Why the American Healthcare System Stinks at Improvement

Steve Meurer PhD, MBA, MHA
Executive Principal, Data Science and Member Insights

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Over the last few decades hospitals have just needed to stay on the road to be financially secure

*With Medicare going insolvent & inactivity from the government, hospitals will need to **change** course or fall off the cliff*

"The biggest issue facing the American health care system is our inability to improve."

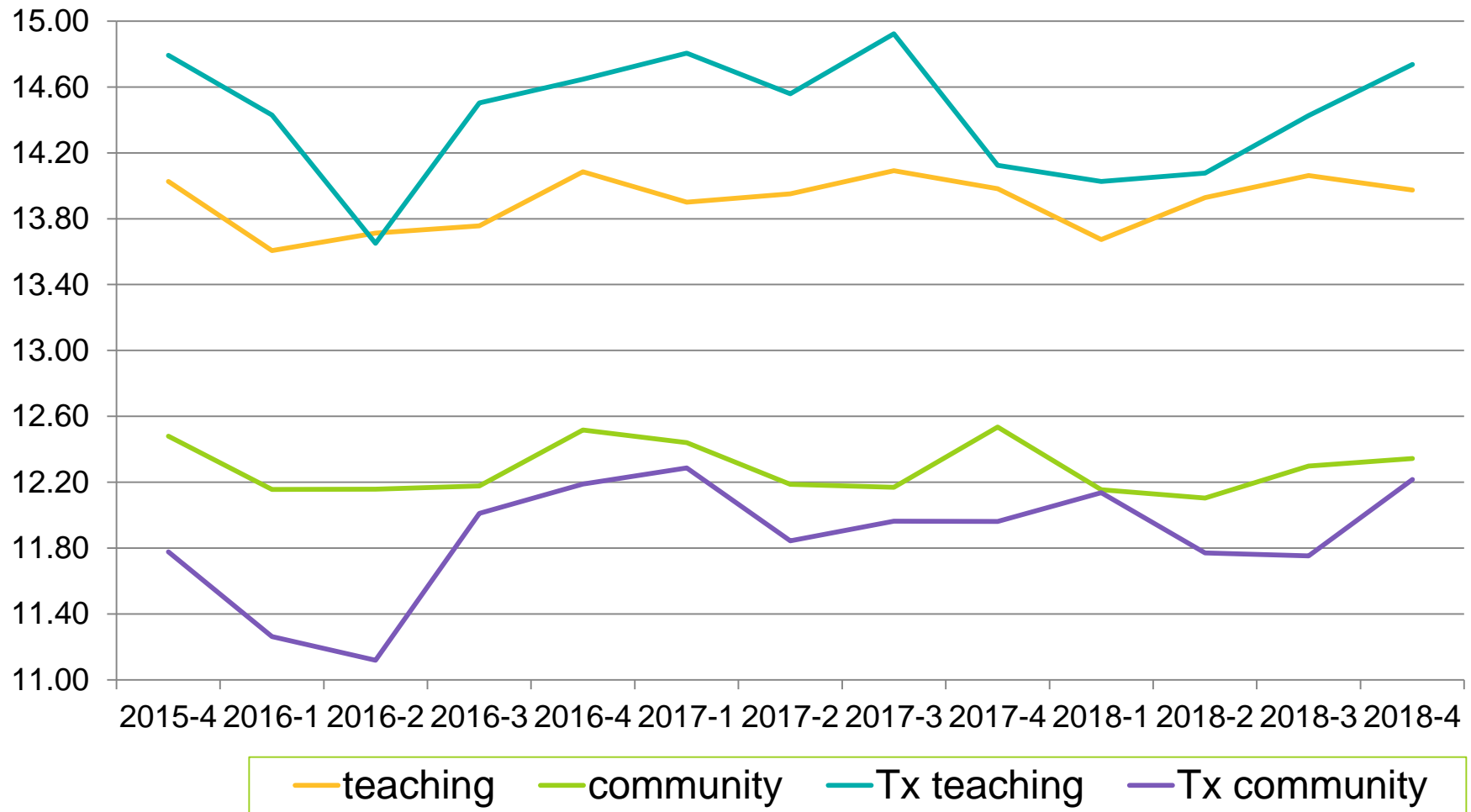*Don Berwick, MD, MPP*
Institute for Healthcare Improvement
President Emeritus and Senior Fellow
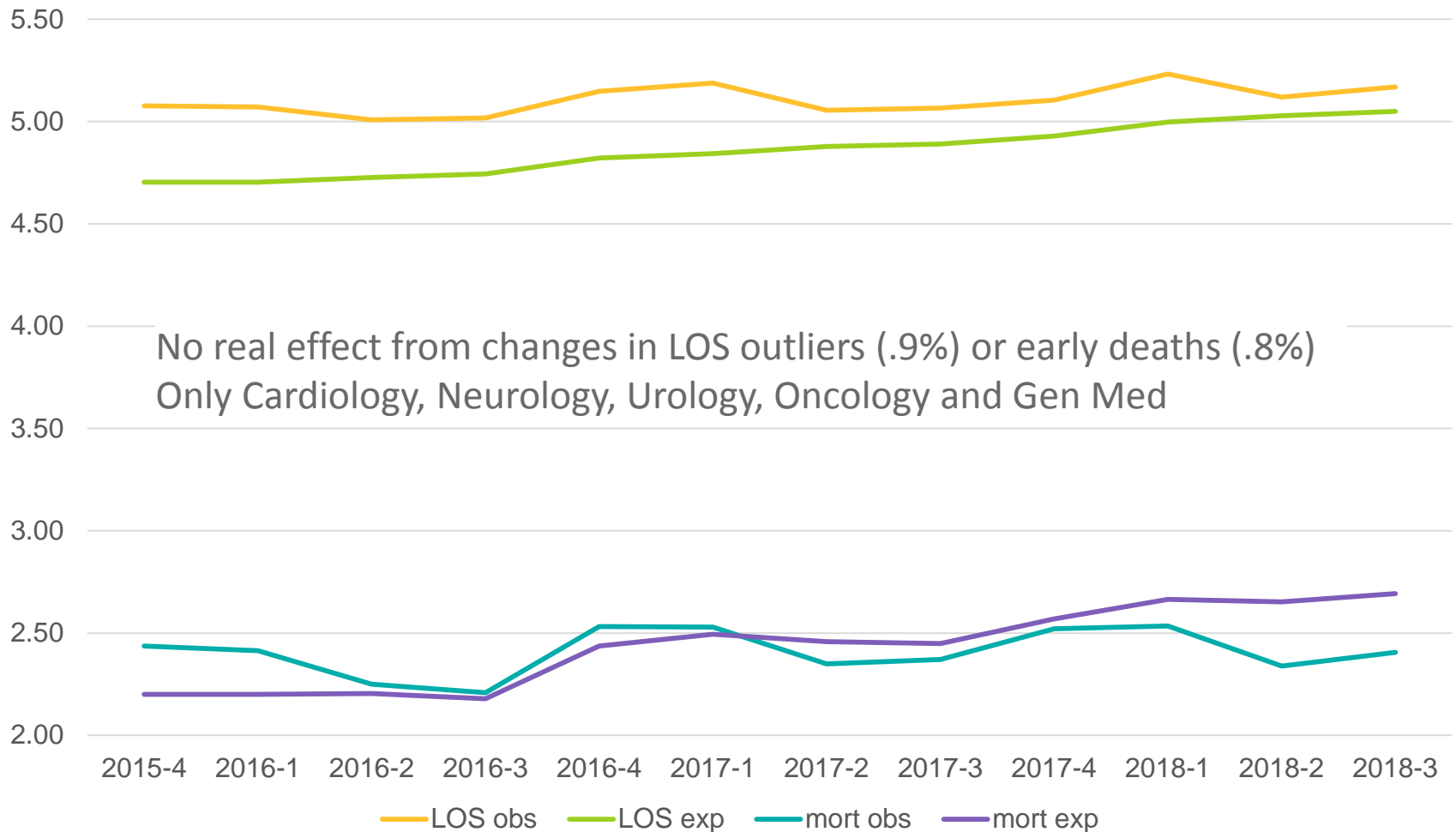*Centers for Medicare and Medicaid Services, Former Administrator*

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30 day CMS unplanned readmissions
Cardiology, General Medicine, Neurology & Oncology

All data from Vizient's Clincial Data Base

4

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Teaching Hospital's LOS & Mortality

No real effect from changes in LOS outliers (.9%) or early deaths (.8%)
Only Cardiology, Neurology, Urology, Oncology and Gen Med

Legend: LOS obs — LOS exp — mort obs — mort exp

All data from Vizient's Clincial Data Base

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Community Hospital's LOS & Mortality

