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PROGRAM

**move THE
NEEDLE**





Leveraging Your Trauma Quality Collaborative to Move the Needle Forward

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Professor and Chief
Division of Acute Care Surgery
McGovern Medical School

Disclosures

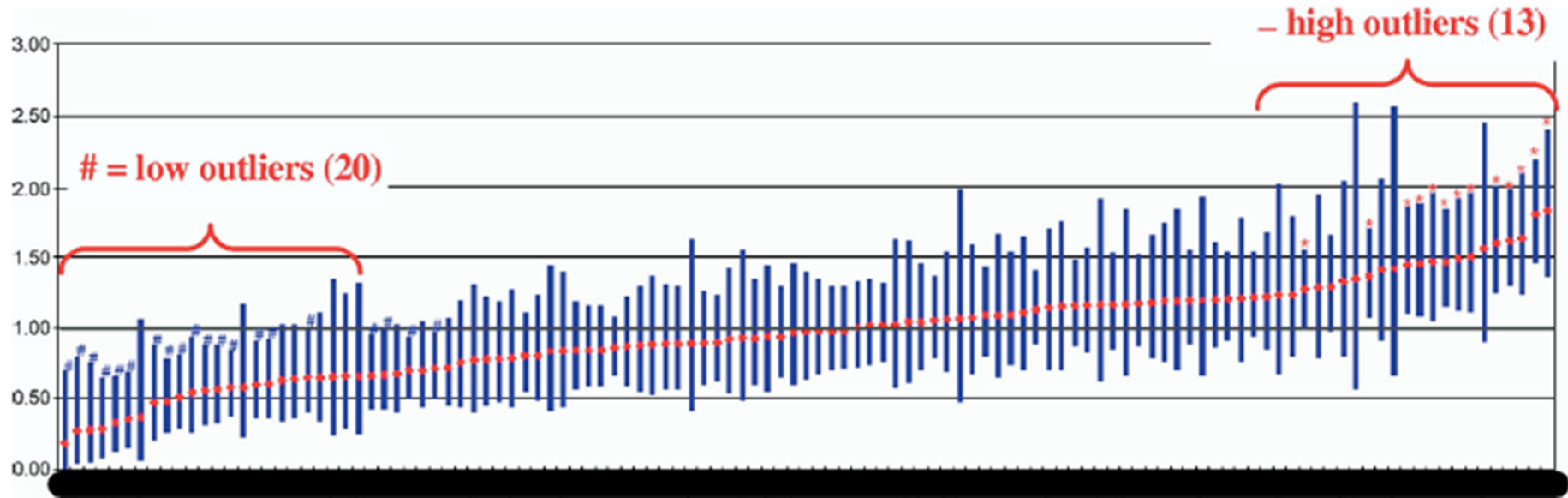


- No relevant financial disclosures

How Do We Move the Needle?



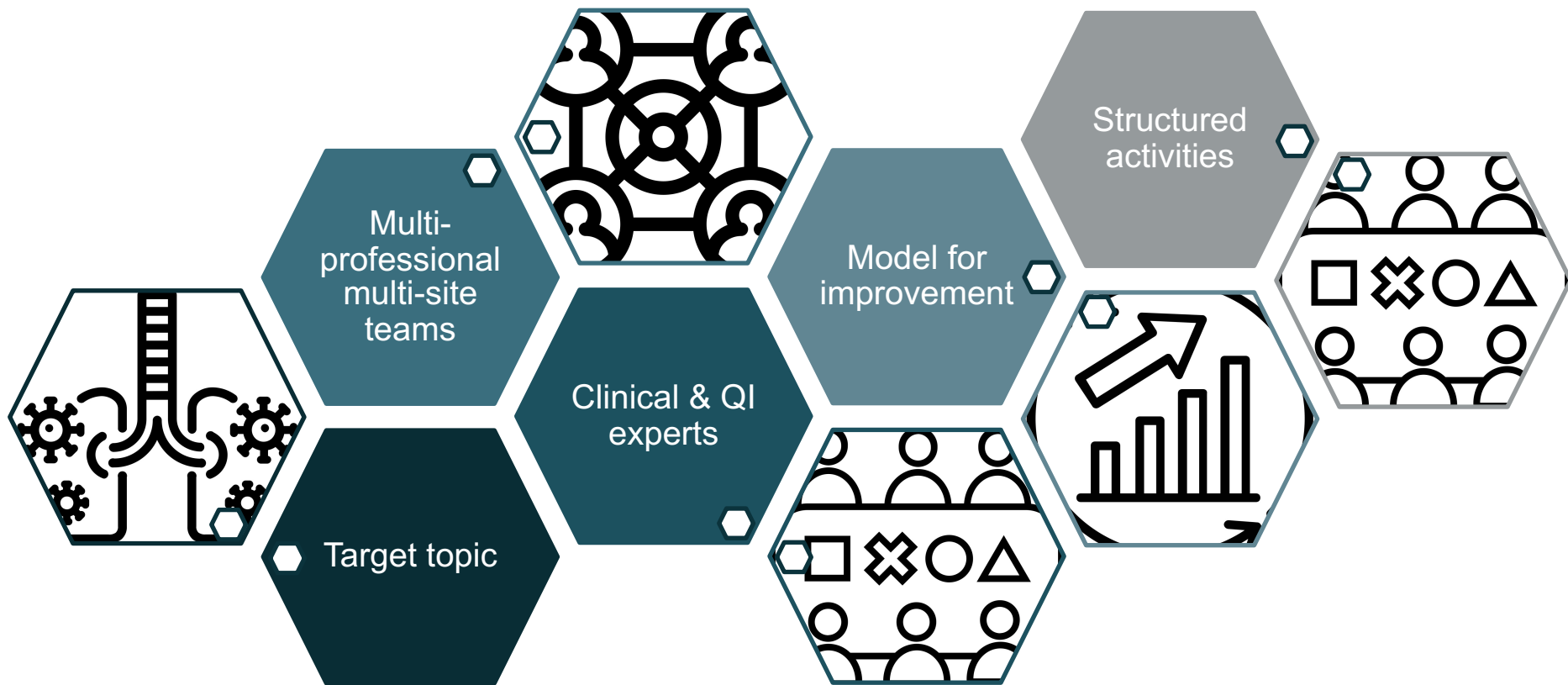
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Quality Improvement Collaborative (QIC)



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Start Collaborating

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FAQs



How many hospitals are in TASQ?

23 hospitals belong to our network



How often does TASQ meet?

- Quarterly face-to-face meetings (3 regional, 1 national)
- Monthly webinars
- "TASQ Force" conference calls
- Email exchanges



Texas Alliance for Surgical Quality (TASQ)
6431 Fannin Street
MSB 4.264
Houston, Texas 77030

www.?????????.com

TASQ

Texas Alliance for Surgical Quality

Stronger Together

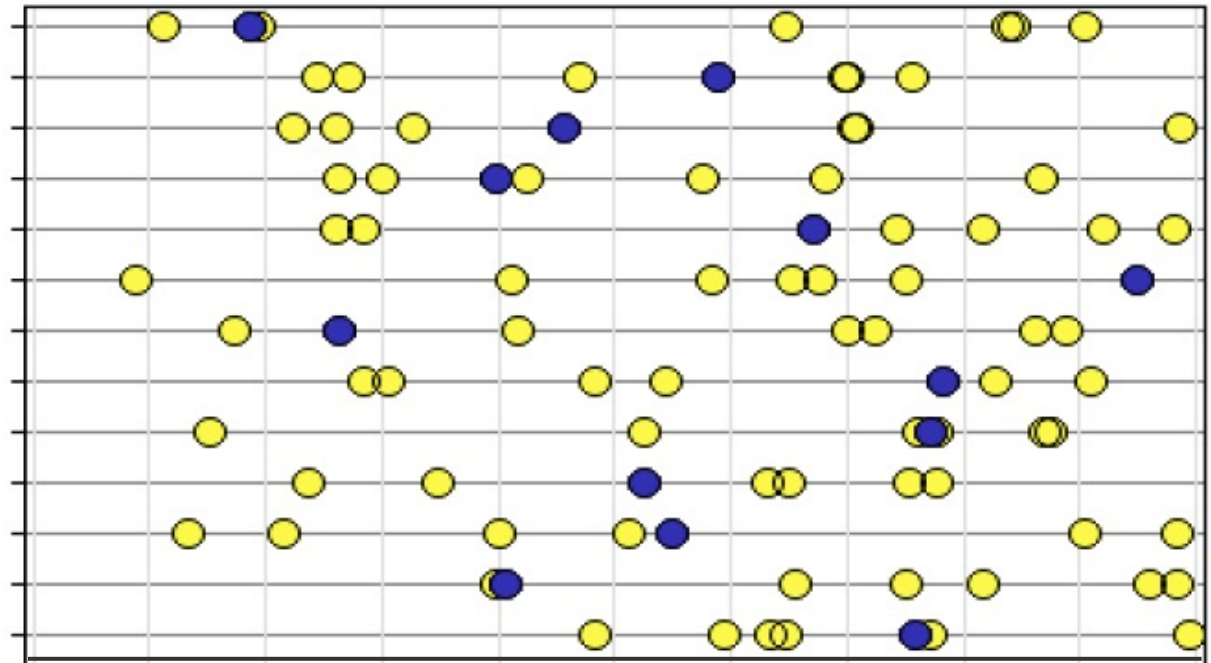
Within Center Variation Across Outcomes



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The following graph displays the percentile rank of the collaborative hospitals amongst all NSQIP hospitals in the selected models from the most recent SAR. Your specific hospital is identified by a blue dot, while the remaining hospitals within your collaborative are identified by yellow dots.

GEN Mortality
GEN Morbidity
GEN Cardiac
GEN Pneumonia
GEN Unplanned Intubation
GEN Ventilator > 48 Hours
GEN VTE
GEN Renal Failure
GEN UTI
GEN SSI
GEN Sepsis
GEN ROR
GEN Readmission



Quality Improvement Is Local

Darrell A Campbell Jr, MD, FACS

Darrell A Campbell Jr, MD, FACS

President Obama has advanced, as the core of his health care strategy, a need for improved quality and reduced costs. He and Congress have now provided \$1.1 billion to establish the Center for Comparative Effectiveness Research as a means to that end. In the President's objective, we search as a means to that end. In order the surgical community to help achieve the program, the American College should highlight how well our program, the American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP), is suited to support quality improvement strategies. The essence of the ACS-NSQIP is, after all, comparative effectiveness. As Porter and Teisberg, the noted health care economists have said, outcomes metrics like the ACS-NSQIP "should become the norm for the treatment of every condition."¹ The ACS has advocated for federal support for the program and it would be appropriate and welcomed.

But to maximize the benefits of the ACS-NSQIP data, there has to be a mechanism—where data can be evaluated and communication mechanism—improvement. This is difficult at the individual hospital level. All have become ingrained by the numbers and there is little opportunity for cross fertilization and biases and there is little opportunity for cross fertilization and biases in this setting. It is even more difficult at the level of ideas in this setting. It is even more difficult at the national meetings, where data are presented rapidly and without time for discussion. The best organization I have seen with little time for discussion, "meet regularly to get together for a 'quality improvement, and discuss who does what. This is comparative effectiveness at the local level."

My experience in this area comes from the Michigan Surgical Quality Collaborative (MSQC), a group of 34, mostly community, hospitals in Michigan, which, frontline in operation for the past 4 years. Here, frontline caregivers generate lively discussions about real-world problems. But it is not a rambling dialogue. It is a targeted discussion based on ACS-NSQIP data, arguably the most reliable surgical data available. To use an example discussed recently at our quarterly meeting, the surgical-site infection rate for diabetic patients in MSQC was found to range from 2% to 20%—a 10-fold variation.

Disclosure Information: Nothing to disclose.

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From the Office of Clinical Affairs and the Department of Surgery, University
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tion. And then the discussion began. What was it about the "best performer" here that accounted for the remarkable success? Or conversely, why were some hospitals struggling? Was finger-stick blood glucose routinely done on entry to the preoperative holding area? Were glucometers available in each operating room? Did anesthesiologists have an insulin infusion protocol? What was the intraoperative trigger for insulin administration? These and a multitude of similar questions were asked and answered in the collaborative environment. This process is how quality improves. It cannot be done in an individual hospital or at the microphone of a national meeting. It can only be done in a collaborative or critical decision-making environment as surgeons. Typ-

Face-to-face communication in a collaborative is critical and nurses' involvement is as important as surgeons. Typically, hospital groups sit together at our meetings, and they include the ACS-NSQIP regional champion, the surgical clinical nurse reviewer, and various administrators. Not all surgical meetings involve nurses in this way, but it is highly important, as the surgical clinical nurse reviewer is frequently more able to advocate for completion—than the hospital setting—and carry them to completion. And there active surgeon with a busy operative schedule. And there are mechanisms available to enhance communication at and outside of meetings. We use an audience response system, for example, to assess practice patterns in Michigan. What percentage of our 34 hospitals uses a formal risk assessment methodology for venous thromboembolism prophylaxis? The answer is available in seconds (ie, not choose to sit at various lunch tables based on a common interest. Although "bowel prep for colectomy" might not interest. Although a compelling lunch table discussion for the lay population, it draws a lot of attention at our meetings. Between meetings, communication comes from a dedicated MSQC Web site (www.msqc.org), a hardcopy newsletter for those less inclined to use the computer, and, most recently, a dedicated MSQC channel on YouTube (www.youtube.com/msqc1), inspired by offspring. These "best practices" identified in member hospitals are described in 10 minutes or less, and can be easily viewed on a laptop or smart phone between patients.

There are core elements of a collaborative that are necessary if the group is to be effective. The first core element is availability of a standardized outcomes infrastructure.

