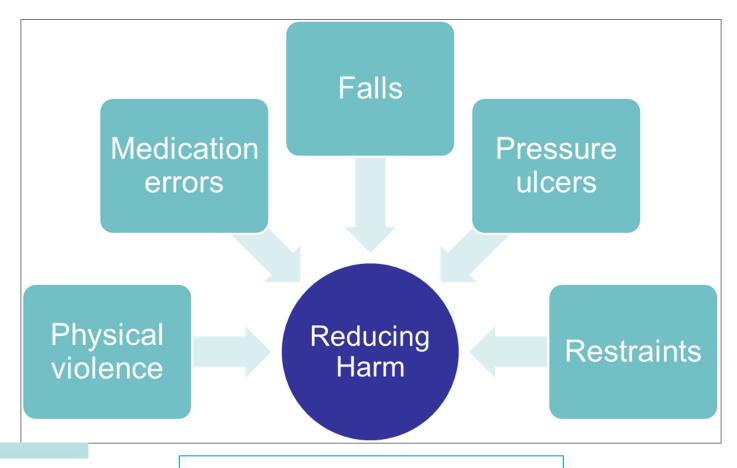
A CRITICAL CARE DASHBOARD allows you to explore relationships



East London NHS Foundation Trust Quality Dashboard

Organisational Level View QHC Chapter 5, 151-154





Long-term mission and stretch aims

Quality as an Organizational Strategy



Safety

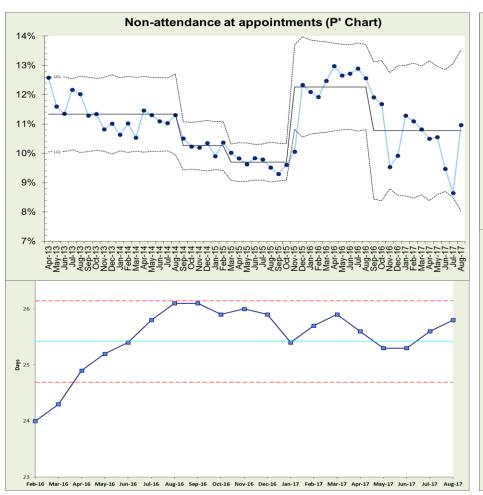
Trust-wide results including Bedfordshire and Luton