No change in LOS outliers (.4%) except in first quarter 2017 & 2018
Decrease in early deaths (1% to .85%)
No change in transfer out (3.1%) and LOS of transfers (3.3)
Increase in transfer out expected: LOS (4.6 to 5) and mortality (2.9 to 3.6)
Only Cardiology, Neurology, Urology, Oncology and Gen Med
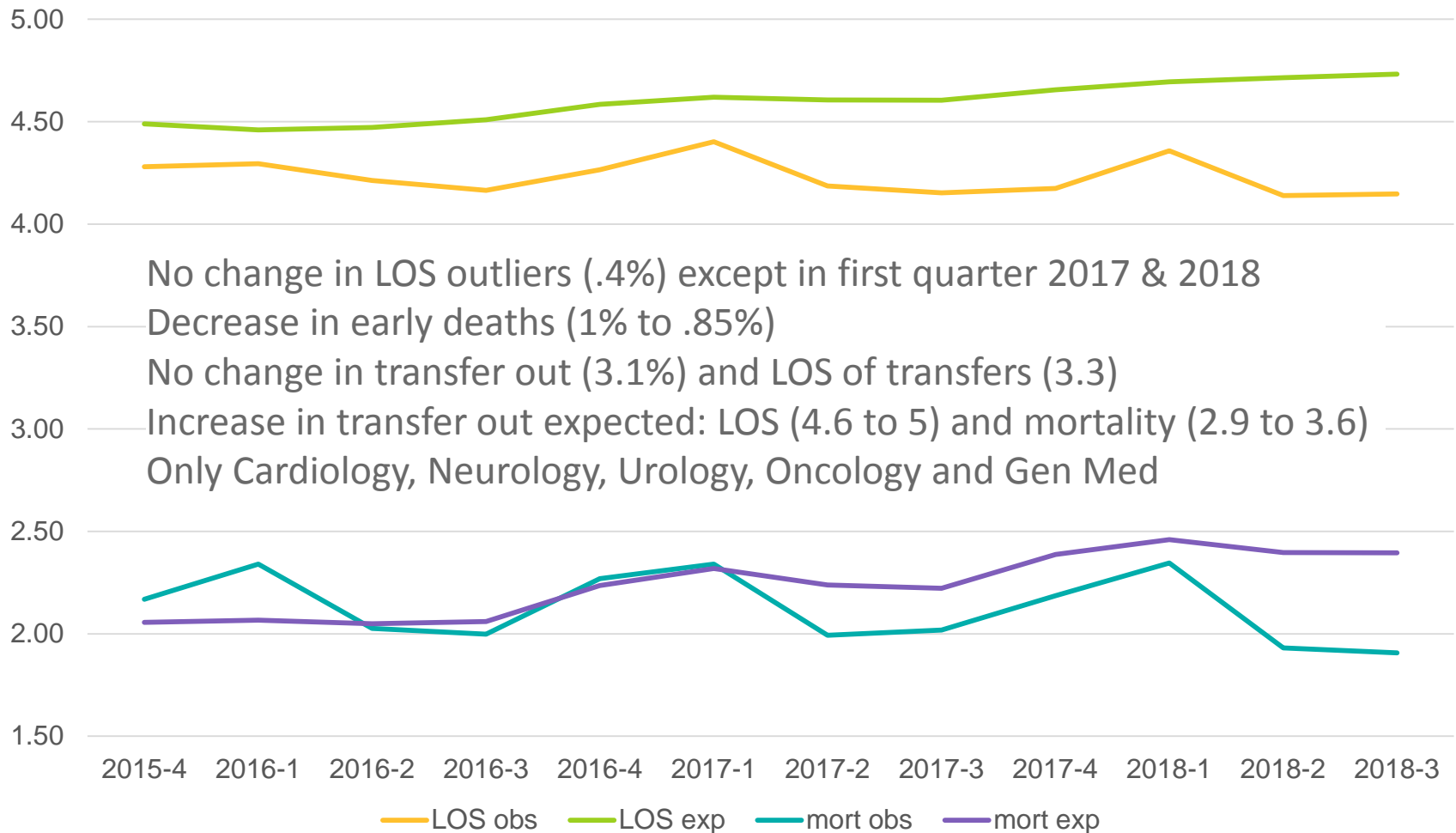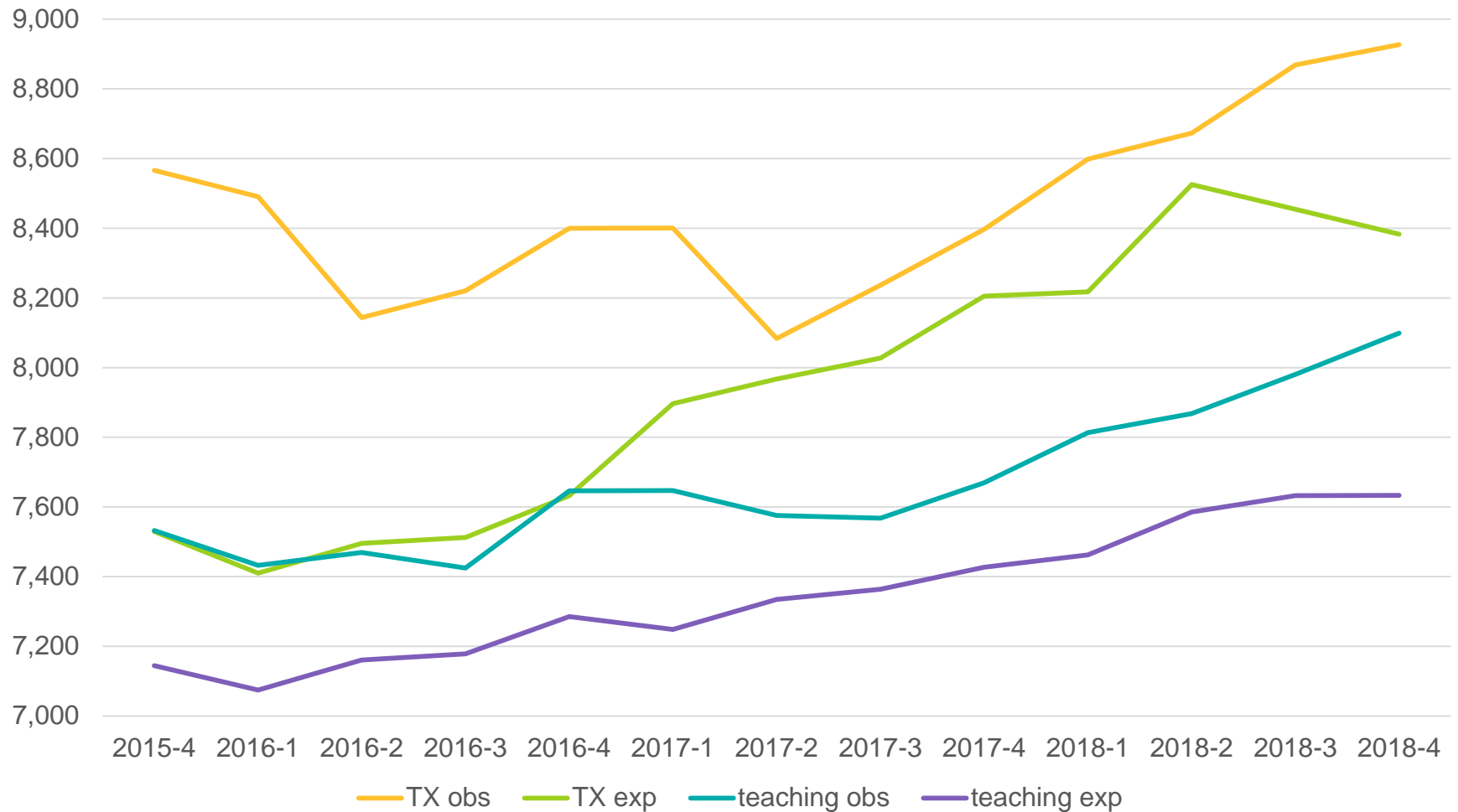
All data from Vizient's Clincial Data Base

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Getting patients out of the hospital is difficult

Difference in LOS (min, max) between routine discharges and different discharge locations				
	Rehab	Home Health	SNF	Hospice
Teaching Hospitals	5.7 (1.6, 15)	2.4 (.33, 7.6)	4.6 (1.7, 13.2)	4.2 (1.4, 10)
Community Hospitals	3.4 (.5, 12.4)	1.6 (.6, 4.3)	3.2 (1.2, 7.4)	2.9 (.3, 7.4)

- a very full 650 bed hospital had 150 patients in their hospital on any given day that did not need to be there. They were waiting to be discharged to their next point of care;
- a large hospital calculated that 200 of their deaths in the hospital last year already had an order to go to hospice;
- of the 20 teaching hospitals with the highest differences in each discharge location, safety net hospitals held 7 spots in rehab, 14 in home health, 11 in SNF and 7 in hospice suggesting a socio-economic and access issue;
- while community hospitals do better than teaching hospitals, there is still substantial opportunities for the average hospital to reduce 2 days discharging patients to rehab, 1 day discharging patients to home health, 1.5 days discharging patients to SNF and hospice
- while there was one hospital that had the minimum difference in 3 of the 4 discharge locations for the teaching hospitals, there was not any one or even a few community hospitals that dominated either the minimum of maximum lists for each location.