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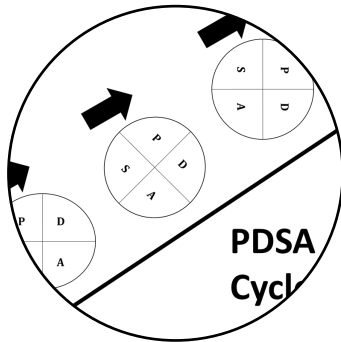
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“...there has to be a mechanism—a local, face-to-face communication mechanism—where data can be evaluated and turned into quality improvement”

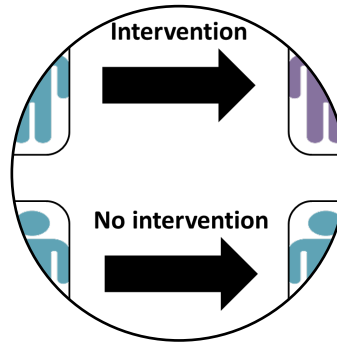
QICs: QI to Implementation



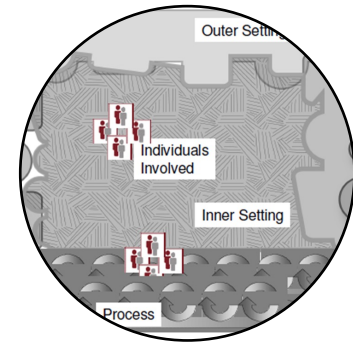
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**Quality
Improvement
Operations**



**Quality
Improvement
Science**



**Implementation
Science**



QICs: QI to Implementation



QI Operations

QI Science

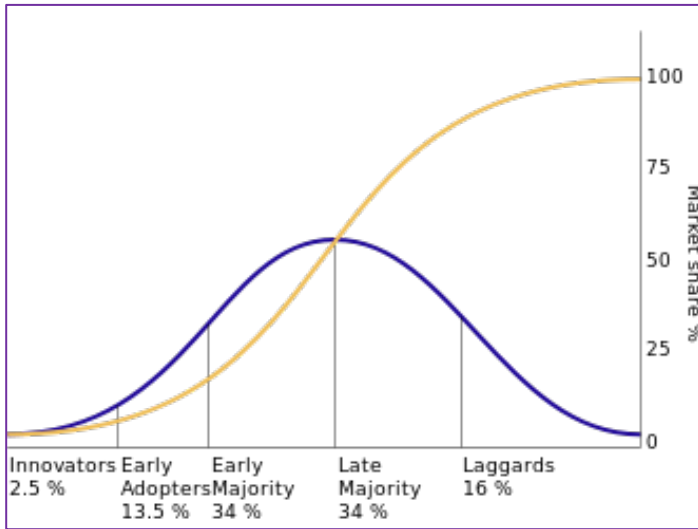
Implementation Science



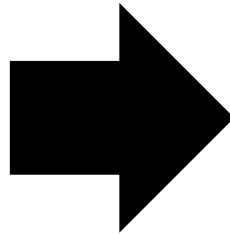
- Short-term focus (initial)
- Local practice applicability
- Theoretical models *not* very important
- Effectiveness outcomes

- Medium to long-term focus (initial)
- Applicability to multiple practices
- Theoretical models extremely important
- Implementation outcomes

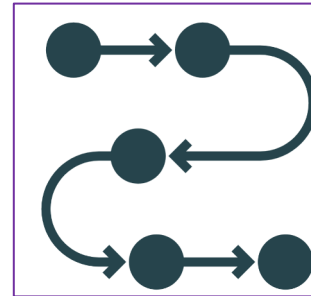
QICs: Models and More



Models, Frameworks, & Theories



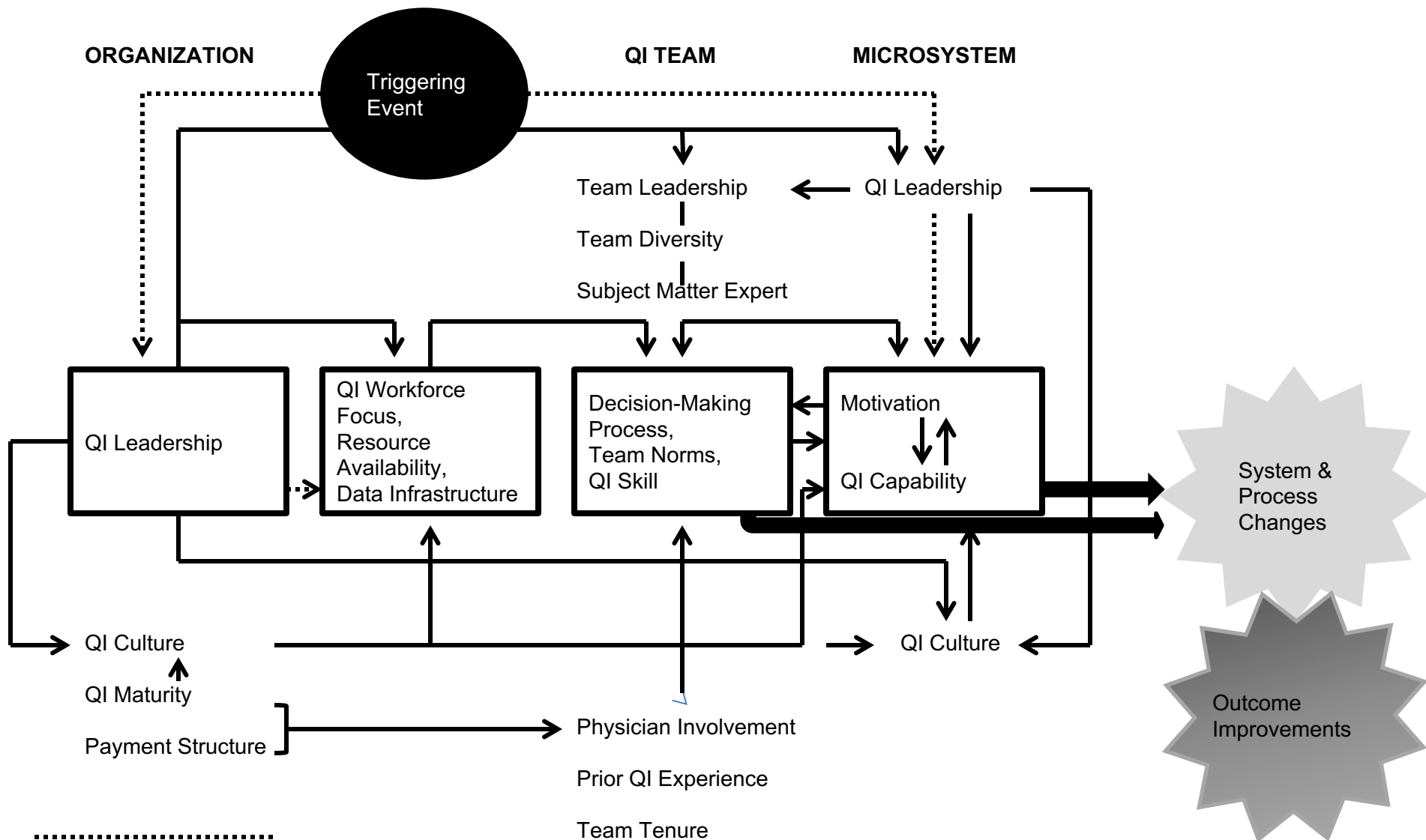
Understand
and/or explain
influencing
factors



Describe
and/or guide
processes



Evaluate
processes



Dotted lines represent
probationary
relationships (consensus
not obtained)

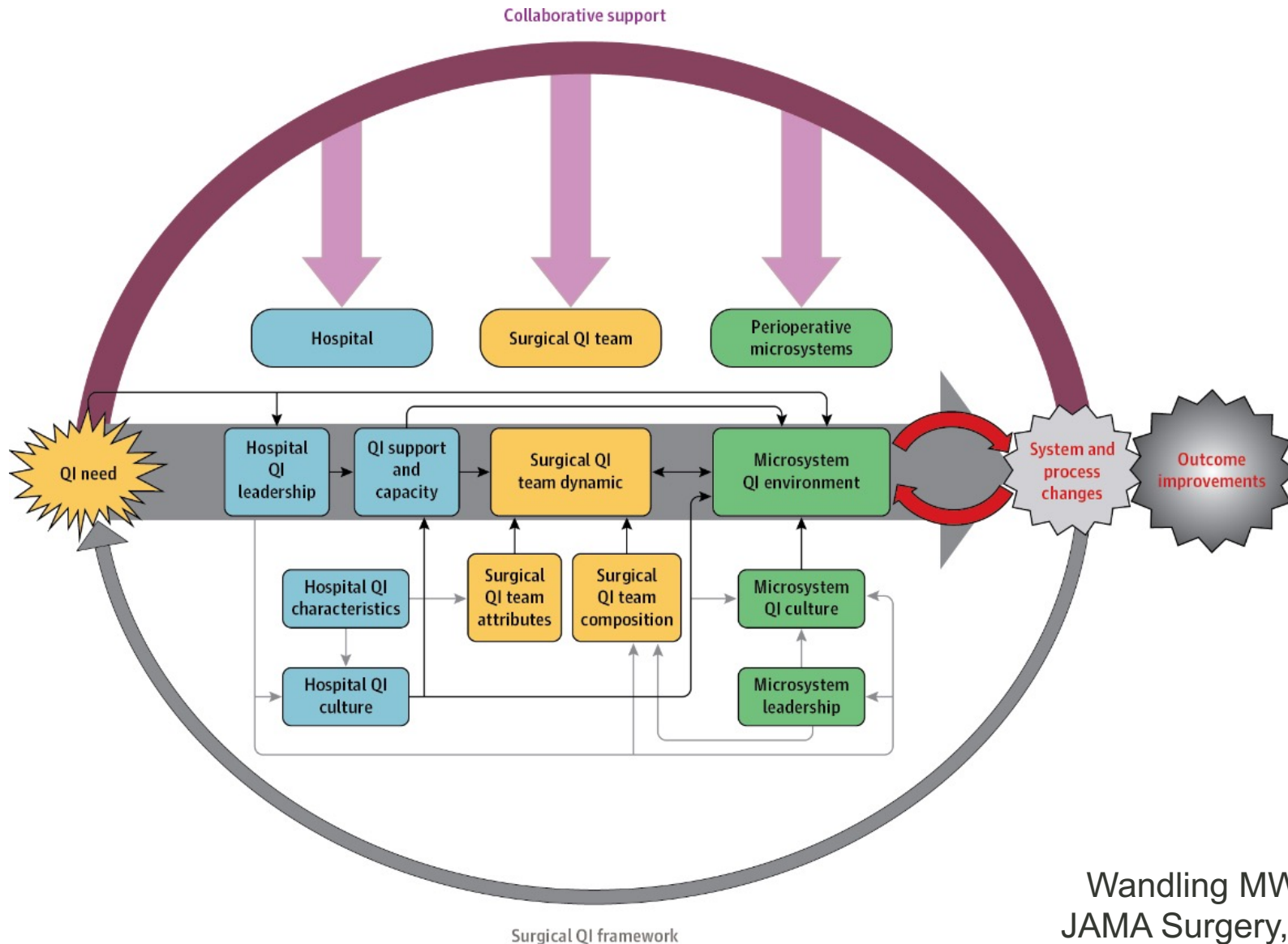
Model for Understanding Success in Quality (MUSIQ)

Kaplan, HC et al. BMJ Qual Saf, 2011.

QIC Models



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Wandling MW et al.
JAMA Surgery, 2016.

EVALUATE

ADJUST

DISSEMINATE

In a learning
health care system,
research influences
practice and
practice influences
research.