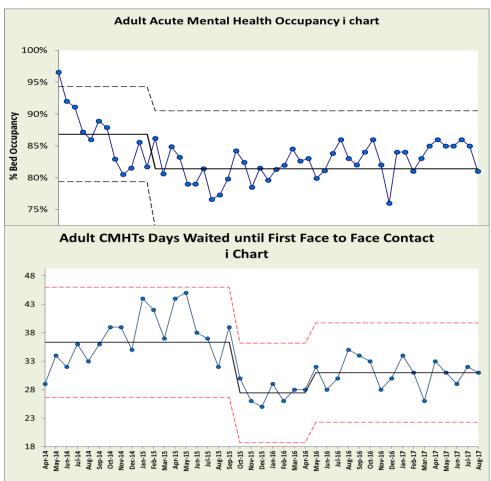


NHS Foundation Trust

Clinical Effectiveness



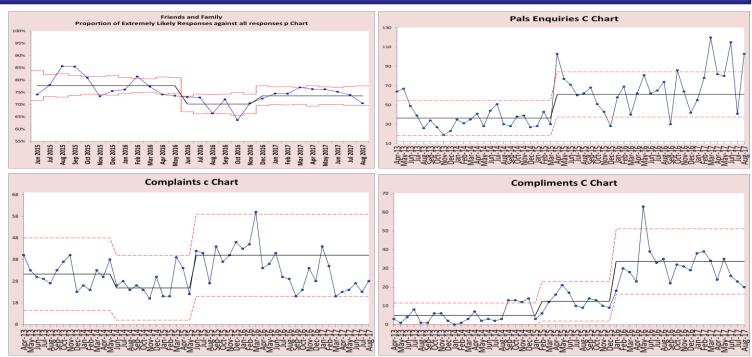




Patient Experience

East London NHS Foundation Trust

trust wide including Beds and Luton



DischargeArrangements
SupportinCommunity

Assessment
ClinicalManagementPhysicalHealth
AccessToServices

Attitude

AppointmentsDelayLeaveClinicalManagementMentalHealth

ControlRestrain

PrivacyDignity

Medication

DischargeArrangements

PhysicalHealthComplications

Assessment

ClinicalManagementMentalHealth

ControlRestrain

PrivacyDignity

Medication

DischargeArrangements

PhysicalHealthComplications

Assessment

ClinicalManagementMentalHealth

ControlRestrain

PrivacyDignity

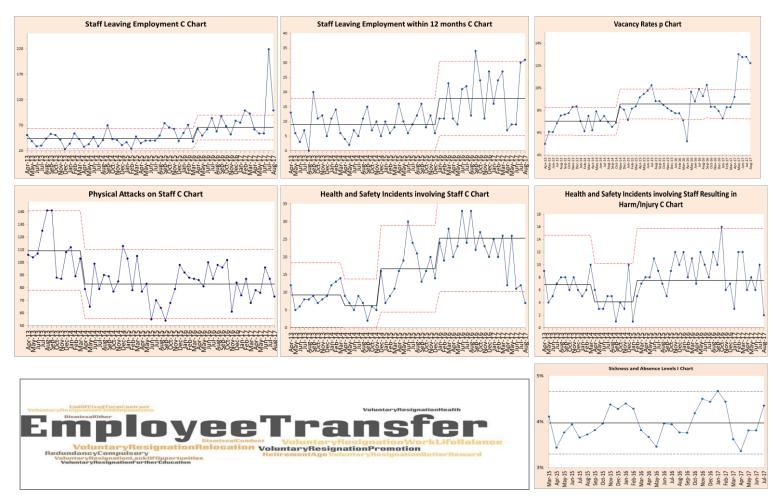
Medication

PatientRecordsLivingPatients

Our Staff

trust wide including Beds and Luton





Dialogue #3 So what's on your Dashboard?

Designing the Components of a Dashboard

- Is this a Macro, Meso or Micro level dashboard?
- Which of your strategic objectives will this dashboard address?
- What are the major dimensions captured by this dashboard?
- Does everyone (and I mean EVERYONE) understand the purpose of this dashboard (improvement, judgment, research)?
- Use the <u>Dashboard Worksheet</u> on the next page.

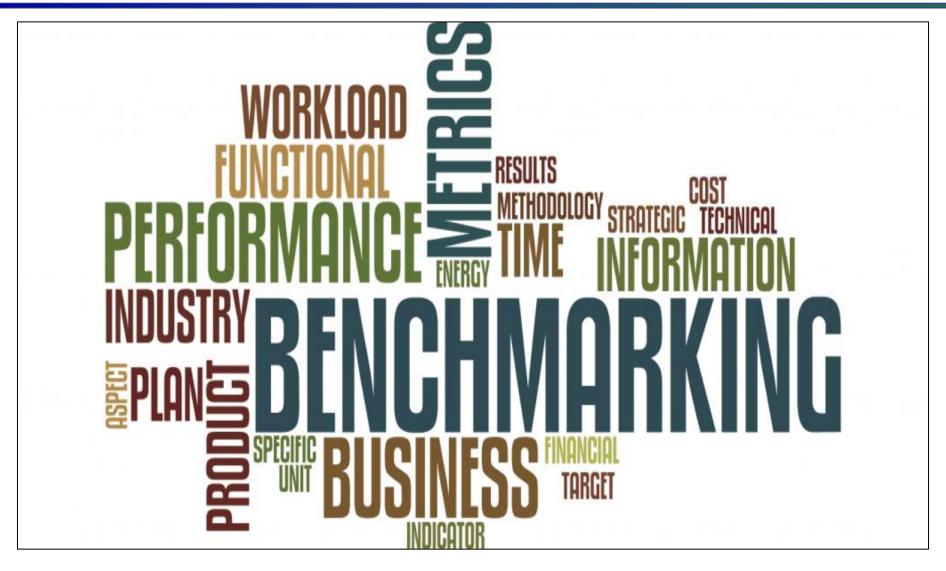
Dashboard Worksheet (page 1)

Is this a Macro	Meso or Micro _	level dashboar	rd?	Use this area for notes and
The Dashboard is designed to measure the following dimension(s) (mark all that apply):				<u>comments</u>
Patient Satisfaction Work Life Quality Clinical Excellence Appropriateness Availability/Access Continuity of Care Effectiveness Efficiency Equity	Inference of the Infere	rmation Technology ction Control ality Outcomes ancial Viability wth/Market Share spect/Caring ability ety er (specify)		
	Add otl	her dimensions l	below:	

Dashboard Worksheet (page 2)

Dimension to be captured by this Dashboard	Potential Measures for each Dimension

A Few Closing Thoughts on ...



Benchmark as a Noun

- Its only about the numbers!
- Performance to the "best" number(s)!
- Using averages or aggregated numbers is fine!
- National "benchmarks" from the government or consultants must be met!
- Targets and goals are the focal points!

"Occasionally there is some confusion over the correct use of the term "benchmark." A benchmark is a measure of best performance against which an organization's performance is compared. A benchmark, however, is never derived from average or aggregate performance. Because it represents the best, a benchmark must refer to the performance of only one organization."