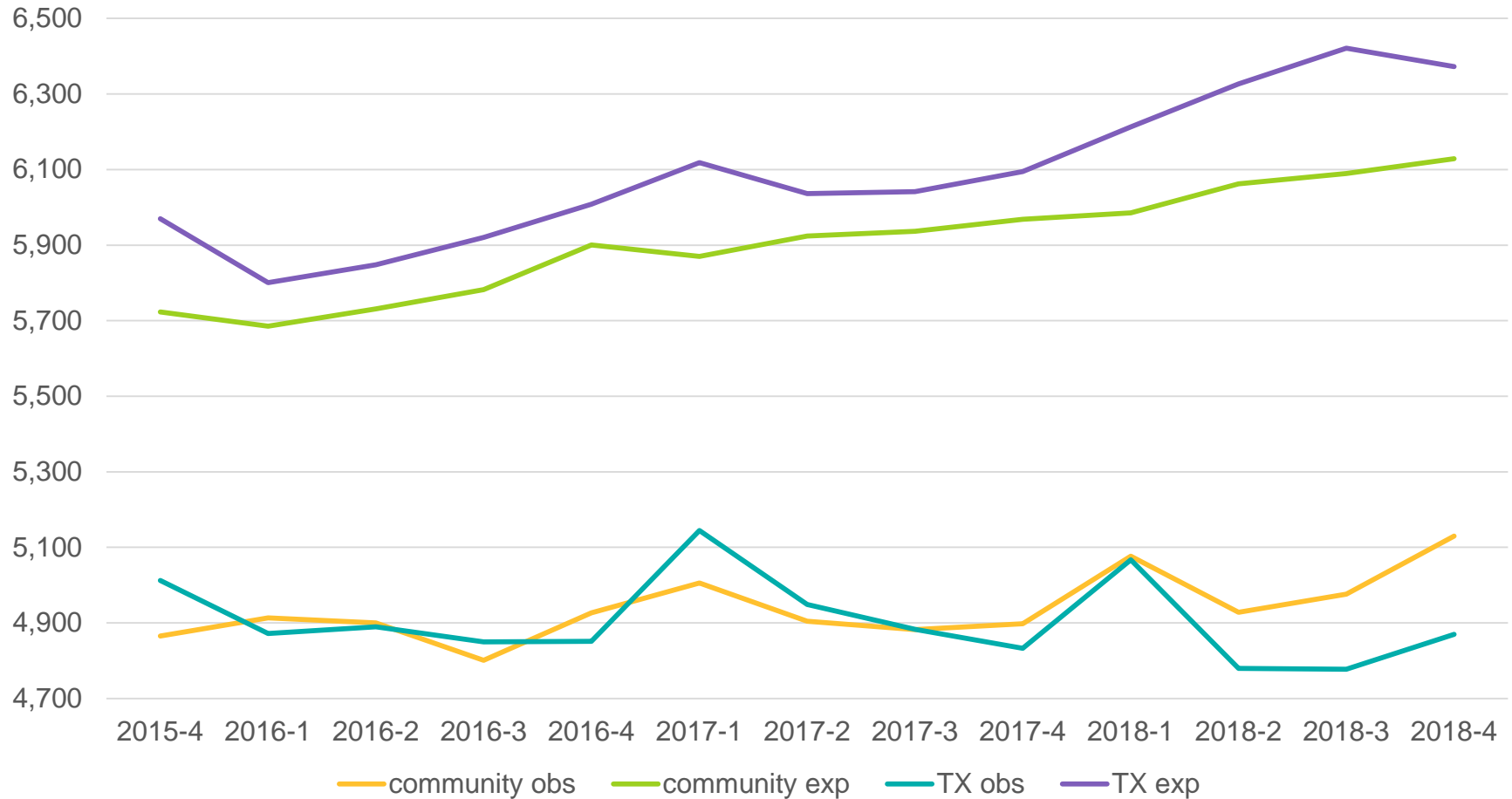# Direct cost for Texas teaching hospitals vs all teaching
Cardiology, General Medicine, Neurology & Oncology

All data from Vizient's Clincial Data Base

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Direct cost for Texas community hospitals vs all community

Cardiology, General Medicine, Neurology & Oncology

All data from Vizient's Clincial Data Base

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How Americans access healthcare

Characteristic	One or more emergency department visits				Two or more emergency department visits			
	1997	2000	2010	2016	1997	2000	2010	2016
	Percent of adults with emergency department visits[1]							
18 years and over, age-adjusted[2,3]	19.6	20.2	21.4	19.4	6.7	6.9	7.8	6.8
18 years and over, crude[2]	19.6	20.1	21.3	19.4	6.7	6.8	7.7	6.8

Age, sex, and race	All primary care generalists				General and family practice				Internal medicine			
	1980	2000	2010	2013[2]	1980	2000	2010	2013[2]	1980	2000	2010	2013[2]
Age	Percent distribution											
Total	66.2	58.9	55.2	49.1	33.5	24.1	21.1	18.9	12.1	15.3	13.9	13.7

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Emergency Department Throughput Year-over-Year Trends

Metric	Vizient AMC Median 2017	Vizient AMC Median 2018	% Change	Vizient Safety Net Median* 2017	Vizient Safety Net Median 2018	% Change	Vizient Community Median 2017	Vizient Community Median 2017	% Change
LOS O/E (CDB)	1.03	1.02	-0.7%	1.01	1.03	+2.3%	0.96	0.99	+3.1%
Equivalent Occupancy**	86.2%	87.3%	+1.3%	86.2%	87.3%	+1.3%	67.1%	67.9%	+1.1%
ED LOS	5.23	5.26	+0.6%	4.93	4.90	-0.7%	3.14	3.22	+2.5%
ED LOS to Admission	7.11	7.40	+4.1%	6.88	6.82	-0.9%	5.13	5.34	+4.1%
Boarder Hours / Adm Pt	3.27	3.18	-2.7%	2.91	2.67	-8.3%	1.75	1.83	+4.8%
ED LOS to Discharge	4.13	4.09	-1.1%	4.08	3.77	-7.5%	2.91	2.93	+0.9%
Walkout Rate	1.58%	1.44%	-9.0%	1.74%	1.63%	-6.5%	0.86%	1.11%	+29.4%
Imaging Procedures in ED per ED Visit	1.26	1.45	+15.3%	1.41	1.43	+1.4%	0.56	0.61	+9.9%

* "Vizient Safety Net" is a custom compare group of those members who self-identified as being a safety net hospital. A list of those members is including within the appendix.

** Includes inpatient and observation patient days

Data from Vizient's Clinical Data Base and Operational Data Base

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Observations – little improvement

In general, risk adjusted LOS, mortality and readmissions have improved only due to the severity of patients and / or more efficient documentation /coding.

Equivalent occupancy has increased slightly which has negatively effected ED throughput and diversions. There has been an increase in ED LOS to Admission.

Even with a number of national initiatives aimed to reduce ED utilization, Americans still continue to access healthcare through the ED.

Hospitals also appear to be increasing their utilization of imaging services for ED patients which could be contributing to higher ED LOS.

Costs continue to increase.

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Why the American Healthcare System stinks at improvement

FIGURE 1

Top 10 Barriers to Successful Hospital Change as Identified by Frontline Hospital Leaders*

1. Poor implementation planning and overly aggressive timelines	73%
2. Failing to create buy-in/ownership of the initiative	67%
3. Ineffective leadership and lack of trust in upper management	62%
4. Failing to create a realistic plan or improvement process	55%
5. Ineffective and top-down communications	52%
6. A weak case for change, unclear focus, and unclear desired outcomes	50%
7. Little or no teamwork or cooperation	43%
8. Failing to provide ongoing measurement, feedback, and accountability	38%
9. Unclear roles, goals, and performance expectations	36%
10. Lack of time, resources, and upper-management support	33%

*The findings presented in this figure are from a sample of 167 frontline leaders from four Midwest community hospitals who participated in 42 focus groups designed to identify the primary causes of why hospital change initiatives fail to achieve desired outcomes. The percentages represent the number of focus groups, out of 42, that identified a specific factor.

From "Why Hospital Improvement Efforts Fail: A View From the Front Line" by Clinton O. Longenecker and Company

The real reason is that we haven't had to, and now that the cliff is approaching we have to erase years of inability

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Here is where we are currently with improvement efforts in hosptials
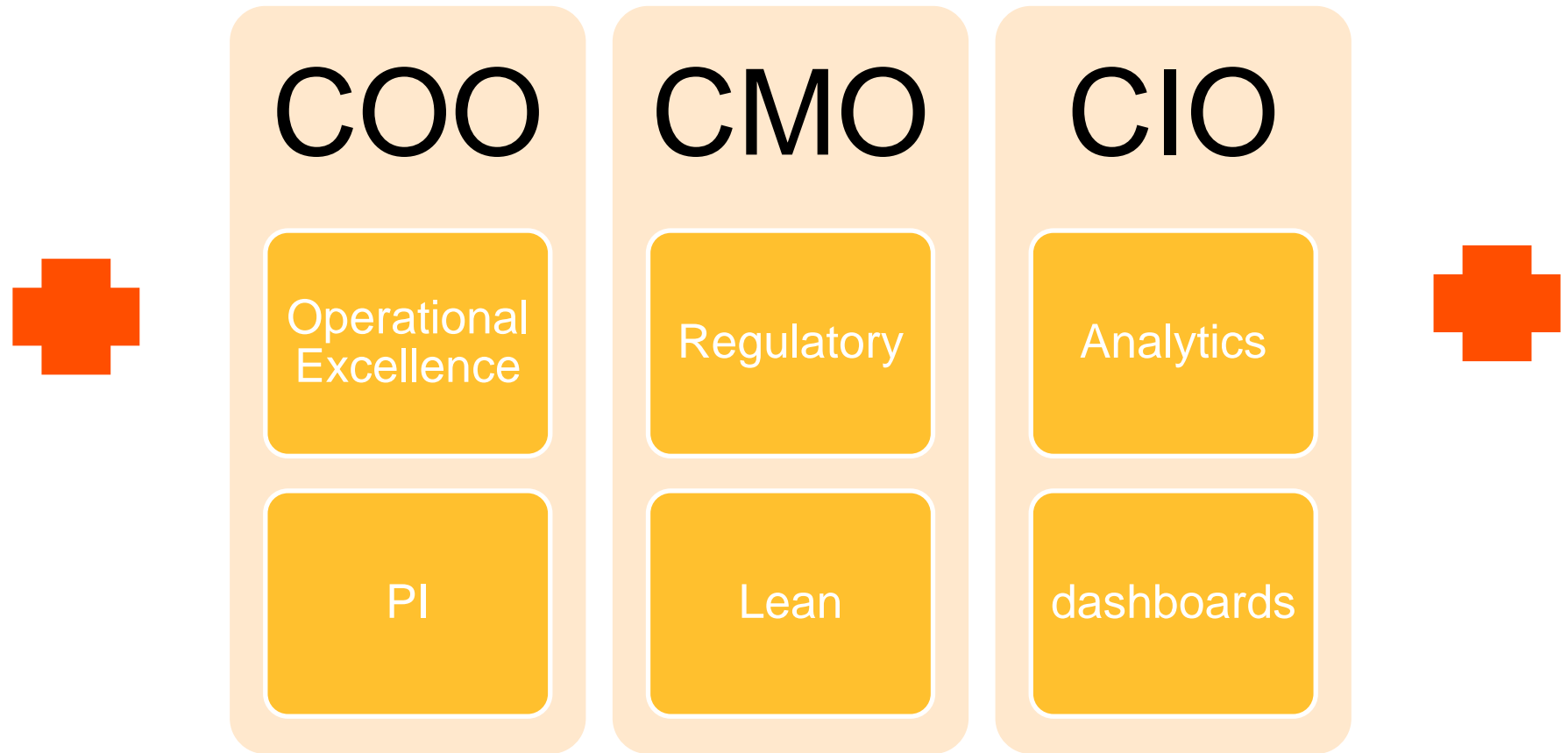
Young, talented analysts rather than Data Scientists with little connection to senior leadership