IMPLEMENT

**INTERNAL AND
EXTERNAL SCAN**

DESIGN

Internal

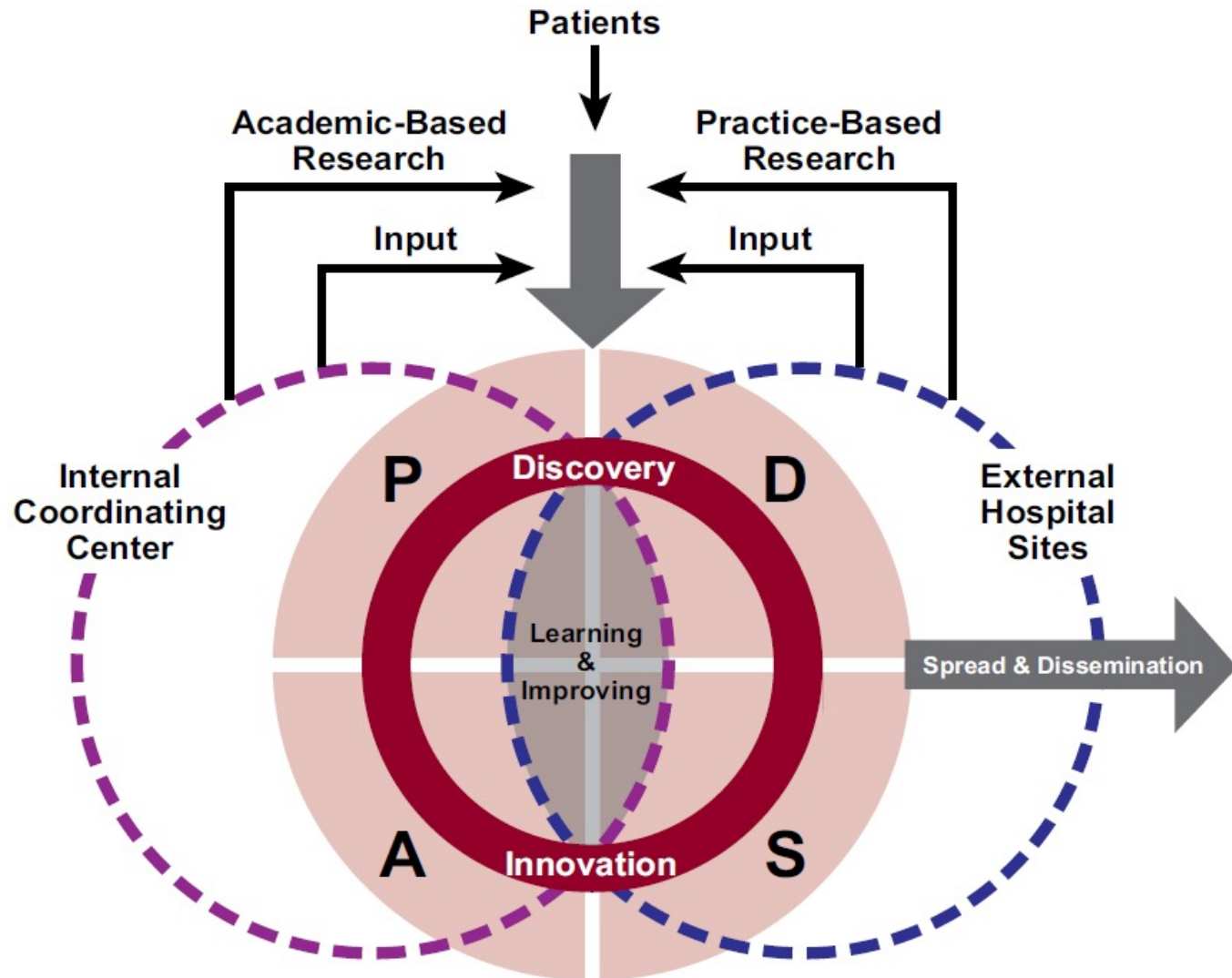
External



MSQC LHS Model



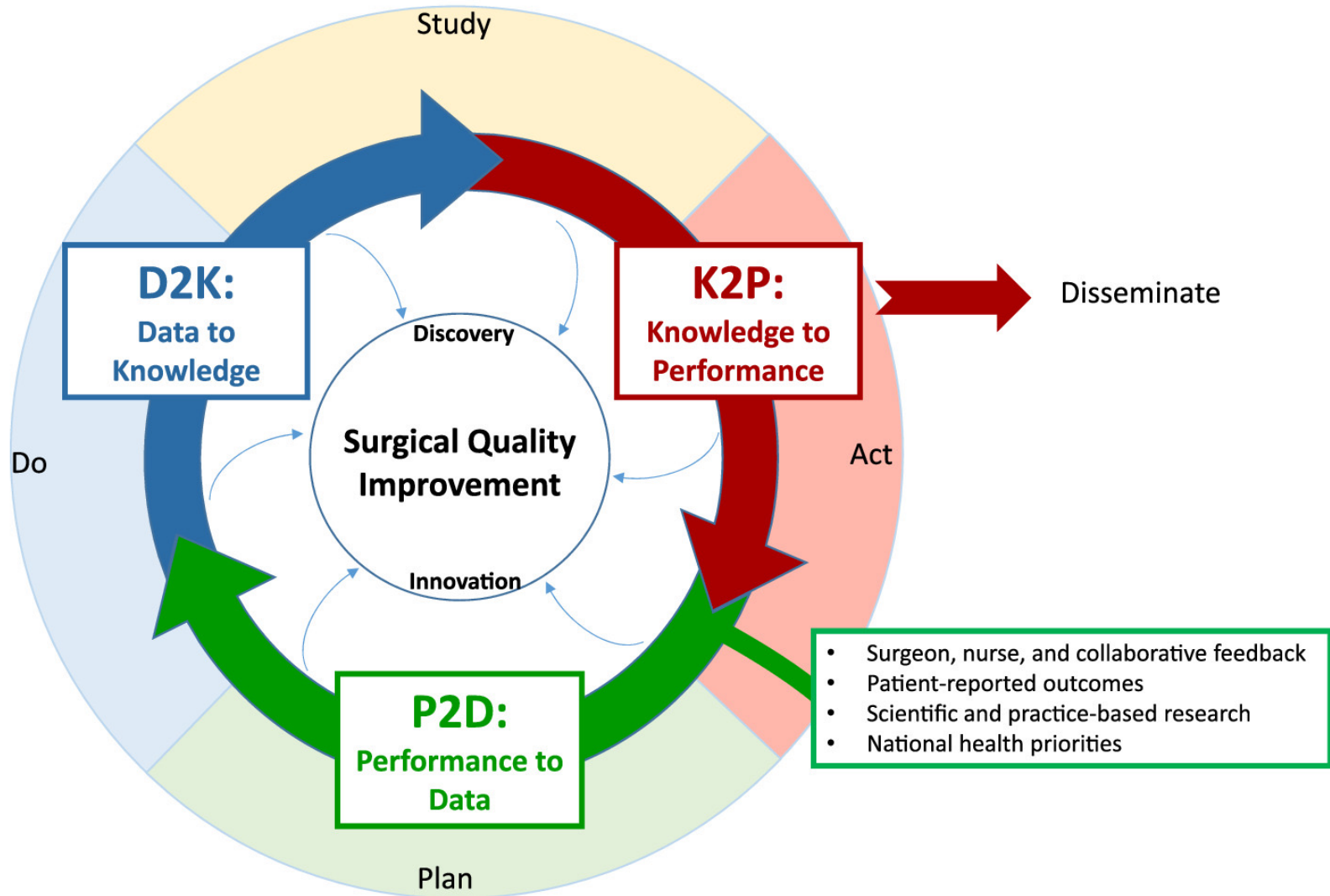
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MSQC LHS Model



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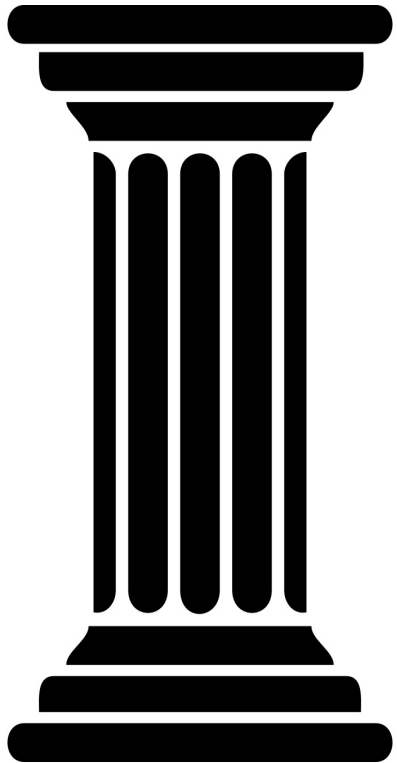
CQI

Key Pillars of CQI

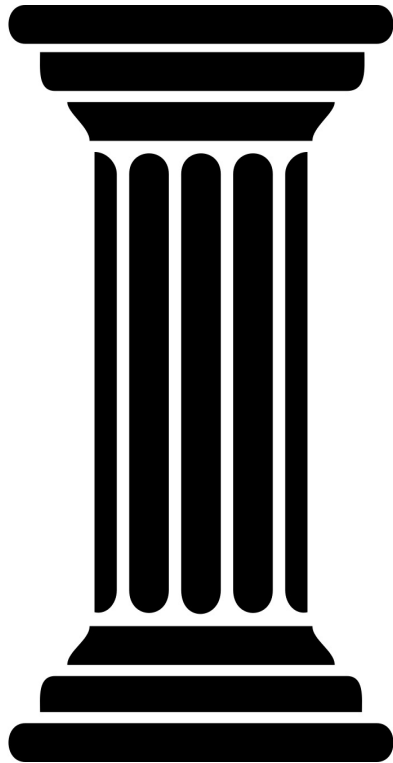


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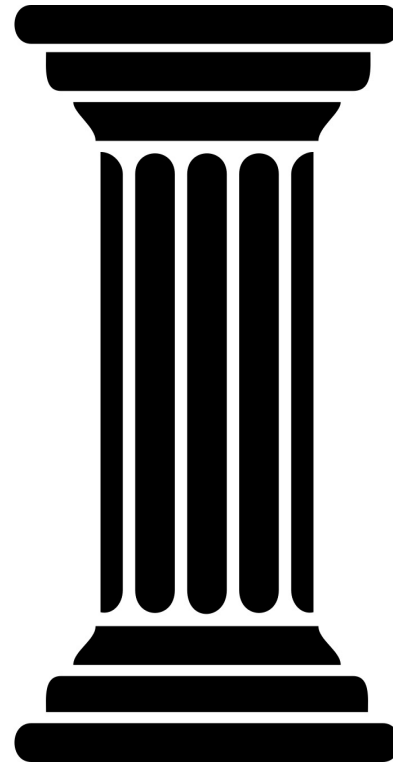
Continuous Quality Improvement



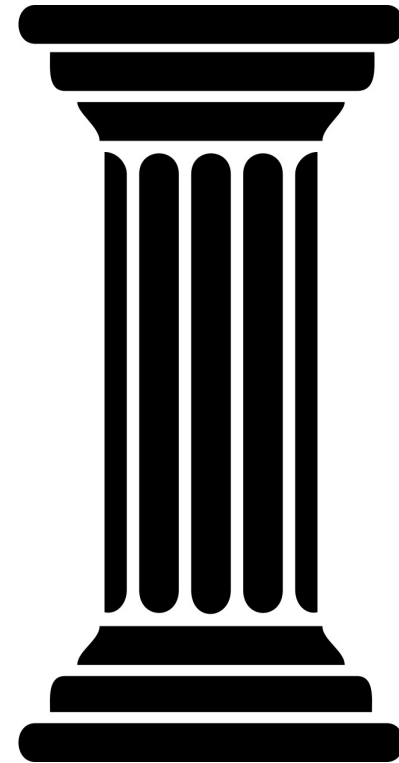
**Verifying
performance
through external
peer review**



**Collecting
data to
measure
performance**



**Building
infrastructure**



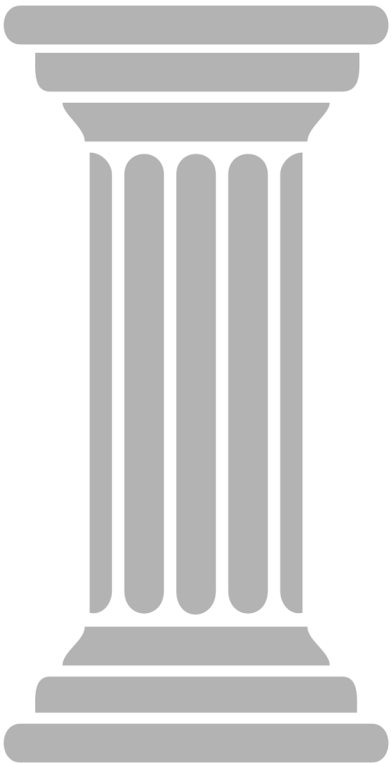
**Setting
standards to
guide practice**

Key Pillars of CQI

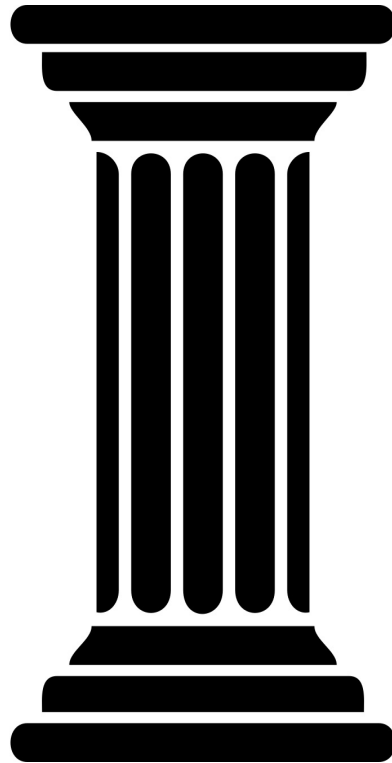


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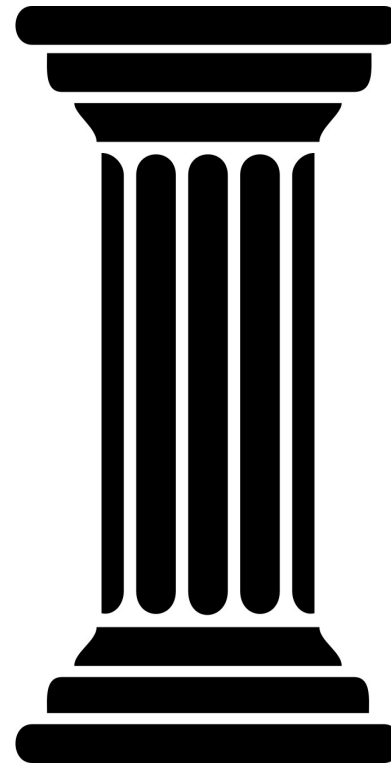
Continuous Quality Improvement



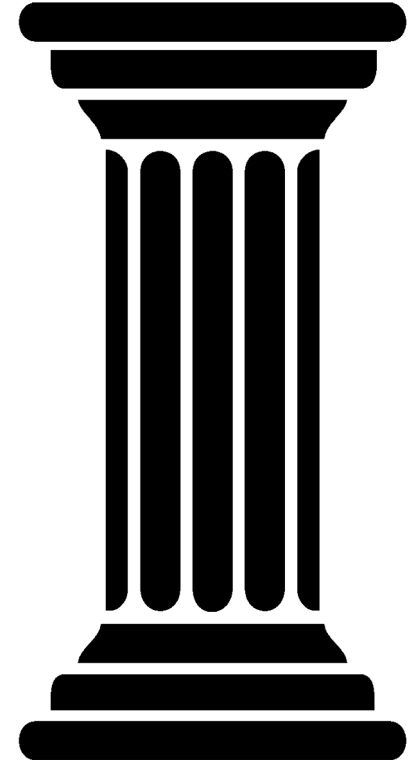
**Verifying
performance
through external
peer review**



**Collecting
data to
measure
performance**



**Building
infrastructure**



**Setting
standards to
guide practice**

ACS Quality Improvement Programs



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ACS
NSQIP®



"Red
Book"

The ACS
Quality Verification
Program

ACS
THRIVE—
Achieving Value-Based Surgery

Cancer
PROGRAMS
AMERICAN COLLEGE OF SURGEONS

Commission
on Cancer®

Children's Surgery
Verification™
QUALITY IMPROVEMENT
PROGRAM

ACS
NSQIP
PEDIATRIC

Geriatric
Surgery Verification
QUALITY IMPROVEMENT PROGRAM

MBSAQIP®
METABOLIC AND BARIATRIC
SURGERY ACCREDITATION AND QUALITY
IMPROVEMENT PROGRAM

TRAUMA
PROGRAMS
AMERICAN COLLEGE OF SURGEONS

STOP
THE BLEED™

SSR™
SURGEON
SPECIFIC
REGISTRY

ACS COVID-19
Registry

NAPBC®
NATIONAL ACCREDITATION PROGRAM
FOR BREAST CENTERS

Commission on Cancer®
National Accreditation
Program for Rectal Cancer

STRONG
for SURGERY

IMPROVING
SURGICAL
CARE and
RECOVERY

Currently in development: Emergency General Surgery Verification; High Risk Gastrointestinal Surgery Verification; Rural Surgery Verification; Thoracic Surgery Verification; and Vascular Verification

ACS Quality Verification Program



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The ACS
Quality Verification
Program™

A QUALITY PROGRAM
of the AMERICAN COLLEGE
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NSQIP®



The ACS
Quality Verification
Program™

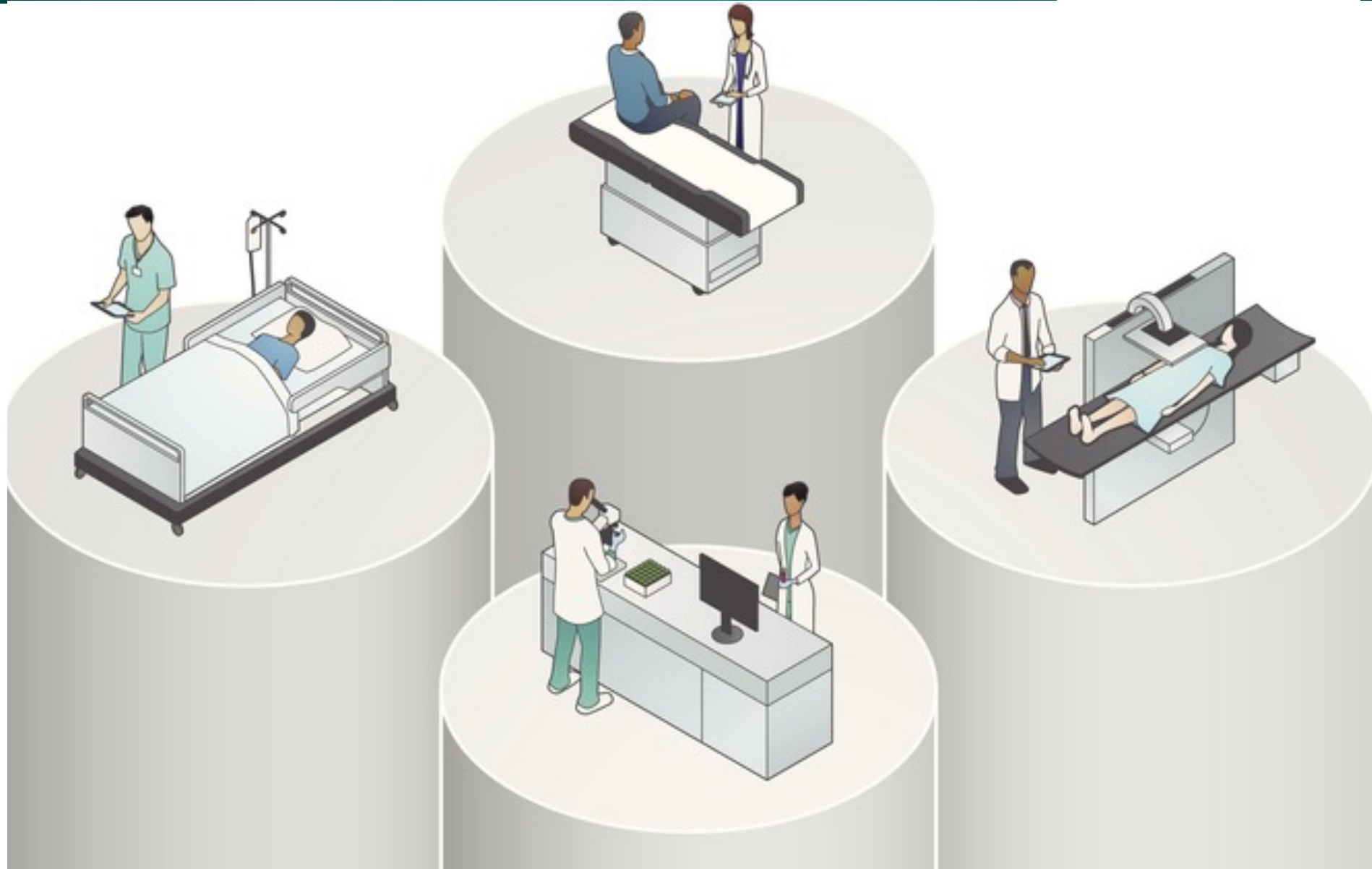
Verifying Quality Across All Surgical Specialties

The ACS Quality Verification Program™ (ACS QVP) provides a proven, standardized method for establishing, measuring, and improving your hospital's quality infrastructure across all surgical departments.

