Evidence-based HQS Improvement Tools and Methods VPQHC

Kathy Rauch, RN, MSHQS, BSN, CPHQ
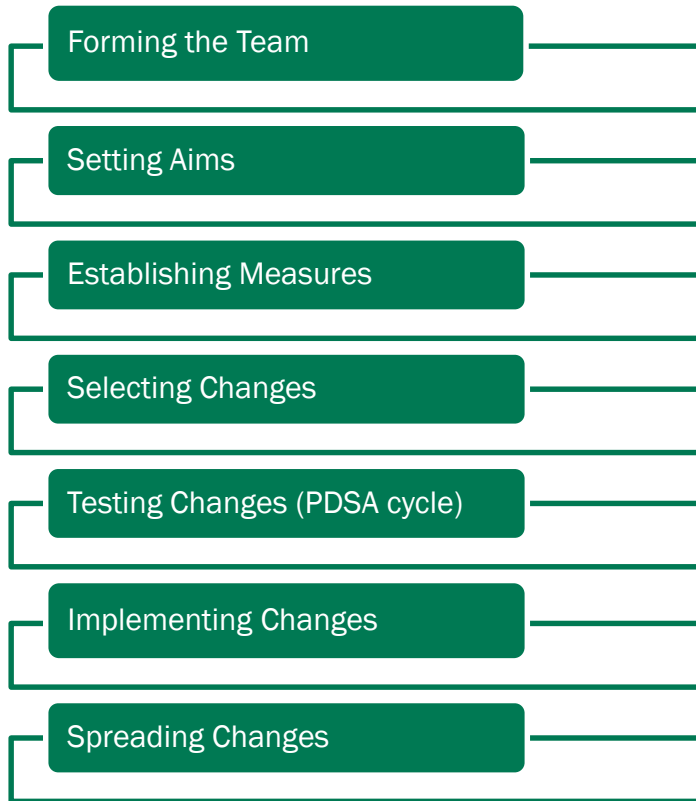## Erin Gretzinger, CPHQ

Session overview

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

- apply the Model for Improvement;

- describe the various types of performance and process improvement approaches;

- explain how to utilize various performance improvement tools; and

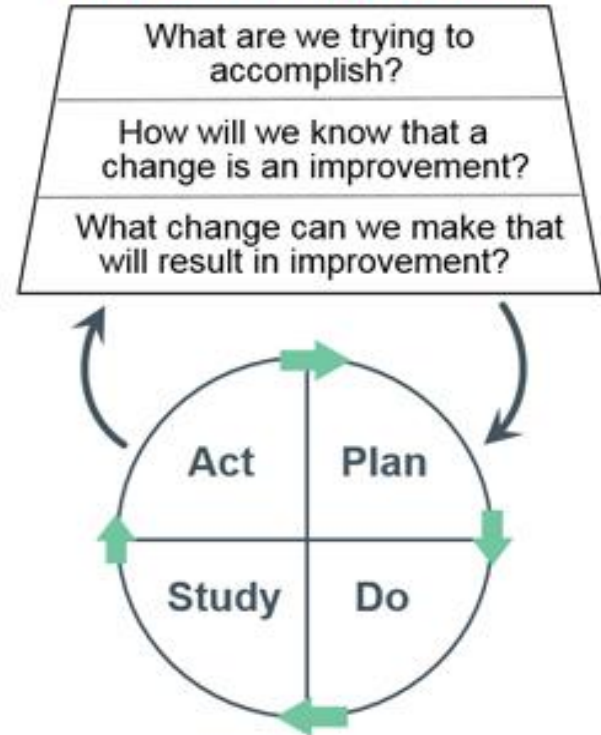- discuss how to monitor performance improvement.

Creating the Foundation

Forming the Team

Setting Aims

Establishing Measures

Selecting Changes

Testing Changes (PDSA cycle)

Implementing Changes

Spreading Changes

Source: Institute of Healthcare Improvement

Model for Improvement

What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?