Decentralized

Quality Improvement, Safety Improvement, Supply Chain Improvement, Operational Improvement done in different areas

Leadership bemoans their inability to improve and change, and creates multiple departments

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Current improvement system structure in the US Healthcare System

COO	CMO	CIO
Operational Excellence	Regulatory	Analytics
PI	Lean	dashboards

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The Proliferation of PI

Quality Department

Analysts within other departments

Decision Support / Data Warehousing

Data Quality (typically within IT)

Performance Improvement

Operational Effectiveness

Informaticists

Chief Transformation Officers

Nursing Quality

I think we are beginning to realize that, somewhere, value has to be created. Without value, we can't be spending money and getting nothing for it. We may actually be seeing the excess in the system being taken out."

Sudha Xirasagar
Director of the MHA Program
University of Southern California

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Characteristics of hospitals that can improve

2006 study around top performing hospitals
- Quality, safety, and service are organizational priorities and leaders are dissatisfied with current state of performance
- Leaders reinforce vision through stories, practices, and decisions
- Physician leaders assume responsibility for quality, safety, and service and willing to be compared to external comparisons
- Innovation at the unit level encouraged and celebrated
- Culture that stresses mutual respect and professional responsibility

And then in 2014 on rising stars
- Shared ownership
- Measurement, evaluation and transparency
- Frontline leaders and innovation

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The best structure for improvement
Simplify and Centralize!

Senior Executive^
Performance Improvement (includes all who support data + change)*
Regulatory (core measures, OPPE)
Infection Control
Risk Management
Patient Safety
Satisfaction

^could include Information Technology, Population Health, Innovation, Value Analysis. Should not include support of the Medical Staff, which is the function of the CMO. The senior exec characteristics should be those described in slide 13.

*Should include the development of, drilling into, and reporting out of all dashboards as well as any change management methodologies (Lean, Six Sigma, etc...). Should not include revenue management.

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the data
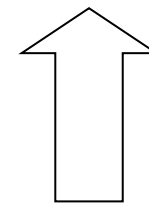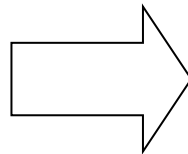
12.6 ↓

5.3 ↑
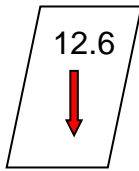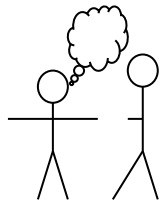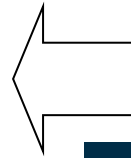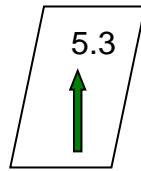
The Improvement

the relationship
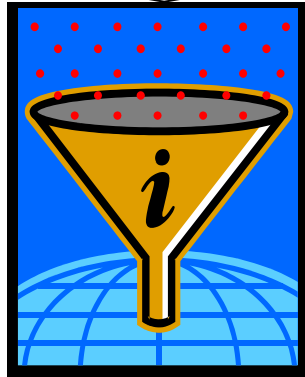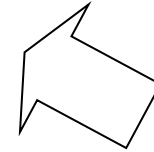
the analysis
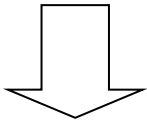
the tools
and resources

the information

the understanding
& innovation

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The key to performance improvement
The Dyad

- **The structure on the previous page is the support for performance improvement (except revenue management)**

- **Develop a single source of truth**

- **Accountability for improvement is the dyad (nurse and physician leaders of service lines)**

- **The dyad would have both administrative and data science support**

- **Data Science support includes: development, drilling into and reporting out of the dashboard once a month and then interactions with the dyad to motivate change**

- **At least quarterly senior leadership should meet with each dyad to go over the dashboard and improvement efforts**

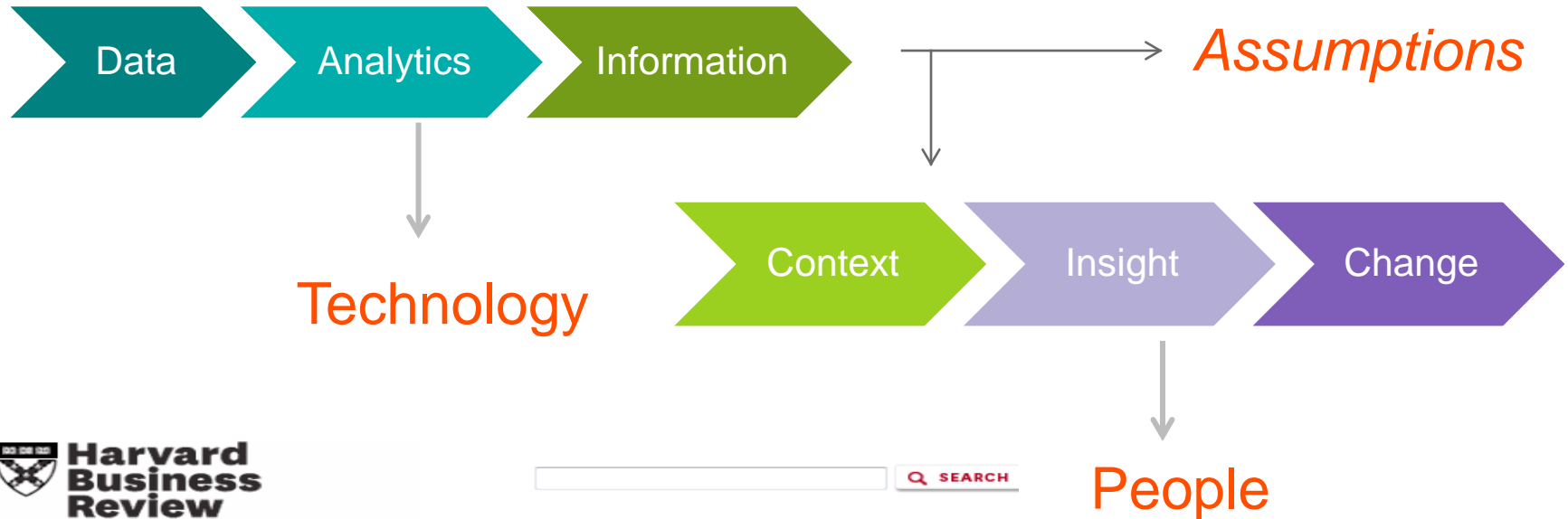*All of this should result in accelerated improvement with less people*

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Improvement

Right
Data

+

Change

=

Improvement
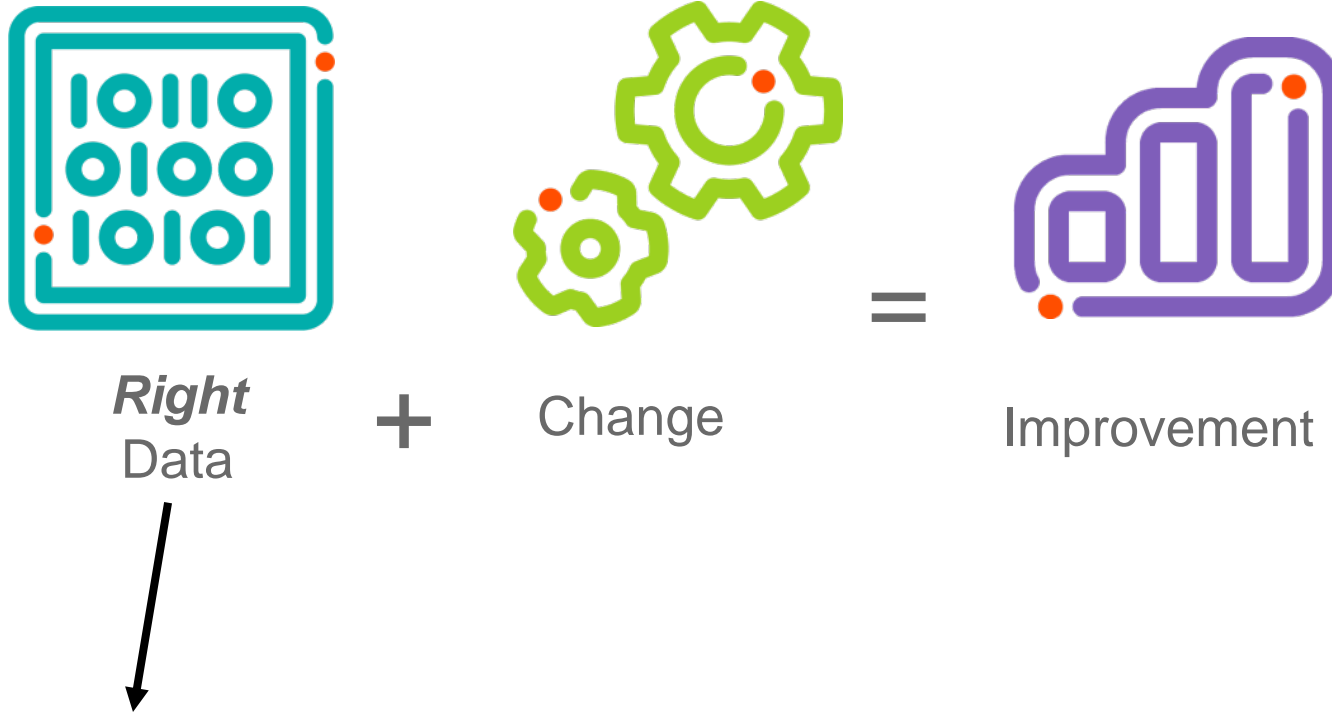
Transparency into hospitals and methodologies