QVP to Bridge Healthcare Silos



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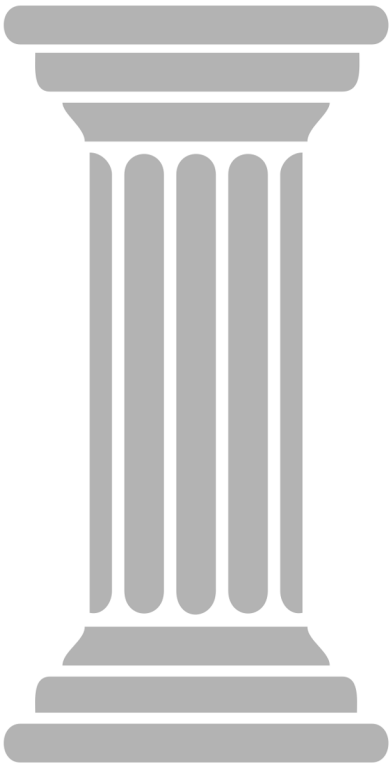


Key Pillars of CQI



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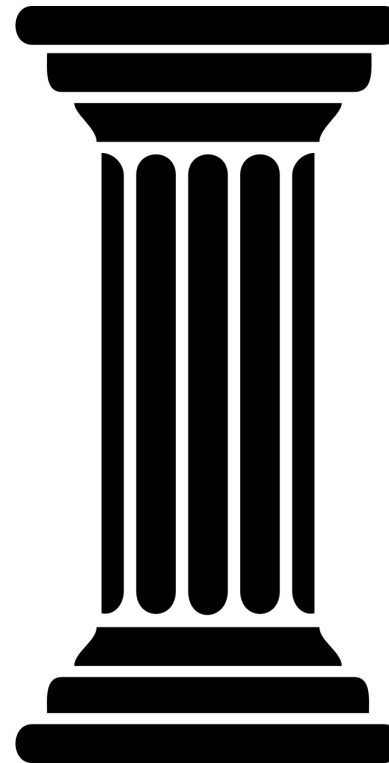
Continuous Quality Improvement



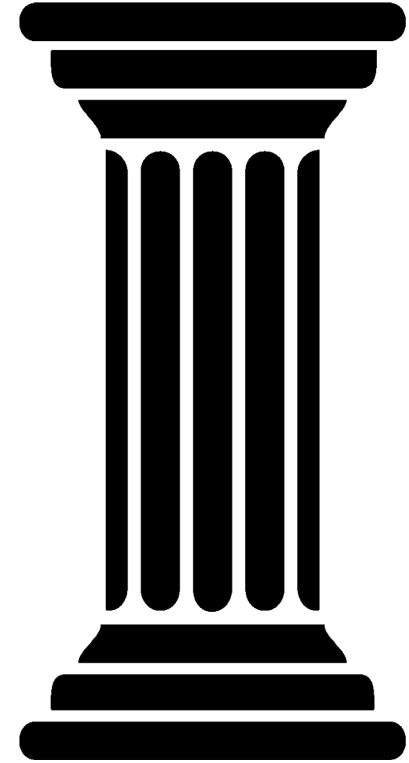
**Verifying
performance
through external
peer review**



**Collecting
data to
measure
performance**



**Building
infrastructure**

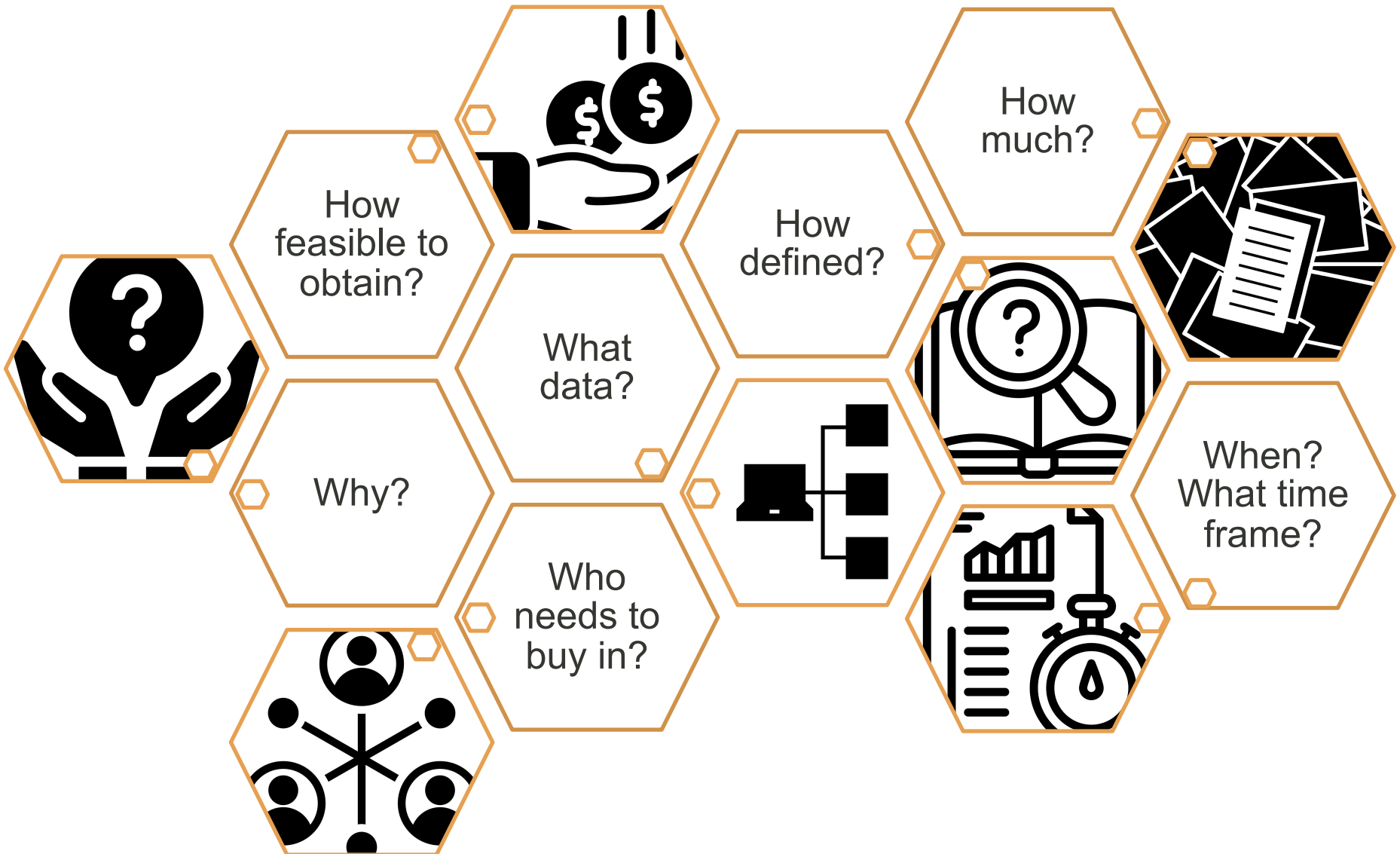


**Setting
standards to
guide practice**

Data Considerations



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TQIP Annual Conference

Save the Date: December 11-13, 2022 | Phoenix, AZ



NSIQP: A Game Changer



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The NSQIP: A new frontier in surgery

Shukri F. Khuri MD, Boston, Mass

From the VA Boston Healthcare System, Brigham and Women's Hospital, and Harvard Medical School

Editors' note: The NSQIP platform is a vital piece of the structure of the Michigan, Washington, and American College of Surgeons quality utilization plans. Dr. Khuri's essay on NSQIP provides the basis for its development and use.

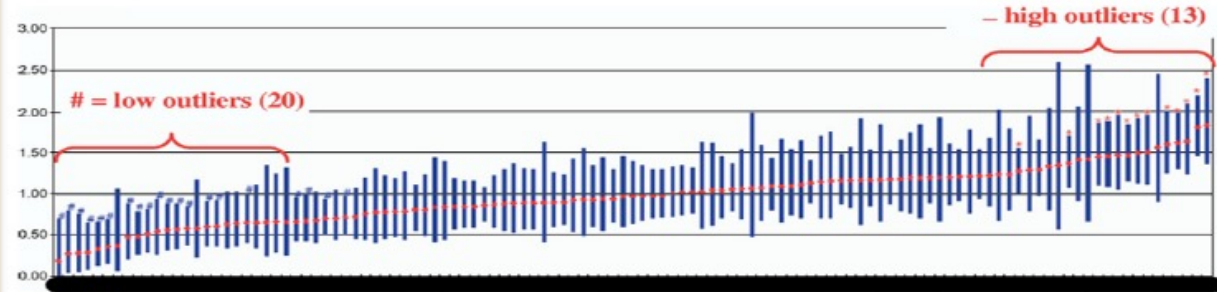
The National Surgical Quality Improvement Program (NSQIP), which was started in the Department of Veterans Affairs (VA) in 1994 and is now expanded into the private sector through the efforts of the American College of Surgeons (ACS), is the first national validated, outcome-based, risk-adjusted, peer-controlled program for the measurement and enhancement of the quality of surgical care.¹ This communication is an update on the NSQIP, its accomplishments in the VA system, and its promise for the private sector and the future of surgery. It underscores the potential impact of this program on our specialty, particularly at a time when regulatory organizations are clamoring to performance standards for hospitals and surgeons, and both employer and consumer groups are calling for transparency in the comparative public reporting of processes and outcomes of surgical care.

THE NSQIP AND THE VA

Following a Congressional law (PL 99-166) that mandated that the VA report its surgical outcomes "in comparison to the national average" and "risk-adjusted for the severity of patient illness," the VA undertook in 1991 a large 44-hospital prospective study, the National Surgical Risk Study, which developed various models for the prediction of surgical outcomes and validated the use of risk-adjusted outcomes as measures of quality of surgical care.^{2,4} Based on the results of this study, the NSQIP was established in 1994 in all 133 major VA surgical

centers. The distinctive feature of the program is a dedicated clinical nurse reviewer at each medical center who prospectively collects patient preoperative, intraoperative, and 30-day outcome data. The data collection methodology is standardized, and its reliability is periodically ascertained. Major operations performed under general, spinal, or epidural anesthesia are included in the database. At low-volume centers, all eligible operations are included. To eliminate sampling bias at higher volume centers, the first 36 consecutive eligible operations are entered in each 84-day cycle, beginning with a different day of the week each cycle. Data are transmitted electronically to a data coordination/analysis center, which generates, on a periodic basis, observed/expected (O/E) ratios for 30-day mortality and morbidity for all operations in a hospital and for each of eight major surgical specialties (Fig 1). The NSQIP has validated that a significantly low O/E ratio is indicative of relatively superior quality of care, while a significantly high O/E ratio is indicative of relatively inferior quality of care.⁵ Periodic comparative reports are produced, and surgical identity of each hospital by a code, and surgical providers and managers at each hospital are made aware of only their own hospital code. These reports show the O/E ratios for all hospitals and provide a wealth of other comparative data that aid hospital managers and care providers in identifying strengths and processes of care that need to be improved at the local level. The NSQIP also provides self-assessment tools and conducts advisory site visits, at the local level. The NSQIP also provides self-assessment tools and conducts advisory site visits, at the local level. The NSQIP also provides self-assessment tools and conducts advisory site visits, at the local level.