Act   Plan

Study   Do
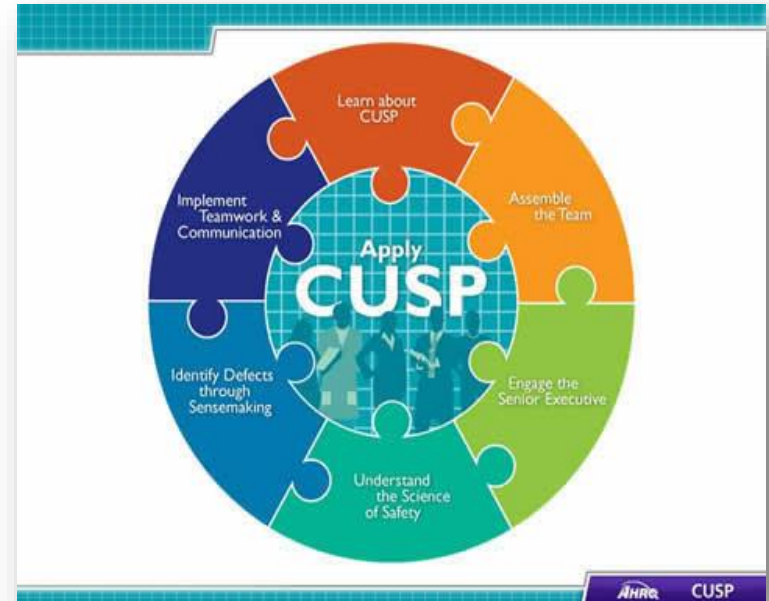
Developed by Associates in Process Improvement

Forming the team

- ## Forming the team
  - Including the right people on a process improvement team is critical to a successful improvement effort.
  - Teams vary in size and composition.
  - Each organization builds teams to suit its own needs.

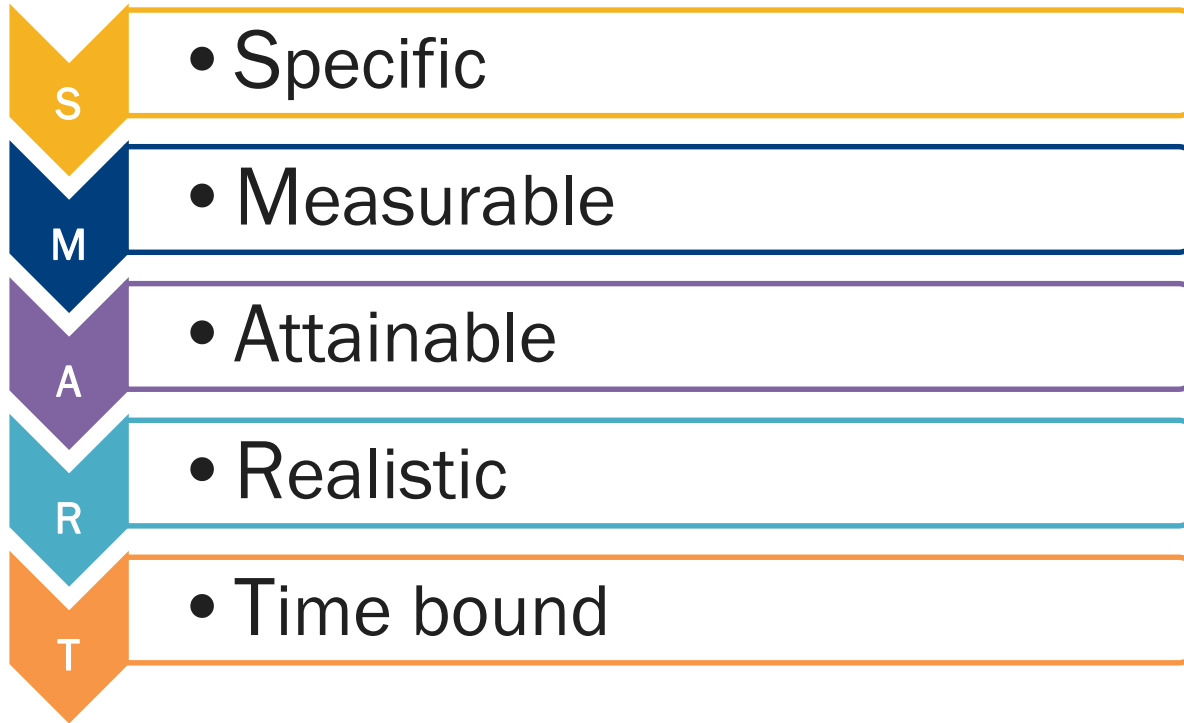- ## Comprehensive Unit-based Safety Program (CUSP)

Polling question

Which stage of team development involves the team members shifting into a 'work together' mode and developing a strong team identity?