Broad enough to populate dashboards & deep enough to transform data into insights

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The role(s) of the Data Scientist

Data → Analytics → Information → *Assumptions*

Technology

Context → Insight → Change

People

Harvard Business Review

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Data Scientist: The Sexiest Job of the 21st Century

by Thomas H. Davenport and D.J. Patil

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What are the biggest obstacles (if any) to accelerating the adoption of analytics in your organization? (check all that apply)

Horizontal bar chart showing obstacles to analytics adoption (approximate percentages):

- Confusion in the market about analytics and analytics vendors — ~29%
- Too many other priorities to focus on analytics right now — ~55%
- EMR rollout consuming all our time and resources — ~35%
- Lack of data warehouse foundation to really roll out a robust analytics infrastructure — ~35%
- **Lack of analytics expertise and/or resources — ~58%** (highlighted with box)
- Lack of funding — ~44%
- Potential solutions too expensive — ~22%
- Lack of executive understanding, support, or approval — ~27%
- Lack of urgency – can't see the benefit or ROI yet — ~24%
- Waiting for the market to mature, waiting for others to succeed and then we'll follow their lead — ~2%
- We've already tried this multiple times and haven't been successful — ~5%
- We already have the resources and expertise we need — ~6%

X-axis: 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

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Who Are These People?

If capitalizing on big data depends on hiring scarce data scientists, then the challenge for managers is to learn how to identify that talent, attract it to an enterprise, and make it productive. None of those tasks is as straightforward as it is with other, established organizational roles. Start with the fact that there are no university programs offering degrees in data science. There is also little consensus on where the role fits in an organization, how data scientists can add the most value, and how their performance should be measured.

Even more challenging in healthcare where many of our leaders just want the information & they will make the decisions, rather than providing resources, placing focus and accountability

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Cleveland Clinic's analytic roles

Data Engineer / Designer
- Computer science
- IT principles
- Data blending
- Code expertise
- Problem solving
- Machine learning
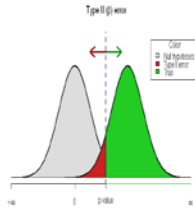
Statistician
- Expert in Statistics
- Writing skills
- Research knowledge
- Study design
- Attention to detail

Business Analyst
- Data Blending
- Report writing
- Producing information from analytic tools

Data Scientist
- Healthcare proficiency
- Problem solving
- Storytelling / visualization
- Understands variation
- Curiosity

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Ehler's Medical Oncology service line

Metric	Rating	Ehlers	Compare Group
12 Mo. Volume		386	10,104
Patients w/ ICU		16.3%	7%
LOS Index	🟡	.88	.88
Mortality Index	🔴	.99	.82
% Encounters w/ Complications	🟢	1.6%	2.4%
30-Day CMS Unplanned Readmits	🟢	14.7%	19.5%
Direct Cost Index	🔴	1.02	.75

Resource Utilization*	Ehlers	Compare Group
Ancillaries (Intensity/Case)	19.4	22
Imaging (Intensity/Case)	16.3	12
Lab (Intensity/Case)	10.4	15.7
Pharmacy ($DDD/Case)	$1,734	$1,479

Coding / Documentation	Ehlers	Compare Group
Avg No. of Dx Codes	19.6	17
Malnutrition POA Y	24.6%	26%
Malnutrition POA N	0	1.1%

Base MS-DRG	Cases	LOS out	LOS obs	st dev	LOS exp	LOS o/e	comps	mort obs	mort exp	mort o/e	% early
019 nervous system neoplasms	93		5.2	4.1	5.6	0.9	1	0.0	3.2	0.0	0.0
142 malig hepatobil sys/pancreas	50		4.8	4.5	5.4	0.9	1	6.0	5.1	1.2	0.0
285 chemorx w/o acute leukemia as sdx	47		4.2	1.2	4.8	0.9	0	0.0	0.4	0.0	0.0
061 resp neoplasms	41		5.3	3.9	6.1	0.9	1	2.4	7.7	0.3	2.4
177 path frac/muscskel conn tiss malig	41	(1)	6.0	6.6	6.1	1.0	0	0.0	1.8	0.0	0.0
126 digest malig	34		7.1	5.6	7.0	1.0	1	0.0	5.2	0.0	0.0
283 lymphoma/non-acute leukemia	26		8.9	6.3	9.6	0.9	1	7.7	4.2	1.8	0.0

Source: CDB Sep 2017 – Aug 2018; 2017 AMC Risk Model. Compare Group: Complex Teaching Medical Centers in Midwest

Mortality Factors
Calendar Year 2018

	Medical Oncology				
Hospitals	**Transfers**	**Pall. Care**	**Hospice**	**% DNR**	**Diag / Case**
Banner Phx (101)	48%				
HUP (8)		51%			
Christiana (12)			25%		
IU Ball (42)				46%	
UTSW Clements (86)					20.8
Avg (All)	**12.8%**	**6.6%**	**8.3%**	**17.8%**	**15.2**
Ehler's South (39)	**7.7%**	**12%**	**20.5%**	**20.5%**	**21**
Ehler's North (38)	**15.8%**	**18%**	**34.2%**	**29%**	**19**
Ehler's Medical (386)	**36%**	**3.9%**	**14.5%**	**14.8%**	**19.6**
Ehler's East (159)	**7%**	**7%**	**22%**	**30%**	**18.9**

Highest

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How other industries improve

1. DATA CULTURE IS DECISION CULTURE

The takeaway: *Don't approach data analysis as a cool "science experiment" or an exercise in amassing data for data's sake. The fundamental objective in collecting, analyzing, and deploying data is to make better decisions.*

Rob Casper, chief data officer, JPMorgan Chase: The best advice I have for senior leaders trying to develop and implement a data culture is to

Cameron Davies, head of corporate decision sciences, NBCUniversal (NBCU): It's not about the data itself. It's not just about the analytics—any

Jeff Luhnow, general manager, Houston Astros: We were able to start with a fresh piece of paper and say, "OK, given what we think is going to happen

Improvement is a team sport

Vizient	+	Member	=	Improvement

- Clinical Data Base
- Expert support
- Data Science
- Member insights
- Networking
- Advisers
- Collaboratives
- Best practices
- Conferences
- List servs
- Webinars

- Leadership focus
- Data science
- Engaged clinicians

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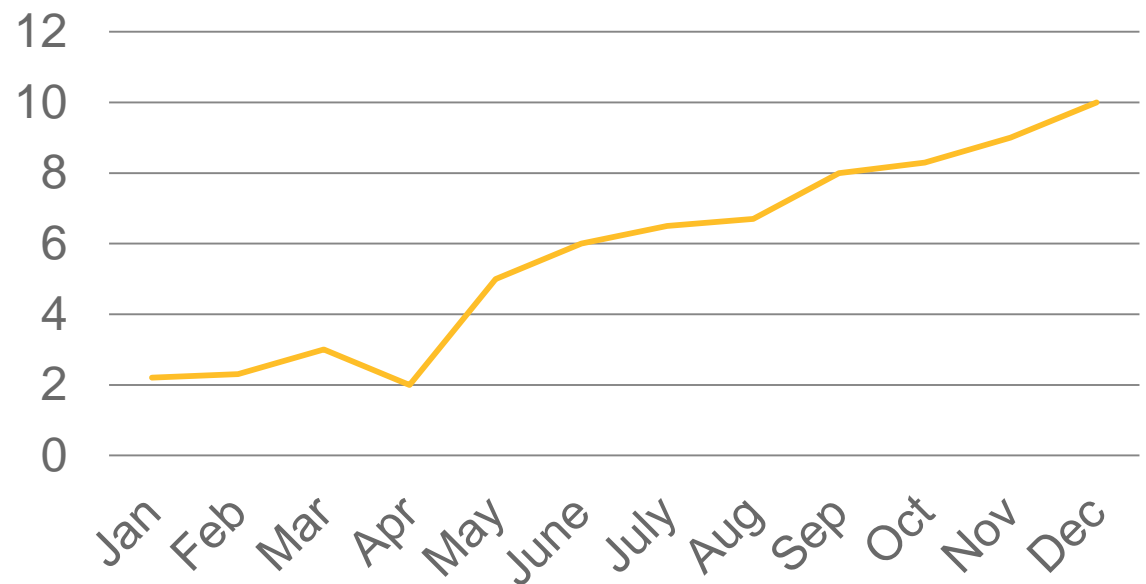
Engaging clinicians
Stages of ~~grief~~ quality measurement

Kübler-Ross	Shannon Sims, MD, PhD
Denial	There's not a problem
Anger	Data are completely wrong
Bargaining	Need different metrics
Depression	My patients are sicker
Acceptance	Ok, maybe we can do better

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The improvement community
Listserv and support

Our institution is trying to capture Expected Discharge Date (using a working DRG) and / or Anticipated Discharge Date (which the admitting physician would provide). We would like to know if your hospital captures either of these in the EMR and if so who collects it and how is it entered (manually, interface, etc). We welcome any information on helpful peer processes to identify and address avoidable days.