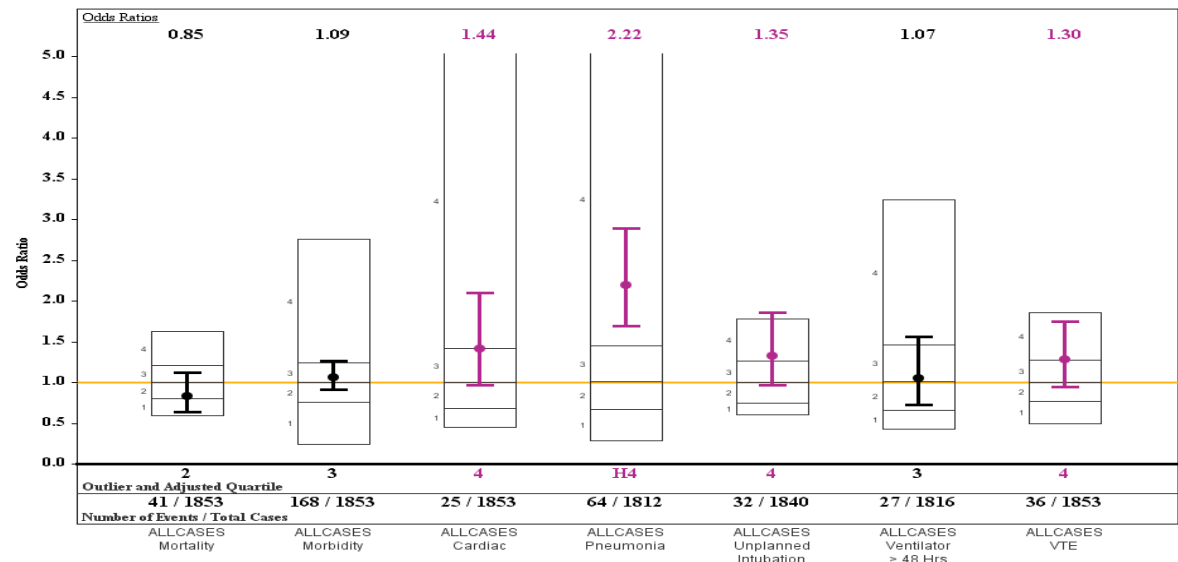
Since the inception of the program in the VA in 1991, the 30-day mortality rate after major surgery has decreased by 31%, and the 30-day morbidity rate by 45% (Fig 2). The program has underscored the importance of system (more than specific providers) as main determinants of outcome and



All Cases

04/01/19 - 03/31/20

Site: 2100

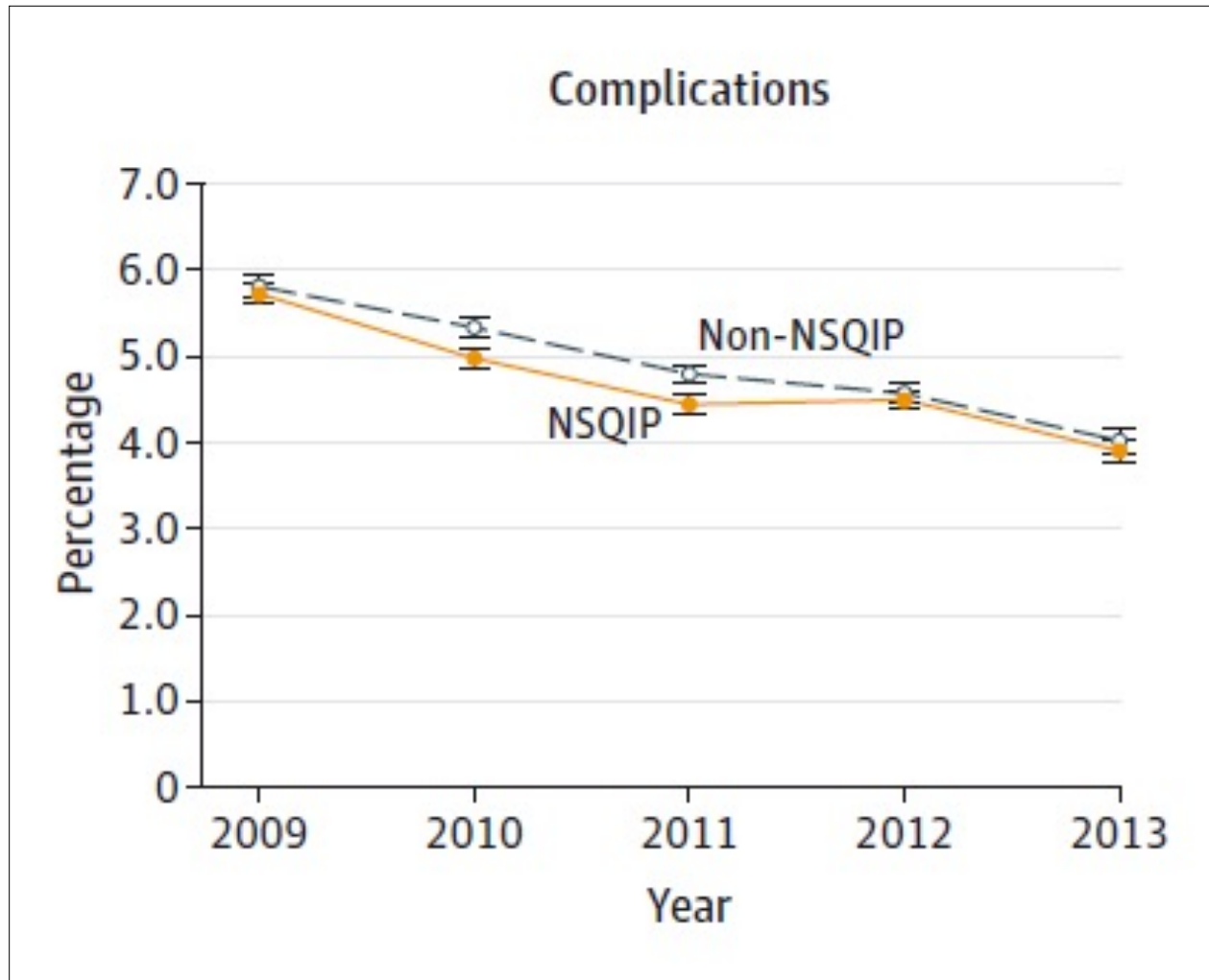


Accepted for publication August 31, 2005.
Reprint requests: Shukri F. Khuri, MD, Chief, Cardiothoracic Surgery (112), VA Boston Healthcare System, 140 VFW Parkway, West Roxbury, MA 02132. E-mail: shukri.khuri@va.gov.
Surgery 2006;150:837-42.
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doi:10.1016/j.surg.2005.08.016

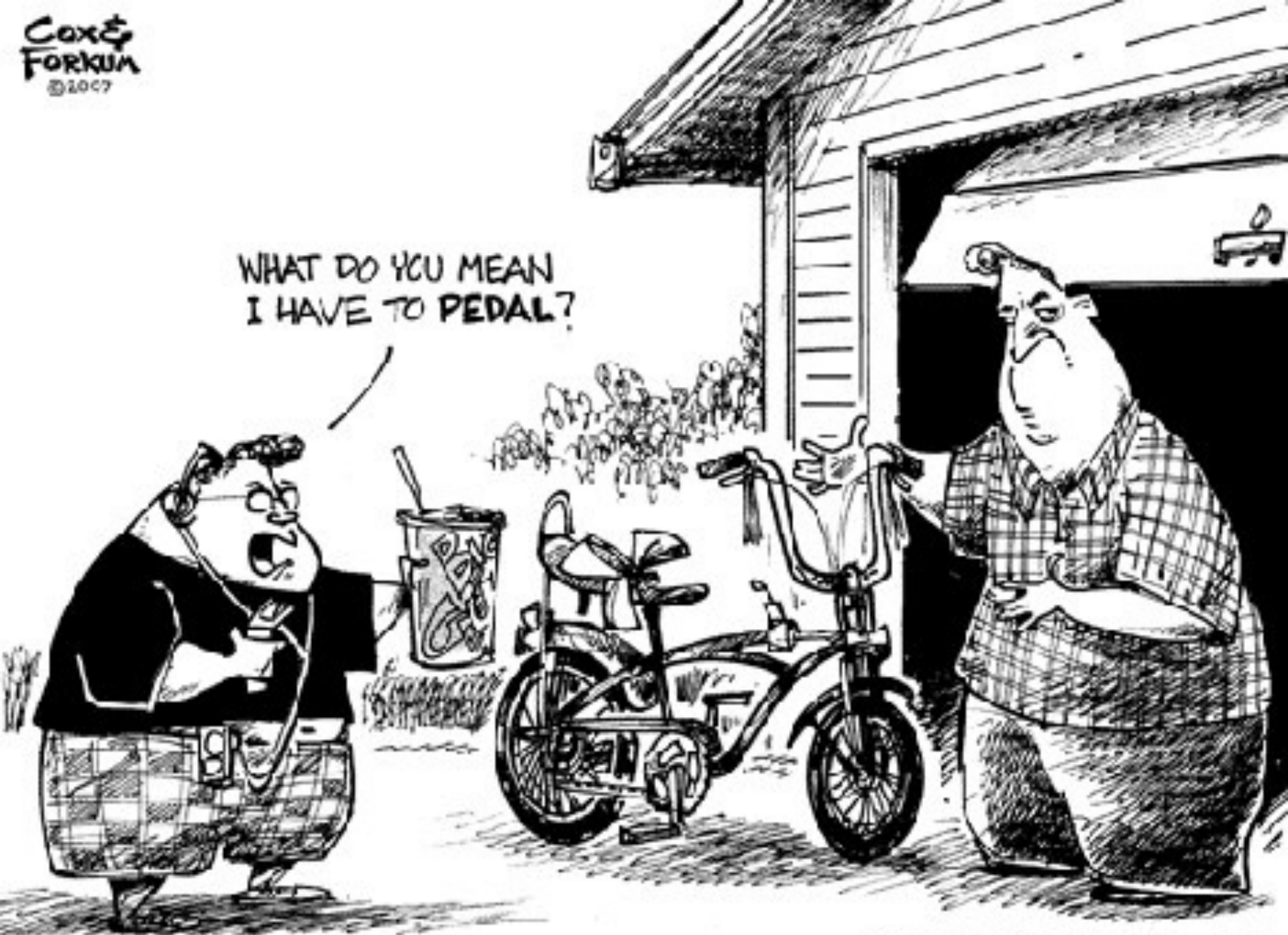
Is NSQIP Enough?



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WHAT DO YOU MEAN
I HAVE TO PEDAL?



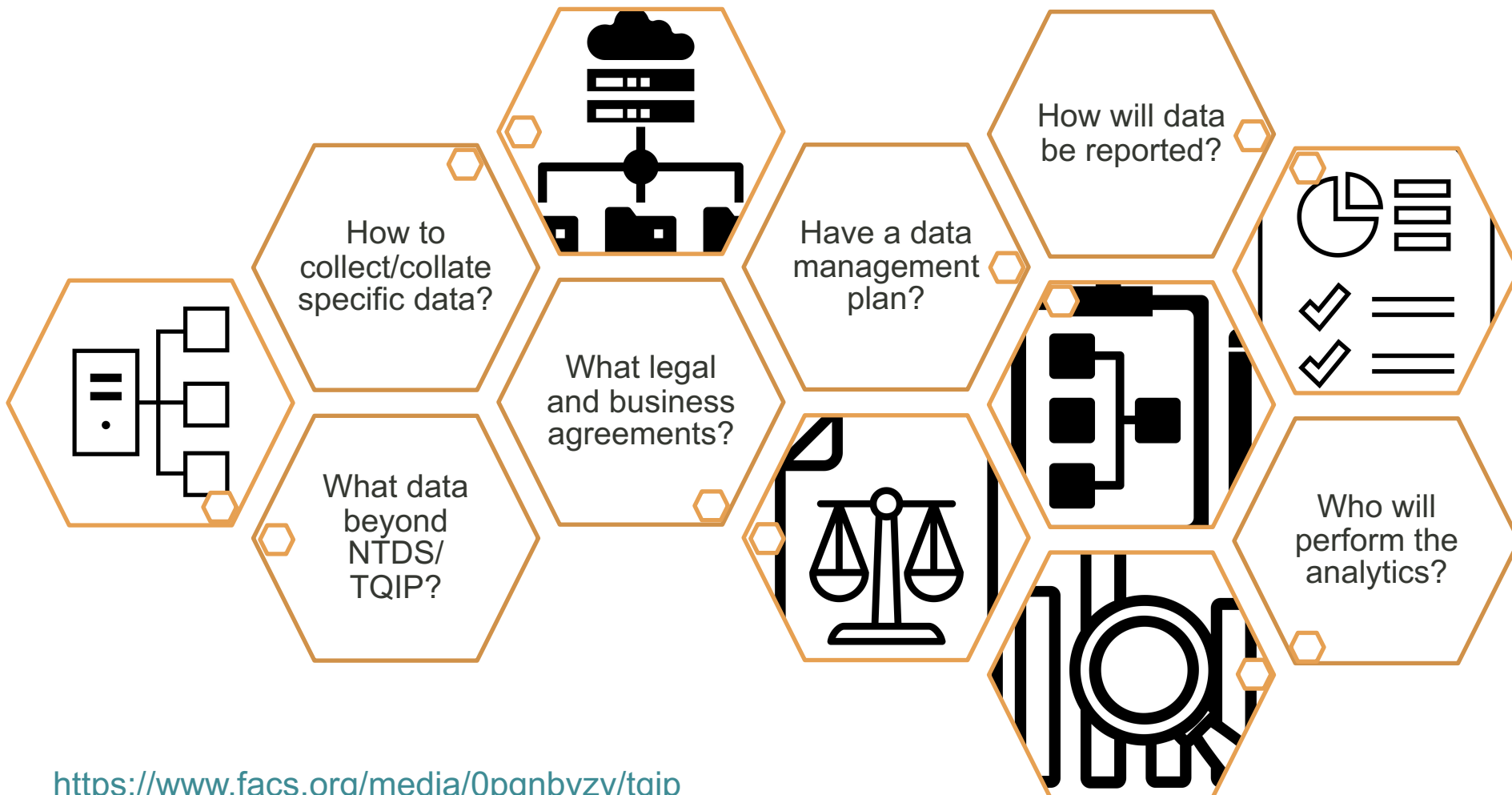


“...take these important studies as prompts, not to decrease investment in the careful analysis and reporting of surgical results but rather to link that information more energetically to processes of learning, skill building, and change within participating hospitals.”

Other Data Considerations



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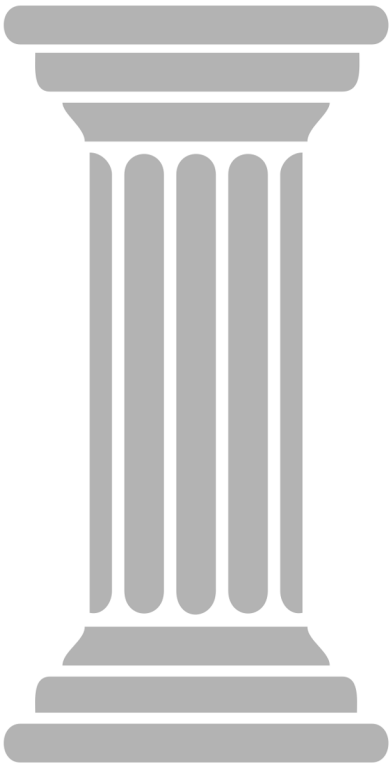
https://www.facs.org/media/0pgnbyzy/tqip_collaborative_toolkit.pdf

Key Pillars of CQI



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Continuous Quality Improvement



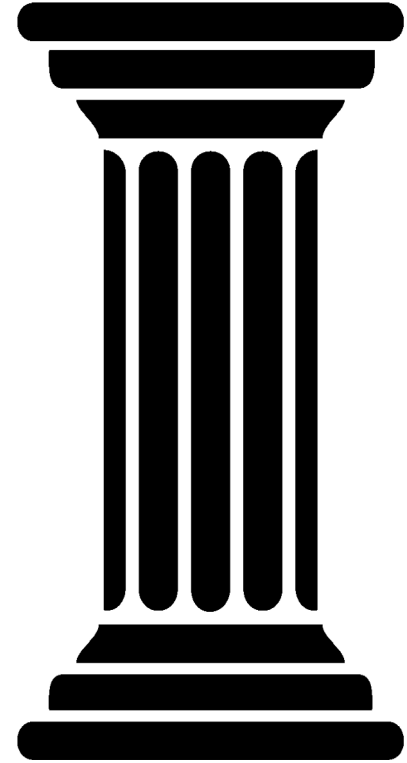
**Verifying
performance
through external
peer review**