A. Storming

B. Forming

C. Norming

D. Conforming

Setting aims

S • Specific

M • Measurable

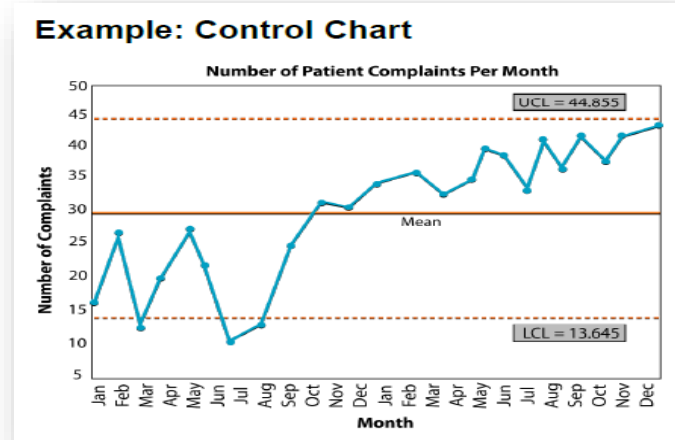**A** • Attainable

R • Realistic

T • Time bound

Establishing measures

Teams use quantitative measures to determine if a specific change actually leads to an improvement.

Source: Health Catalyst

Example: Control Chart
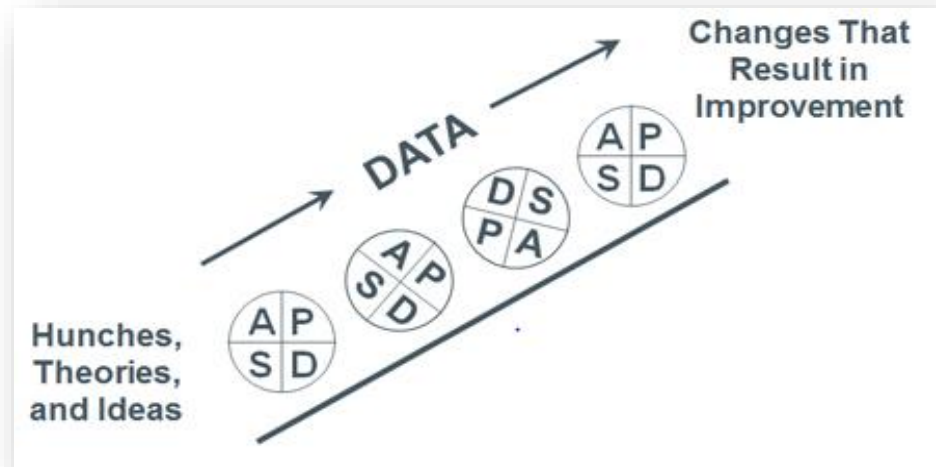
Selecting changes

Ideas for change may come from those who work in the system or from the experience of others who have successfully improved.

Source: Institute for Healthcare Improvement

Testing changes (PDSA cycle)

- The Plan-Do-Study-Act cycle is shorthand for testing a change in the real work setting — by planning it, trying it, observing the results, and acting on what is learned.

- This is the scientific method adapted for action-oriented learning.

Implementing changes

- After testing a change on a small scale, learning from each test, and refining the change through several PDSA cycles, the team may implement the change on a broader scale — for example, for an entire pilot population or on an entire unit.

Spreading changes

After successful implementation of a change or package of changes for a pilot population or an entire unit, the team can spread the changes to other parts of the organization or across other organizations.

[PDSA in Everyday Life](#)

IHI Open School course QI 102 - Robert Lloyd, PhD

Discussion

- Think about your day so far. Can you identify any PDSA cycles you've run in your personal life - even if you didn't know it was a PDSA cycle at the time? Was it successful? Why or why not?

- What is the value of a failed PDSA cycle?

To be considered a real test . . .

- The test must be planned, including a plan for collecting qualitative or quantitative data.

- The plan needs to be carried out (do) and data collected.

- Time needs to be set aside to analyze the data and study the results.

- Action must be based on what is learned.

PDSA Exercises

Personal Improvement Worksheet

EXERCISE: Personal Improvement Worksheet

Example:

"In 30 days, I will be getting eight or more hours of sleep each night."
"I would like to be able to run a 5K in less than half an hour by Christmas."
"By April 30, I will have 100% of my daughter's closet reorganized."
"By next week, I will decrease my intake of Pepsi to one per day."

1. **AIM: What are your aims?**
   Develop your aim(s) with a general aim statement and specific goals. Please make sure that your aim(s) are consistent with your goals.

2. **MEASURES: What measures will you track?**
   Given the above aim(s), what measures will you use to track progress? List the key process and outcome measures that are pertinent to all the goals in your aim.

3. **CHANGES:** *Given your aim(s) and what you have learned, what changes will you focus on to reach your aims in the next 3 weeks?*

Adapted from the Institute for Healthcare Improvement
http://www.ihi.org/resources

A personal PDSA

AIM: What are your aims?

- Develop your aim(s) with a general aim statement and specific goals
- Make sure your aim(s) are consistent with your goals.

MEASURES: What measures will you track?