Dave Caplan; Director, Data Analytics, NewYork Presbyterian Hospital

Institution	Responder	Position/Department	Expected Discharge Date (using a working DRG) and / or Anticipated Discharge Date (which a staff person would provide).	Who initially inputs information?	Further information on processes to identify and address avoidable days.
University of Minnesota MC	Karyn Baum kbaum@umn.edu	Assoc Chair of Clinical Quality, Dept of Medicine/ Exec Med Director, Care Transitions and Pt Flow	Anticipated Discharge Date	Anyone (SW, MD)	We have EPIC and do capture anticipated d/c date when possible. It can be entered by anyone (social worker, physician, etc). We have a significant amount of variability by unit regarding the % of time this is done, from 5% to 100%, averaging 44%. we also track avoidable days manually through having SW or CC note them in a separate system including an underlying reason. #1 cause is waiting for SNF. All of this is for our LOS and utilization work.
UTMB	Gaddie, George H. ggaddie@UTMB.EDU		Expected LOS/ Working DRG	CDI team	Our CDI team manually enters a working DRG and expected length of stay into the system.
Saint Luke's Health System	Sharon Korzdorfer skorzdorfer@saint-lukes.org	RHIT, Director, Health Information Management	Expected LOS/ Working DRG	CDI team	If your organization has clinical documentation specialists creating a working DRG you can use the CDI activity in Epic or if you have coding staff doing concurrent coding it could be captured in the Coding Info activity. Both of these activities in Epic can then be view only and/or have these fields populated to other template views for evaluating expected discharge based on GMLOS
Cambridge Health Alliance MA	Frankel, Adrianne afrankel@challiance.org	Quality Mgmt Performance Improvement Advisor	Expected LOS/ Working DRG	Case Managers	Our Case Managers document the expected discharge date in the EMR. There is usually a conversation about this during our daily multidisciplinary rounds. Additionally we try to encourage staff to put this date, (and update this date as needed), on the white board in patient rooms.
Harborview Medical Center	Ellen Robinson lnrobin@u.washington.edu	Quality Improvement	Anticipated Discharge Date	CC Nurse	We have included Anticipated Discharge Date in a note that our Care Coordination Nurses use. We use it as a communicate point for real time coordination.

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15 Aug HIIN Community Knowledge Network

Wednesday, August 15, 2018 ·

Toward Inclusion and Diversity: Empowering Improvement →

22 Aug PI Collaborative Series

Wednesday, August 22, 2018 ·

Preventing Adverse Events in the Operating Room →

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PI Collaborative projects for delivery in 2019
The Clinical Data Base provides data for those in orange

Safety

- Use of Technology for Infection Control Benchmarking Study – 4Q18
- Opioid Prescribing in Orthopedics Collaborative – 2Q19
- Glycemic Adverse Drug Events (ADE) Collaborative – 3Q19

Efficiency

- Addressing Pharmaceuticals in High Cost Service Lines Collaborative – 4Q18
- Cybersecurity for Medical Devices Benchmarking Study – 1Q19
- Effective Operational Models for Systemness Benchmarking Study – 1Q19
- Workplace Violence Benchmarking Study – 3Q19
- Clinical Supply Variation Benchmarking Study – 4Q19

Mortality

- Reducing Risk of Failure to Rescue Events Collaborative – 3Q18
- Maternal Mortality Collaborative – 1Q19
  - Postpartum hemorrhage
  - Preeclampsia and Eclampsia
- Sepsis Early Recognition Collaborative – 2Q19
  - Emergency Department
  - Inpatient
  - Ambulatory

Effectiveness

- Developing an Impactful and Measurable System-wide Quality Plan Benchmarking Study – 4Q18
- Stroke: Standardizing Care Collaborative – 2Q19
  - Reducing Clinical Variation
  - System-wide Stroke Care
- High Utilizers: Identification and Care Management Collaborative – 3Q19

Patient centeredness

- Managing Serious Illness Collaborative – 2Q18
- Shared Decision-Making Benchmarking Study – 4Q19

Access

- Improving Care Access Through a Virtual Healthcare Design Collaborative – 2Q18
- Maximizing Team Based Care Models in the Ambulatory Setting Collaborative – 3Q18
- Management of Behavioral Health Issues Collaborative – 4Q18
  - Acute Care
  - Chronic Care
- COPD: Chronic Care Management Collaborative – 3Q19
  - Points of Access
  - Standardized Care
  - Community Partnerships
- Acute Care Capacity Collaborative – 4Q19
  - ED Throughput
  - Capacity Management

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Clinical Data Base *unique* features

525+ hospitals	Custom comparators	Transparency	Drill-down capability	Networking and collaboration	All Inclusive
Clinical Data Base	All but one U.S. News Honor Roll; 95% of all AMCs; 320+ community hospitals	Drill into data by hospital name	Over **100,000** reports written per month	Connect easily with other hospitals	Quality, operational, safety and financial metrics by clinical condition, doc, etc…
Other Databases	Few AMCs	Aggregate groups w/out names	Many fewer drill down options	Connect through agreements and or additional cost	Similar data but less ability to tailor

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Top / Bottom Q&A and reports written
*in collaboratives

Top hospitals	Reports
Mayo*	9,537
Rush*	8,950
NYU*	3,684
UTMB Health*	12,714
Kansas*	9,407
UPHS HUP*	8,048
Utah*	5,763
Methodist Houston*	15,741
Hermann*	7,873
Tufts*	959
Morristown	11,275
Average	**8,541**

Bottom hospitals	Reports
A*	9,091
B	967
C	589
D*	2,494
E	4,330
F*	9,505
G	274
H	622
I*	8,686
J	4,561
K	62
Average	**3,744**

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Highest and lowest readmissions by clinical condition

Base MS-DRG	Den	LOS out	% 30 day	% 14 day	% 7 day
273 rbc dis	37,866	(362)	27.98	15.69	8.32
141 cirrhosis/alcoholic hepatitis	21,800	(171)	25.08	15.07	7.62
126 digest malig	14,600	(95)	22.89	15.23	8.82
245 malig female reprod sys	3,022	(21)	22.70	14.63	7.45
144 dis liver exc malig, cirr, alc hepa	21,368	(161)	22.49	13.96	7.58
207 inborn errors of metab	1,583	(5)	22.17	11.31	6.25
061 resp neoplasms	10,910	(78)	22.01	13.53	7.31
190 mastectomy for malig	1,963	(5)	4.48	2.45	1.48
028 viral meningitis	1,031	(19)	4.36	3.59	2.23
203 thyroid/parathyroid	3,006	(17)	3.69	2.99	2.36
227 maj male pelvic procs	13,428	(116)	3.65	2.76	1.71
240 uterine/adnexa proc for non-malig	13,222	(84)	3.08	2.39	1.66

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ED and Observation mortality

Hospital	Cases	Deaths (Obs)	Pct Deaths (Obs)
	54,864	0	0.00
	67,042	1	0.00
	38,304	1	0.00
	24,060	1	0.00
	49,068	**11**	**0.02**
	28,554	117	0.41
	74,310	347	0.47
	39,621	187	0.47
	27,106	130	0.48
	29,523	149	0.50

Source: CDB (Q1'18-Q4'18)
Non-inpatient: ED and observation
Includes patients >= age 18
Exclude cases <20,000 cases
2018 methodology

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Base MS-DRG: 218 by discharge status
LOS observed, LOS expected

Hospitals	routine	expired	home health	SNF	hospice
X	65.2% 4, 4.3	2.9% 8.6, 8.7	10.0% 9, 5.3	9.0% 9.6, 6.6	1.8% 9.2, 7
Y	52.3% 3.4, 4.6	0.6% 8, 11.6	16.6% 5.8, 5.3	16.9% 6.2, 6.2	5.2% 7.5, 8
Z	71.1% 3.8, 5.3	0.9% 9, 7.5	8.1% 6.6, 6.2	16.6% 9.4, 6.9	1.8% 6, 7
A	60.1% 4.2, 4.6	0.0% 0, 0	20.3% 7, 5	12.6% 8.7, 5.9	5% 6.2, 7
B	**59.4%** **3, 4.4**	**0.0%** **0, 0**	**15.4%** **4.9, 5**	**16.2%** **5.3, 5.4**	**2%** **6, 7**

Source: CDB (Q4'17-Q3'18)
2018 Methodology
Includes patients >18
All hospitals in CDB

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Discharge Status - UTMB
Cardiology, Neurology, Gen Med and Oncology