**Collecting
data to
measure
performance**

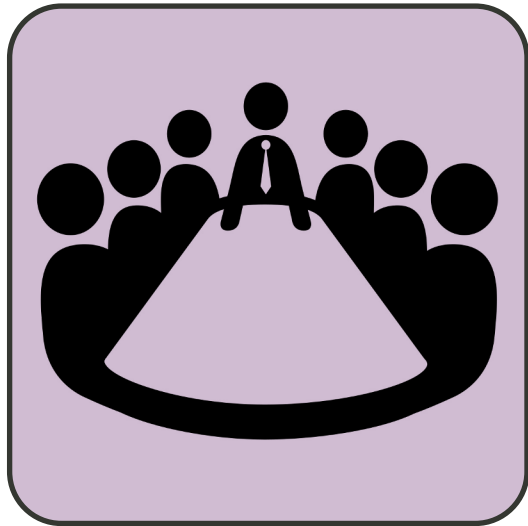


**Building
infrastructure**



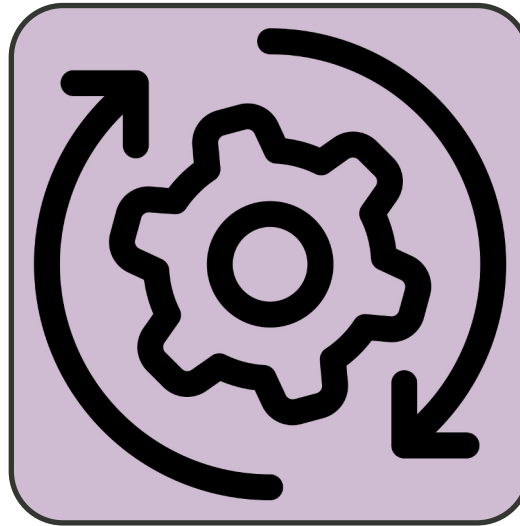
**Setting
standards to
guide practice**

Donabedian Model



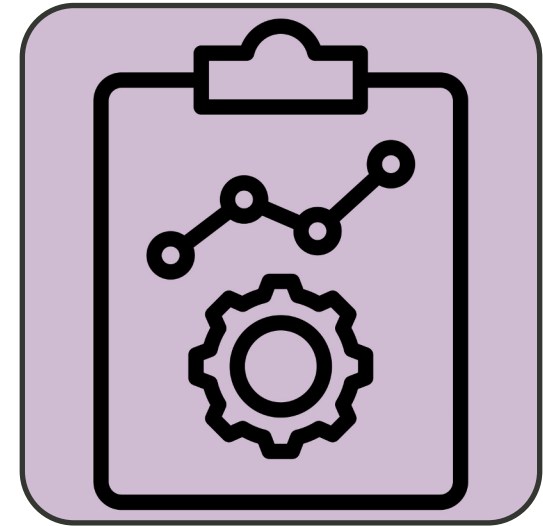
Structure

???



Process

???



Outcomes

Trauma registry
TQIP

QVP Standards: Infrastructure



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Modified QVP Standards: Infrastructure



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Governance

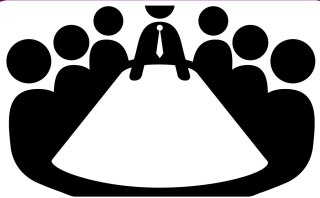


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Advisory Committee

- Group of collaborative participants
- Advises the leadership and serves as a sounding board



Executive Committee

- More formal than an advisory committee
- Votes on action items and determines collaborative leadership



Corporation

- If part of a large hospital or healthcare corporation
- Oversight structure that reports to and through the corporate leadership infrastructure



Government

- Can include collaborative management within their operative infrastructure

Administrative Management

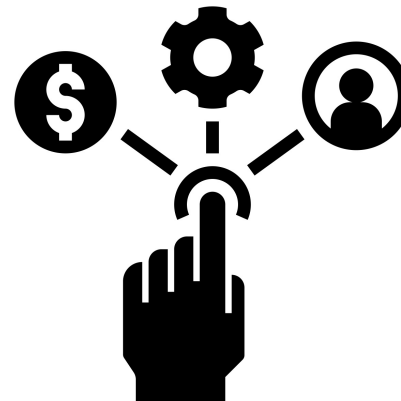
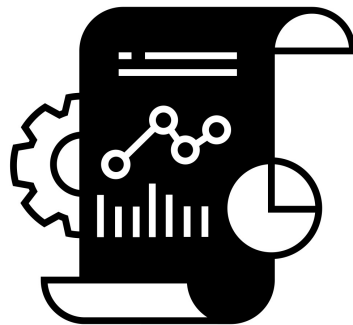
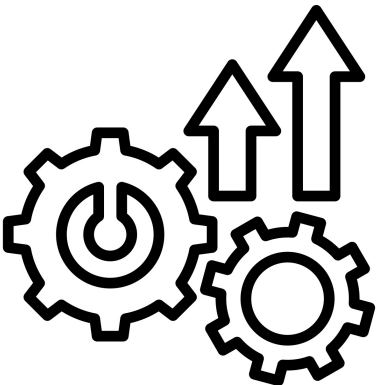
Director

Quality
Improvement

Data
Outcomes &
Analysis

Business
Operations

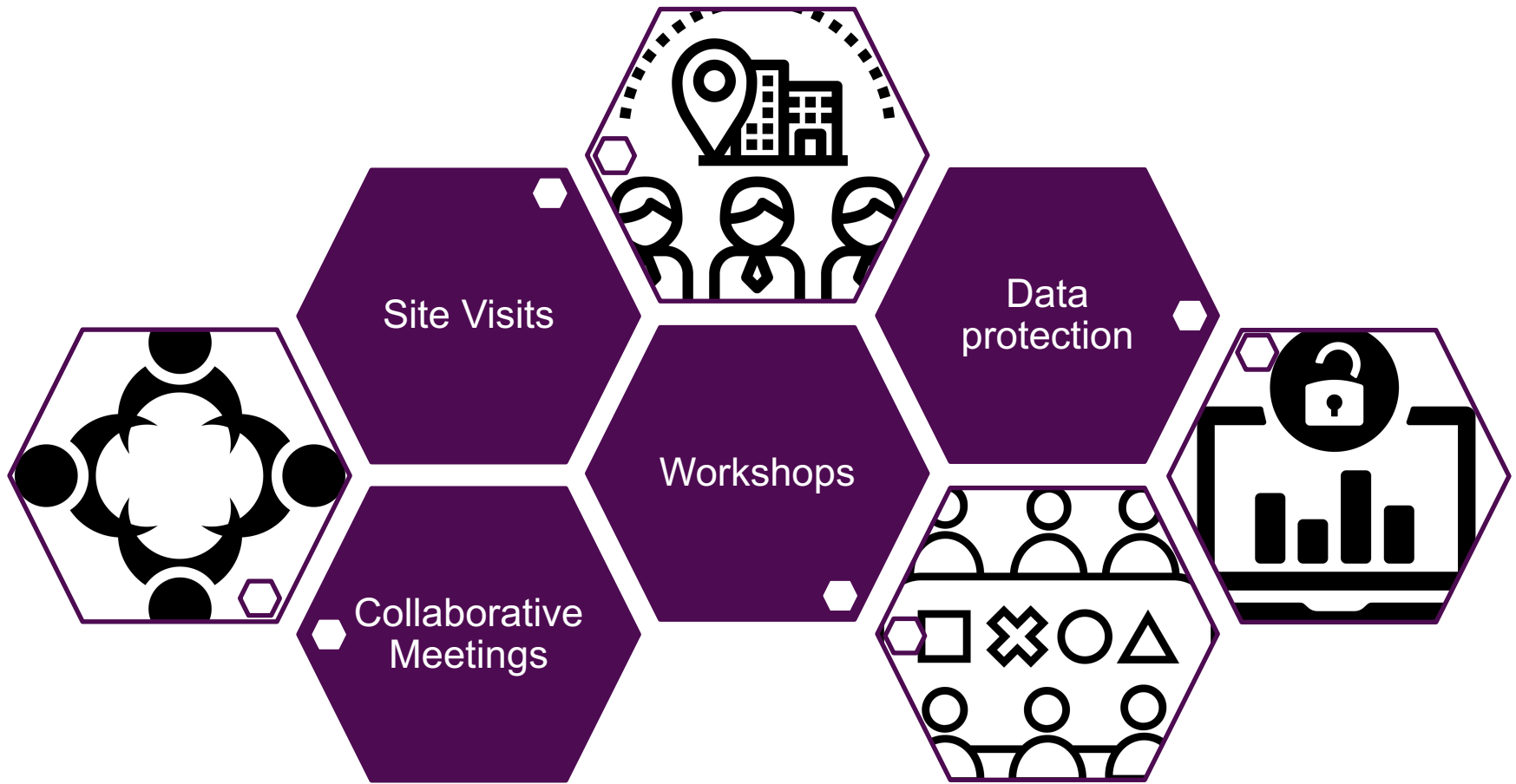
Clinical Site
Coordination



Culture



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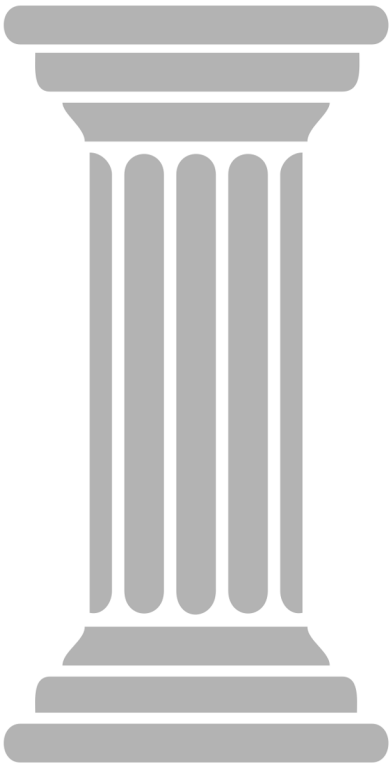


Key Pillars of CQI



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Continuous Quality Improvement



**Verifying
performance
through external
peer review**



**Collecting
data to
measure
performance**



**Building
infrastructure**



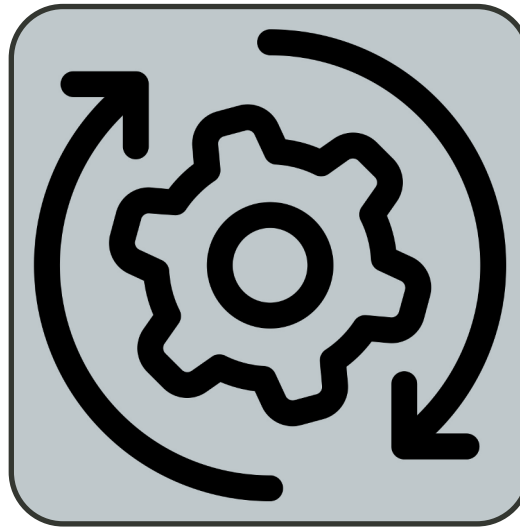
**Setting
standards to
guide practice**

Donabedian Model



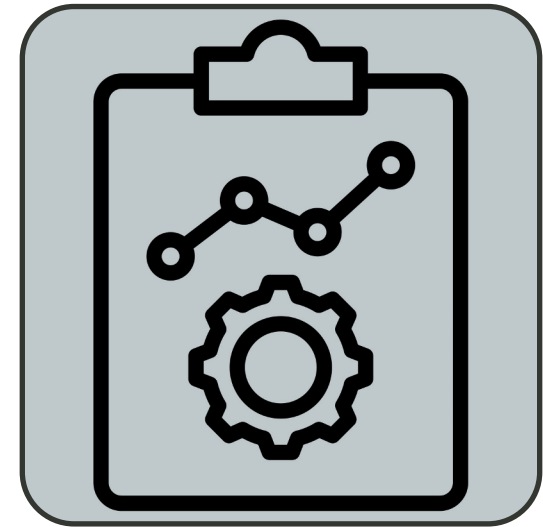
Structure

???



Process

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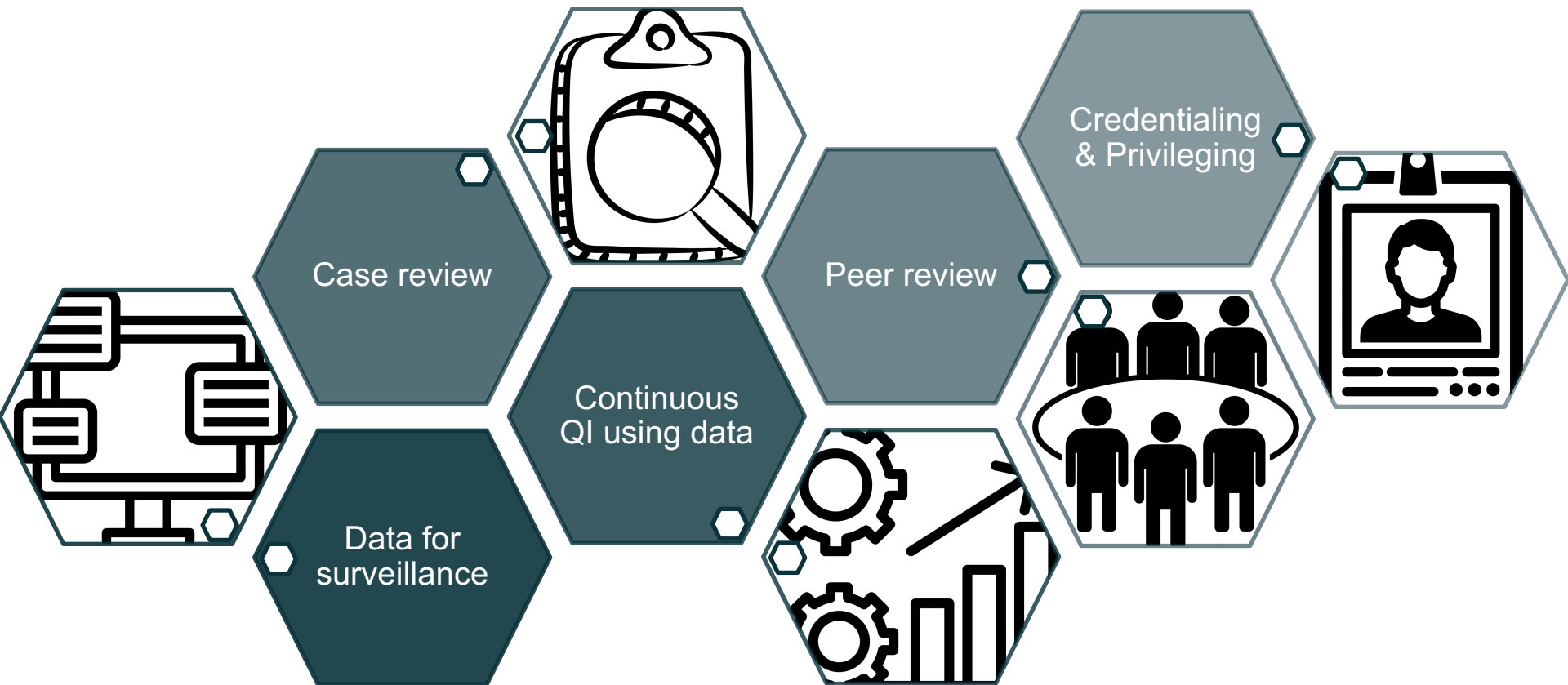
Outcomes