> "When is a Performance Goal a Benchmark?" The Mihalik Group (Summer, 2003: 2)

Benchmarking as a Verb

- Identifying and understanding best practices.
- Realizing new performance levels.
- Creating a new culture.
- Using numbers to learn, not as an end.
- Focusing on the processes that produce excellence.
- Benchmarking is a beginning not an end!

The focus of benchmarking

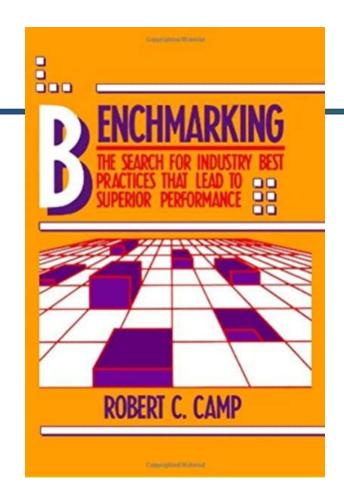
Benchmarking is a Verb

"Benchmarking as a verb, is a way to identify and understand best practices that enable organizations to realize new levels of performance. It is a journey not a destination designed to establish highly reliable structures and processes, create a new culture that is focused on continuous improvement and excellence, and create the conditions that enable a learning organization to emerge."

Source: R. Lloyd. Quality Health Care: A Guide to Developing and Using Indicators. 2nd edition, Jones and Bartlett Learning, 2019:155.

Benchmarking Problems

- Look at the current performance of an organization that has been highlighted and quickly pick it as THE BENCHMARK!
- Give little thought to "how" an organization achieved a top rating.
- Little consensus on which
 organization is consistently <u>THE</u>
 <u>BEST</u> amongst healthcare
 organizations or in other industries.



The most widely referenced book on the benchmarking process.

A final thought...

"Measures should not be carved in stone!"

"How the Right Measures Help Teams Excel" Christopher Meyer, *HBR*, May-June, 1994.



"Measures that were relevant during the early stages in development of a new product (or service) will undoubtedly become irrelevant as the product (or service) nears production."

"Numbers are not explanations; they do not give insight upon which you can build the next step of your reasoning or your next investigation."

Jan Vandenbroucke. "Observational Research, Randomized Trials, and Two Views of Medical Science" *PLOS Medicine*, March 2008, vol. 5, issue 3 (www.plosmedicine.org)

So, back to the initial question...





Leadership's Role in Using Data to Drive Change!

- Creating the desire for continuous improvement.
- Creating an environment that nurtures respect among people.
- Providing encouragement.
- Promoting cooperation.
- Understanding variation!





Additional IHI Resources on the Science of Improvement

You can access the following free videos from the IHI website:

- Dr. Lloyd has over 20 <u>Whiteboard Videos</u> that explain the concepts, tool and methods of QI in 4-8 minutes.
 - http://www.ihi.org/education/IHIOpenSchool/resources/Pages/BobLloydWhiteboard.aspx
- Also Dr. Lloyd's **On Demand Videos** can also be accessed from the IHI Website:
 - Deming's System of Profound Knowledge and the Model for Improvement http://www.ihi.org/education/WebTraining/OnDemand/ImprovementModelIntro/Pages/default.aspx
 - Data Collection and Understanding Variation
 http://www.ihi.org/education/WebTraining/OnDemand/DataCollection_Variation/Pages/default.aspx
 - Using Run and Control Charts
 http://www.ihi.org/education/WebTraining/OnDemand/Run_ControlCharts/Pages/default.aspx

Thank you for joining me today. Best wishes developing and using your Strategic Dashboards! Dr Bob

Healthcare Resilience in Extraordinary Times

The Journey Continues!

The capacity to learn is a gift; the ability to learn is a skill; the willingness to learn is a choice.

Brian Herbert



Dr. Robert Lloyd Bio

Robert Lloyd, PhD, Vice President, Institute for Healthcare Improvement provides leadership in the areas of performance improvement strategies, statistical process control methods, development of strategic dashboards and capacity and capability building for quality improvement. He serves as primary faculty for the IHI Improvement Advisor (IA) Professional Development Program, the Improvement Science in Action (ISIA) Program, the Improvement Coach Program and various other IHI initiatives and demonstration projects. Dr. Lloyd works throughout the US, Canada, the UK, Sweden, Denmark, Africa, the Middle East, India, Malaysia, Australia and New Zealand. He is an internationally recognized speaker on quality improvement concepts, methods and tools.



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He also advises senior leadership teams and boards on how to create the structures, processes and cultures that will make quality thinking and behaviors part of daily work. He is the author of three leading books on measuring quality improvement in healthcare settings and numerous articles and book chapters on quality measurement and improvement.