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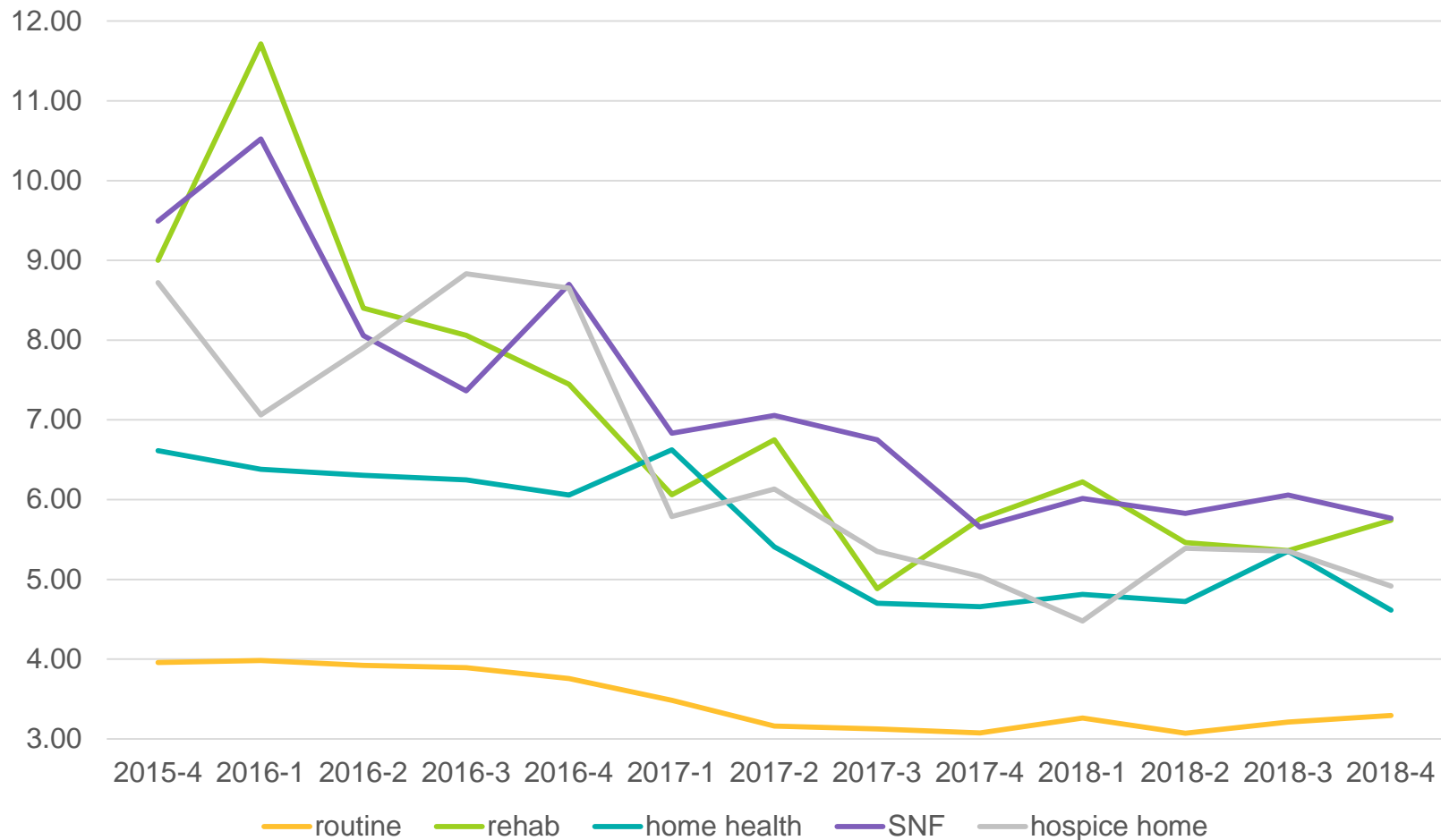
Opioid use in low back pain ED patients
Lincoln Community is 48th of 168 hospitals

Hospital	Den	Num	%
MEDSTAR_WASHHOSPCTR	2,230	79	3.5
MEDSTAR_HARBOR	738	55	7.5
MEDSTAR_UNIONMEMORIAL	1,695	134	7.9
MEDSTAR_SOUTHERNMD	2,053	172	8.4
TUFTS	900	76	8.4
METHPA	755	67	8.9
MEDSTAR_GOODSAM	740	77	10.4
METHODIST_HOUSTON	766	80	10.4
HARRISHEALTH	3,026	331	10.9
NYU_LUTHERAN	1,154	127	11.0
BOSTONMC	2,888	319	11.0
NYU_WINTHROP	1,687	200	11.9
MEDSTAR_GEORGETOWN	649	77	11.9
PARTNERS-MASSGEN	1,552	188	12.1
YNHHS_YANEWHAVEN	4,017	508	12.6
MEDSTAR_FRANKLIN	2,411	314	13.0
Lincoln Community	920	217	23.6
Adams Medical	252	142	56.3

Individual Resource	Den	Num	%
codeine/ acetaminophen	920	1	0.1
fentanyl	920	53	5.8
hydrocodone/ acetaminophen	920	93	10.1
morphine	920	84	9.1
oxycodone	920	27	2.9
tramadol	920	4	0.4

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Hospital Strategies
Keeping patients out of the hospital who don't need to be there

Pre / Post Acute Care / Population Health

- Sanford recently aligned with over 200 post acute care providers

- Vermont has purchased failing hotels and converted them to transitional housing

- Dartmouth is building a LTC, SNF, Hospice facility across the street

- Hospitals have created observation units focused on receiving ED patients near death, and those high readmits

- NYU has developed strong relationships with NYC home health agencies

- **Memorial Hermann has developed a protocol for neurology transfers**

- **Mayo has designated a physician to each inpatient who works to get them out of the hospital**

- **Many hospitals are conducting weekly long length of stay discussions**

- **Hospitals use palliative care for more than patients who are actively dying**

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Leaderships role

Create enthusiasm and Drive Change

> **Cleveland Clinic, Denver Health, WVU, Intermountain and Hermann**

Single source of truth / Q&A metrics on leadership dashboards
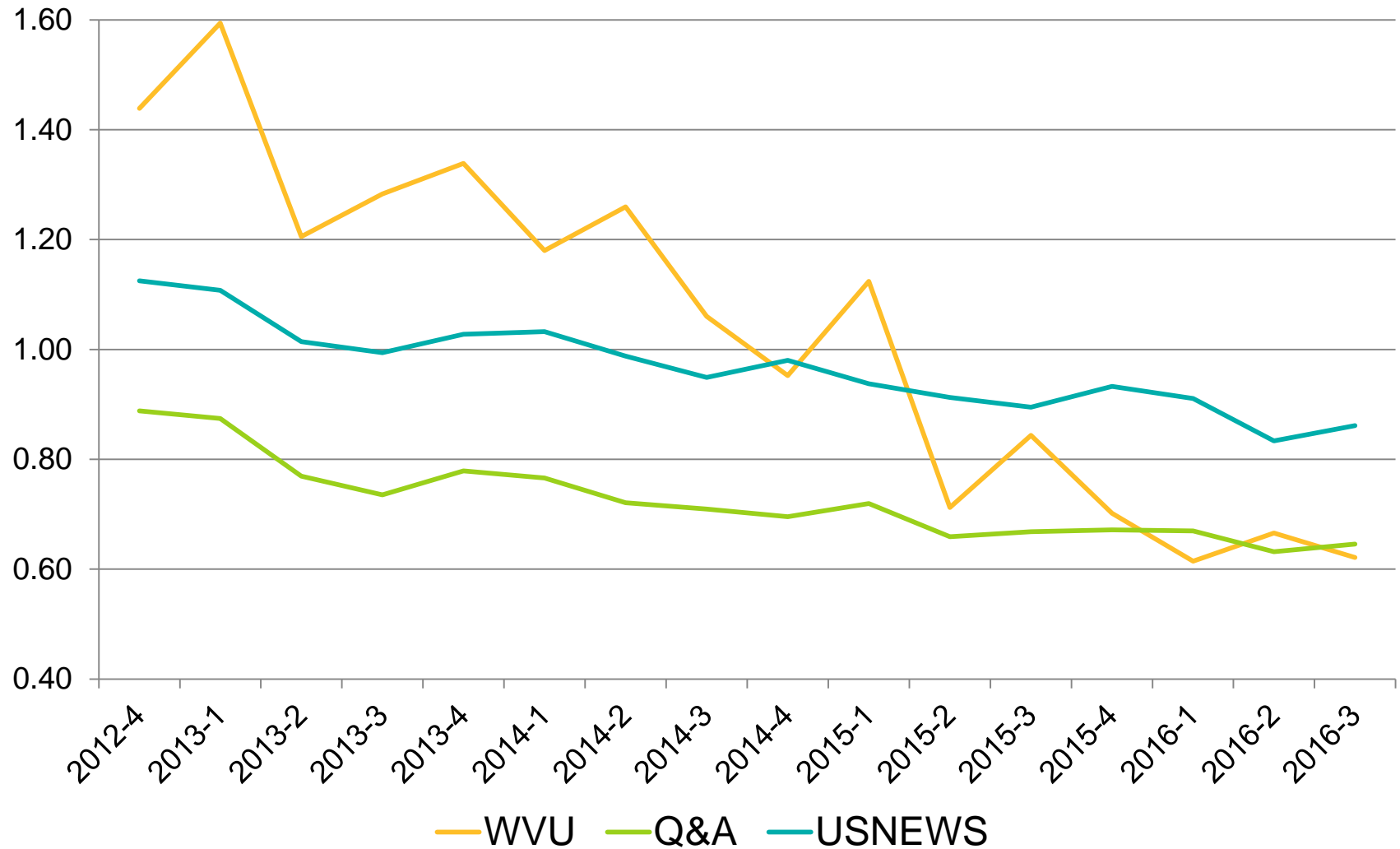
> **David Entwhistle, Donna Sollenberger**