TQIP

QVP Standards: Processes



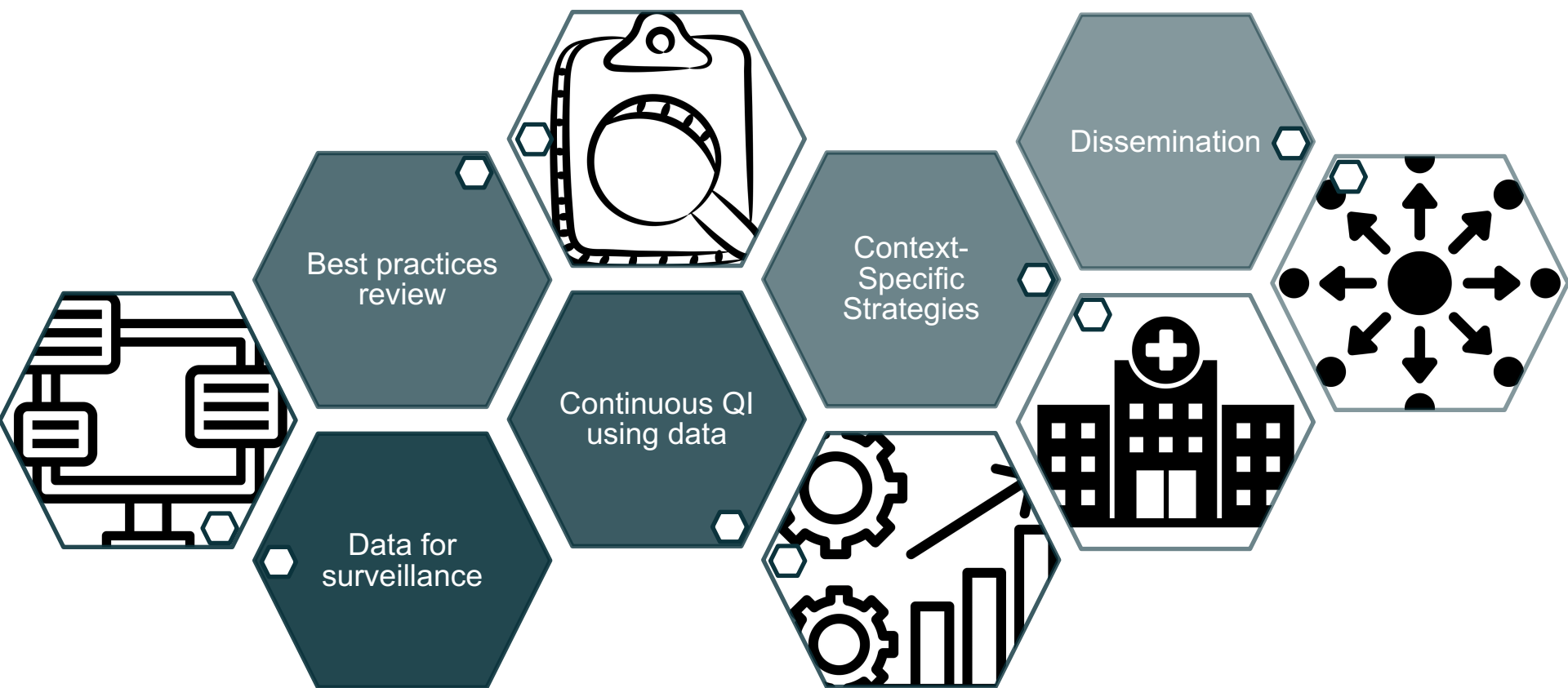
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Modified QVP Standards: Processes



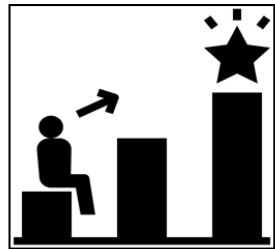
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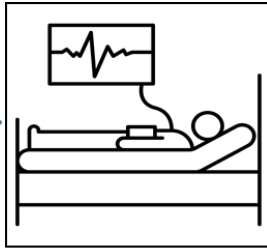
Continuous QI Using Data



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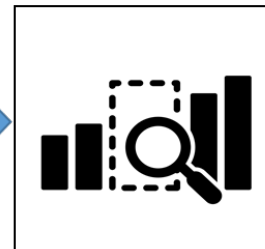
What do we
want to
accomplish?



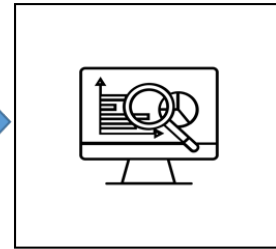
Who cares and
what do they
care about?



What are we
doing now and
how well are we
doing?



What can we do
better?



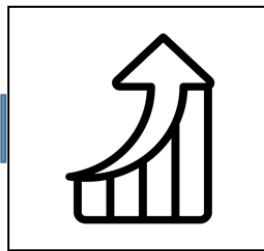
What keeps us
from doing better?



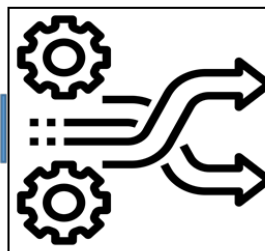
What did we
learn?



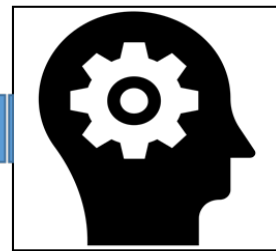
How can we do
it right every
time?



How did we do?



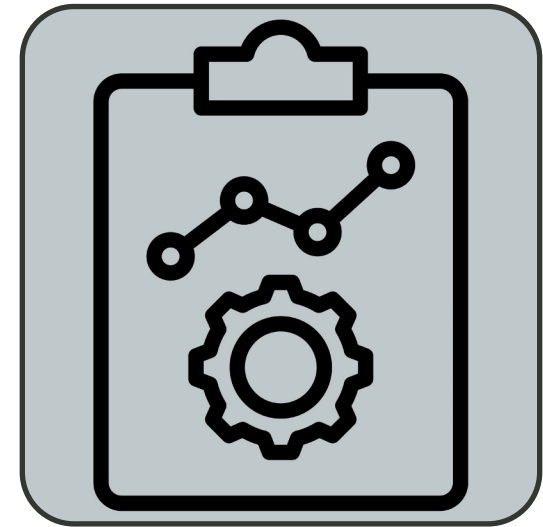
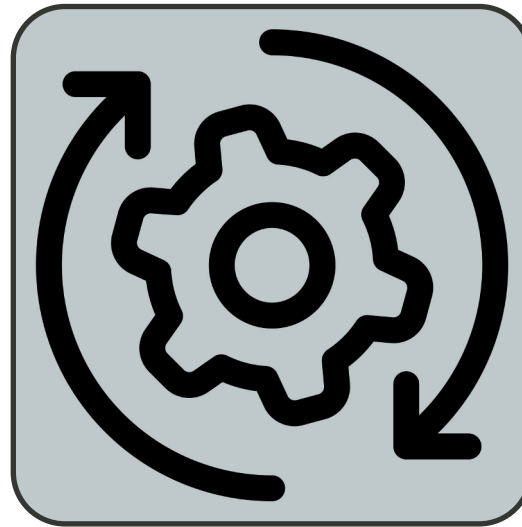
Do it



What changes
could we make
to do better?

Best Practices Review

Davis CH et al. J Am Coll Surg, 2017.



Structure

???

Process

38 infection
control
practices

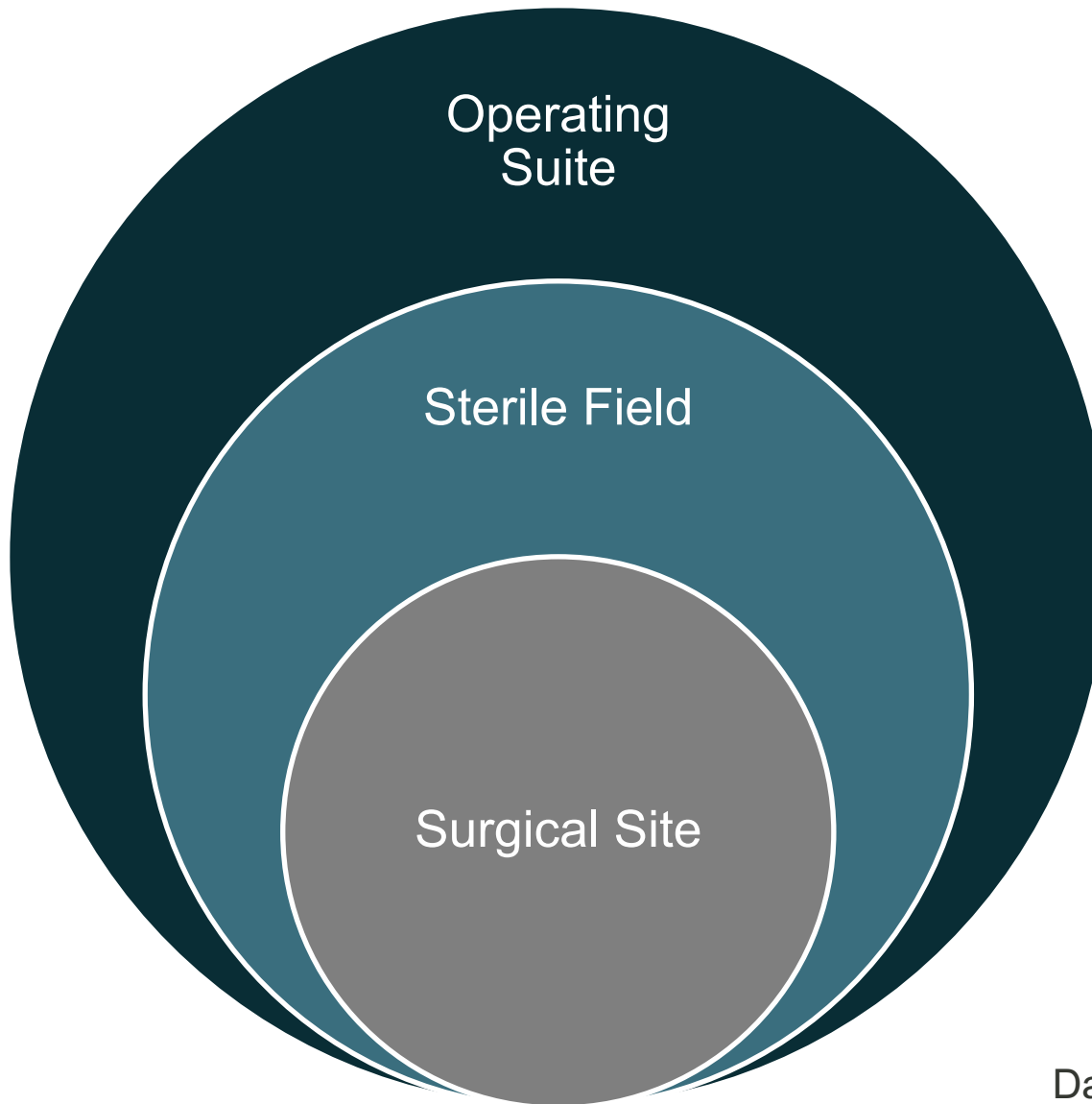
Outcomes

SSIs

Best Practice Review



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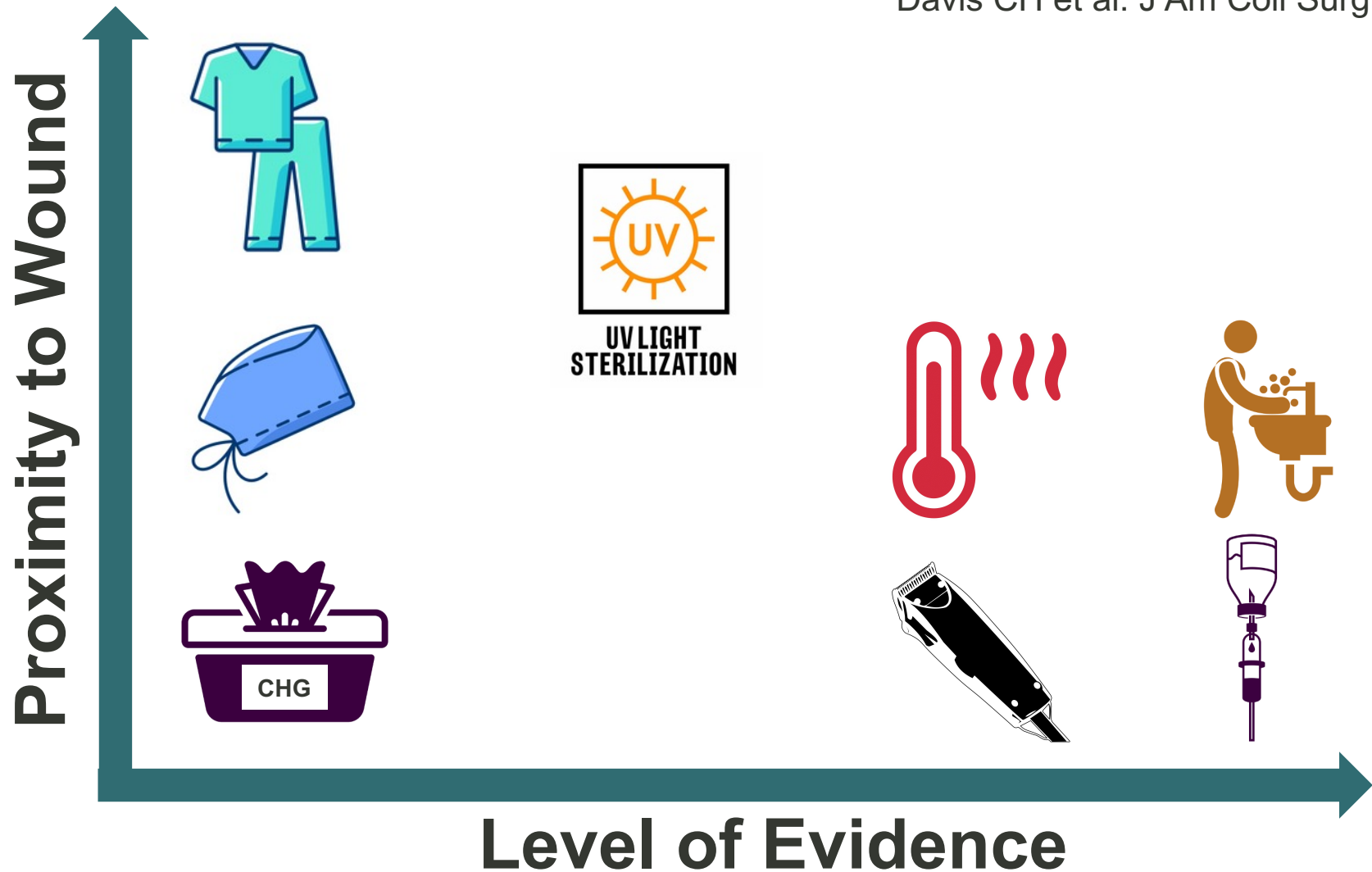
- **Operating Suite**
 - Attire
 - Decontamination strategy (UV system)
- **Sterile Field**
 - Cloth hats
- **Surgical Site**
 - Pre-hospital
 - CHG shower
 - Preop
 - Glucose check
 - Intraop
 - Prophylactic abx

Best Practices Review



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Davis CH et al. J Am Coll Surg, 2017.

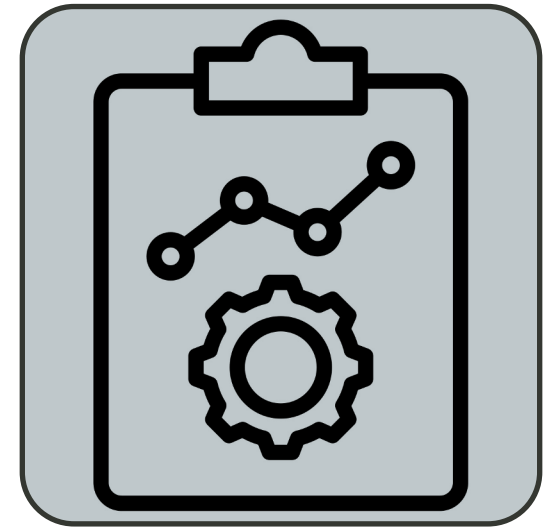
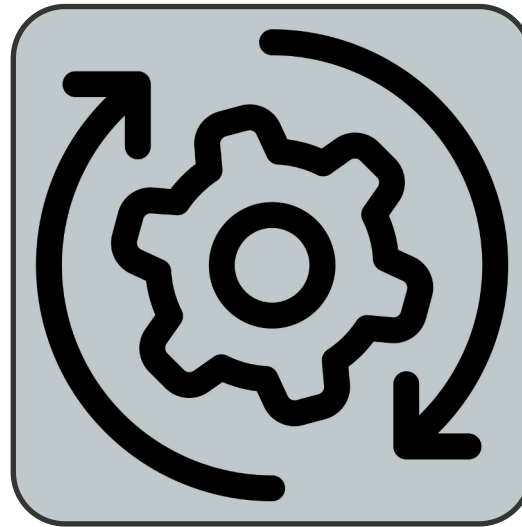


Best Practices Review



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Davis CH et al. J Am Coll Surg, 2017.



Structure

Weekend PT
staffing

Process

VTE
prevention
practices

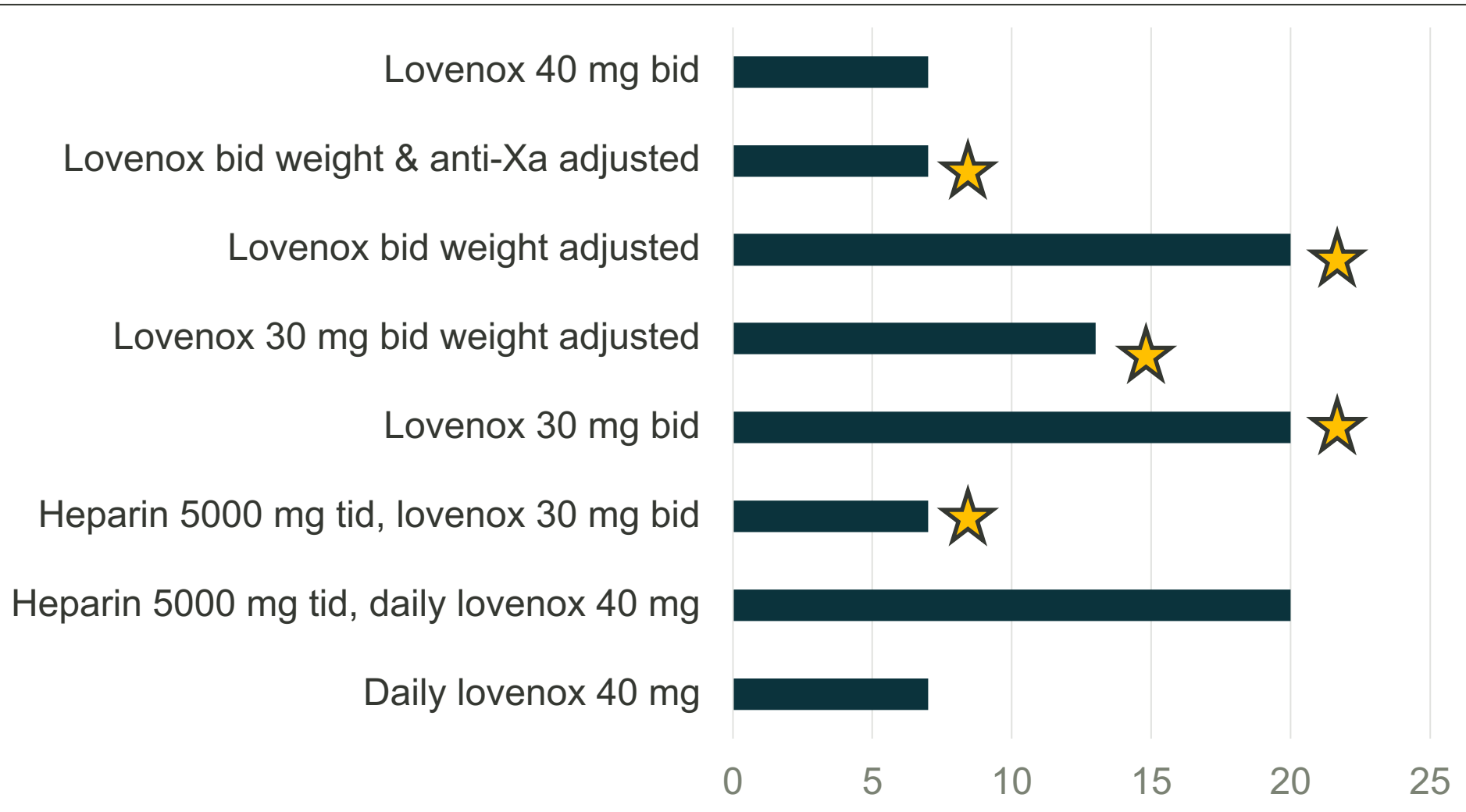
Outcomes

VTE
(TQIP)

Best Practices Review



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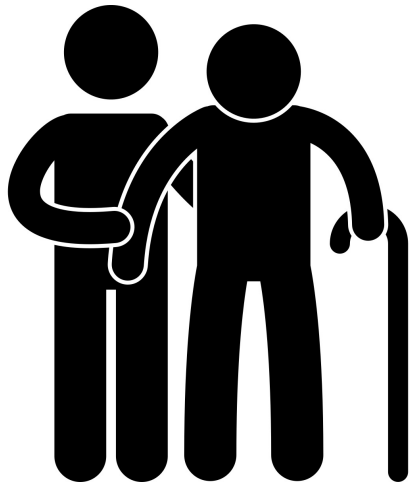
Top performer

Regner JL et al. Am J Surg, 2018.

Best Practices Review



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**Weekend PT/OT
teams**

**Lower DVT rates
(0.4% vs 1.3%)**

**Ambulation
3x/day**

**Lower PE rates
(0.2% vs 0.8%)**

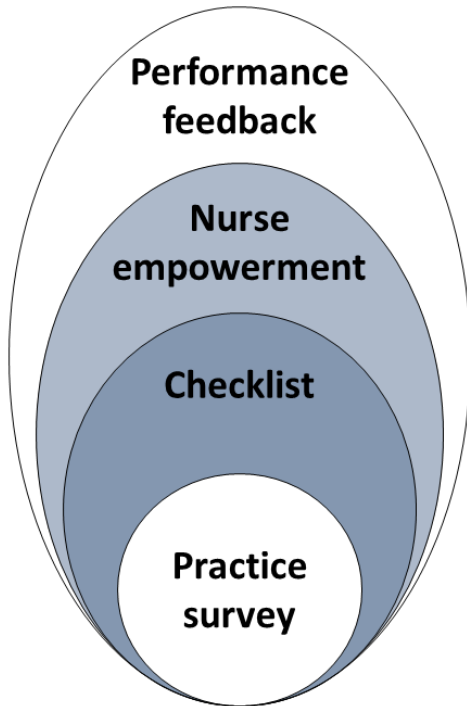


Context-Specific Strategies



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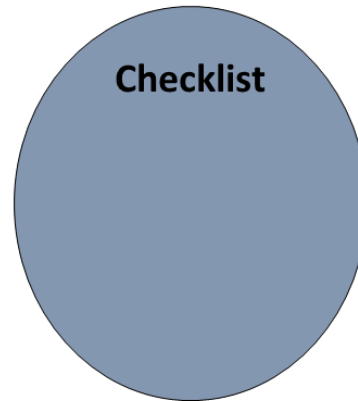
ORIGINAL OR



Context:

1. Enthusiastic leadership (implied)
2. Adequate resource commitment (implied)
3. Responsive system to identify equipment issues (implied)

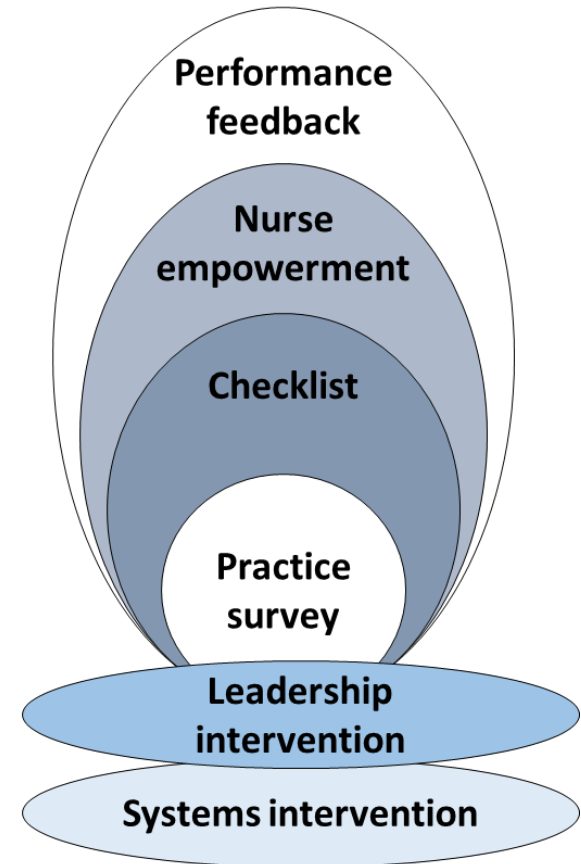
OR A



Context:

1. Performance feedback system in place
2. Nurses already empowered
3. Physicians previously education on bundles
4. Practice surveys ongoing
5. Enthusiastic leadership
6. Adequate resource commitment
7. Response system to identify equipment issues

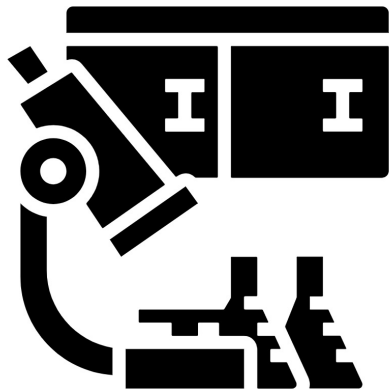
OR B



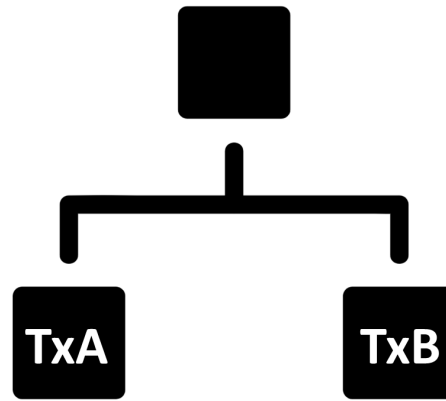
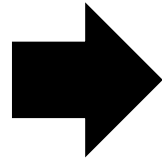
Context:

1. Adequate resource commitment

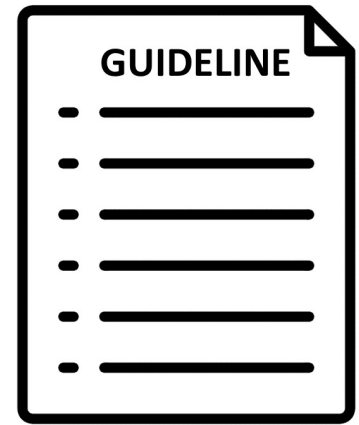
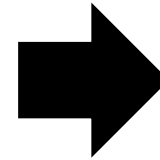
Dissemination




Pre-Intervention



**Efficacy &
Effectiveness
Trials**



**Dissemination
&
Implementation**



17 years (14% of research)

Dissemination



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Targeted
distribution of
information and
intervention
materials to a
specific public
health or clinical
practice audience

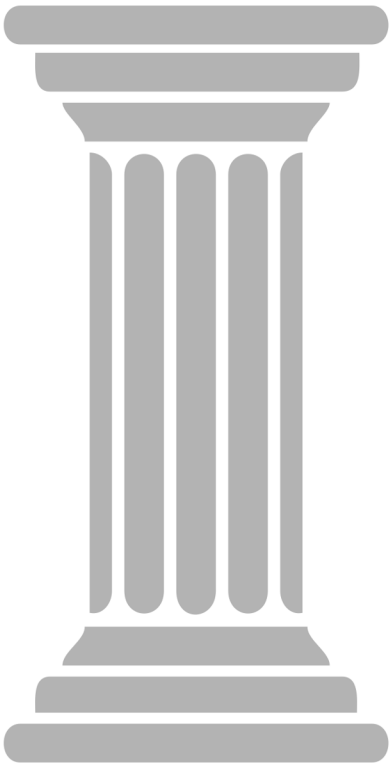


Key Pillars of CQI



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Continuous Quality Improvement



Verifying
performance
through external
peer review



Collecting
data to
measure
performance



Building
infrastructure



Setting
standards to
guide practice



Start Collaborating

For more information, contact :
Lillian S. Kao, MD
Tel: (713) 500-6280
Email: Lillian.S.Kao@uth.tmc.edu



FAQs



How many hospitals are in TASQ?

23 hospitals belong to our network



How often does TASQ meet?

- Quarterly face-to-face meetings (3 regional, 1 national)
- Monthly webinars
- "TASQ Force" conference calls
- Email exchanges



Texas Alliance for Surgical Quality (TASQ)
6431 Fannin Street
MSB 4.264
Houston, Texas 77030

www.?????????.com

TASQ

Texas Alliance for Surgical Quality

Stronger Together

Resources



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A QUALITY PROGRAM
of the AMERICAN COLLEGE
OF SURGEONS

ACS TQIP Collaborative Toolkit

A guide for getting started and maintaining momentum



Implementing a State-Level Quality Improvement Collaborative:

A Resource Guide From the Medicaid Network for Evidence-based Treatment (MEDNET)



AHRQ
Agency for Healthcare Research and Quality
Advancing Excellence in Health Care • www.ahrq.gov

Collaborative Improvement Tool Kit

The MSQC LHS Model



MSQC
Michigan Surgical Quality
Collaborative

Lillian.S.Kao@uth.tmc.edu
@LillianKao1



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**move the
needle**