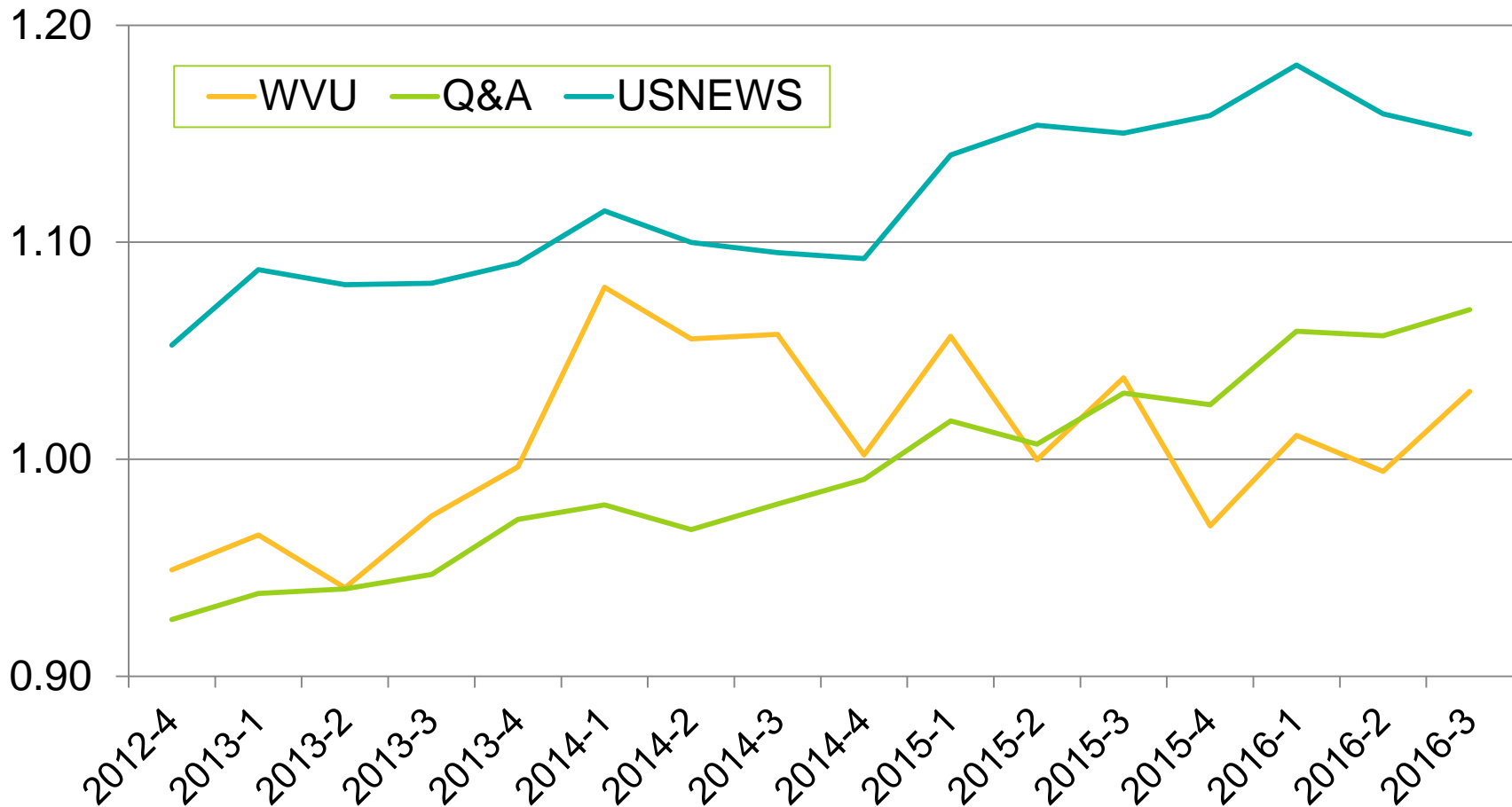**Develop the correct structure**

> **Simplify and consolidate**

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West Virginia University has shown significant improvement with consistent use of the CDB

Q&A Study Measure and Rank				
	2013	**2014**	**2015**	**2016**
Overall Q&A rank	**71**	**37**	**18**	**6**
Mortality (Q&A rank)	41.4% (87)	42.2% (93)	51.25% (75)	63.63% (16)
Safety (Q&A rank)	50.00% (78)	73.4% (1)	75.00% (2)	71.59% (3)
Effectiveness (Q&A rank)	90.5% (4)	89.4% (8)	88.54% (2)	67.65% (19)
Patient Centeredness (Q&A rank)	57.8% (41)	60.9% (32)	52.78% (59)	58.33% (44)

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Mortality observed / expected

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Direct costs observed to expected

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30 day related readmissions

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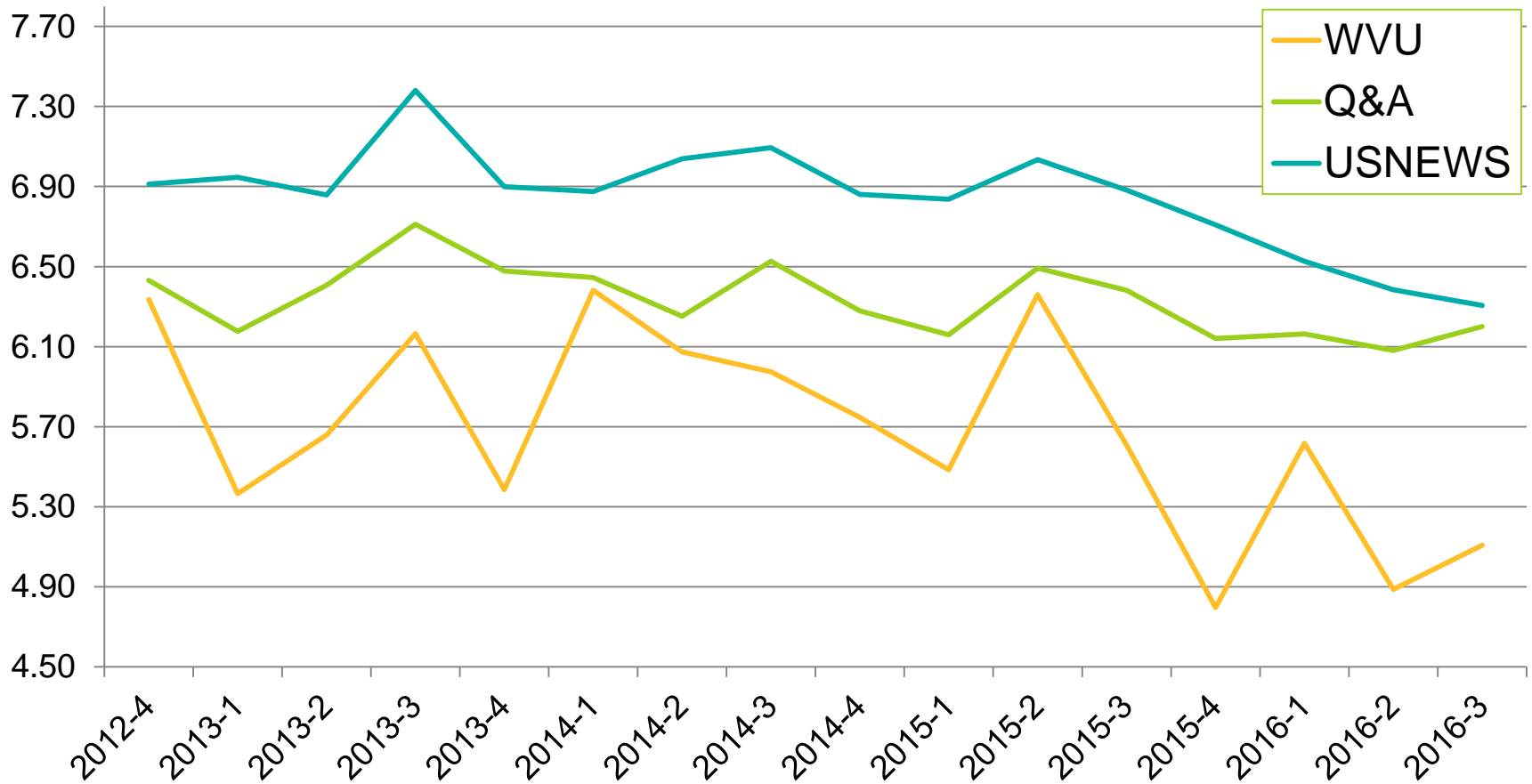
What did they do?

Driven by the CEO and CQO, the CDB (particularly the Q&A metrics) became the definitive source of data at WVU

- CDB data and benchmarks populate much of the scorecards that cascade from the board down to service lines
- WVU has thoughtfully not invested in other comparative products, or the development of a massive data warehouse
- Analytic FTEs were deployed to drill down and understand the CDB metrics

Alignment of Goals

- From the CEO to Clinical Chairs to the Employees
- In 2013 Quality established quarterly rounds with Clinical Chairs to analyze goals and improvement plans (maximized incentive!!)
- The compare groups are tailored by service, but the target is always the 25th percentile

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USER NAME	REPORT COUNT
Report Writer 1	2,600
Report Writer 2	2,262
Report Writer 3	2,094
Report Writer 4	1,425
Report Writer 5	1,031
Report Writer 6	941
Report Writer 7	845
Report Writer 8	509
Total	**14,458**

'WVU could not have accomplished the improvement we've seen in the last 3 years without the data, support, and direction from Vizient. Whenever we needed training or had a question or needed a networking contact or wanted a best practice, Vizient was able to satisfy that request '

Frank Briggs, System CQO

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Selected Specific Efforts

- *CLABSI*- we looked at technology and studied alcohol caps

- *C diff* – reduced fluoroquinolone use, changed our cleaning supplies (not using bleach any longer), brought in vaporized hydrogen peroxide, just added infrared

- *Readmission*- hired a full time physician medical director of care management, then hired a full time NP, social worker and 2 RNs. Developed care plans and recently the transition of care team (focus on non-connected patients)

- *Mortality*-inpatient hospice beds, developed H&P for better documentation and coding capture in Epic, sepsis screening tool running on patients to identify possible sepsis earlier

- *Ambulatory measures*- developed process for outside reports and labs to be incorporated into EPIC, weekly calls with clinics across system so they know which of their patients are coming next week and what care gaps they have to be closed

- 78th to 1st in Safety after adding PSI reviews by Clinical Chairs & Quality

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