- Given the above aim(s), what measures will you use to track progress? List the key process and outcome measures that are pertinent to all the goals in your aim.

CHANGES:

- Given your aim(s) and what you have learned, what changes will you focus on to reach your aim(s) in the next three weeks?

Dream.
Believe.
Achieve.

Discussion and sharing of PI plan

Consider:

- Is it possible for this project to be completed in the next several weeks?

- How clear and complete is the aim statement?

- Is there a complete set of measures? Are they clearly related to the project goals?

PDSA Cycle Feedback Sheet

PDSA CYCLE FEEDBACK SHEET

PURPOSE: To provide helpful feedback to hospital teams who have submitted a PDSA worksheet documenting tests of change designed to develop, test or implement a change.
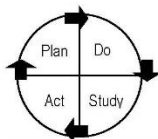
FULL Facility Name (do not use abbreviation):

PDSA #   Date: Reviewer:

PLAN: Review Question:	Was it Addressed? (√ if yes)	Comments/Notes:
Was the objective for this PDSA cycle clear?		
Did the team state their predictions? Did the prediction identify how they thought test would result in an improvement?		
Did the team address WHO, WHAT, WHERE, WHEN?		
Did the team describe plan to collect the data required to answer questions? Will the team be able to evaluate the predictions using these data?		
What was the scale/scope of the PDSA (Too large, small, complex, simple etc.)? Was there a more useful size/scope for this PDSA cycle?		
DO: Review Question:		
Did the team attempt to carry out their plan?		
Did the team document any problems or unexpected events?		
Did the team collect the data they planned to collect?		
Suggestions to improve the DO phase of the PDSA.		
STUDY: Review Question:		
Did the team compare the data and feedback or observations to their prediction and summarize what they learned?		
Did the team update their theories about the objective of the cycle?		
Any suggestions?		
ACT: Review Question:		
Did the team say what will happen in the next PDSA cycle (develop change further, test, implement)?		
Suggestions for the next PDSA cycle(s)?		

Additional Comments:

PDSA #1

PDSA #2

PDSA WORKSHEET

Full facility name: Best Practice Hospital	Date of test: May 2021	Test Completion Date: June 1, 2021
Overall organization/project AIM: Reduce the number of OB hemorrhage rapid response calls through early identification and mitigation of risk.		
What is the objective of the test? Educate staff in risk-assessment and treatment.		

PLAN:

Briefly describe the test:
Organize a three-day Postpartum Hemorrhage Workshop (PPHW) for staff.
Topics covered: Stages of Blood Loss, Quantification of Blood Loss, Hemorrhage Cart, PPH Medications, Blood Administration, Massive Transfusion Protocol, Bakri Balloon, PPH Risk Assessment

How will you know that the change is an improvement?
Decreased number of OB hemorrhage rapid-response calls.

What driver does the change impact?
Assess hemorrhage risk and implement measures to prevent hemorrhage.

What do you predict will happen?
Increased number of patients identified at risk.

PLAN

List the tasks necessary to complete this test (what)	Person responsible (who)	When	Where
1. Met with PPH Project Team, discussed PPH topics and dates.	PPH Committee	April 2021	Antepartum Unit/Email
2. Informed Staff of Postpartum Hemorrhage Workshop.	OB Nurse Educator	May 2021	Huddle/Email
3. Purchased supplies for workshop.	OB RN Educator	May 2021	
4. PPH Set-Up and Workshop	PPH Committee	May 2021	L&D Conference Room

Plan for collection of data:
Process - Chart review to ensure assessment was performed and that risk factors were calculated.
Outcome – Number of OB hemorrhage rapid response calls.

DO: Test the changes.
Was the cycle carried out as planned?   **X** Yes   ☐ No

Record data and observations.
82% of charts had a risk assessment documented.
50% of those identified at risk had a plan of care developed to reduce the risk of post-partum hemorrhage.

What did you observe that was not part of our plan?
Care planning was not evident when patients were identified at risk.

STUDY:
Did the results match your predictions?   **X** Yes   ☐ No

Compare the result of your test to your previous performance:
Comparing the results with our prediction, we learned that continuing education and practice will improve recognition, response, and readiness when responding to an OB Hemorrhage.

What did you learn?
Yearly Postpartum Hemorrhage Workshop are imperative to improve patient care and outcome.
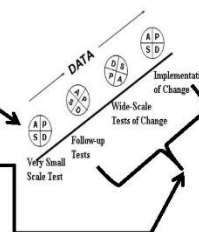**ACT:** Decide to Abandon, Adapt, Adopt
☐   <u>Abandon</u>: Discard this change idea and try a different one.
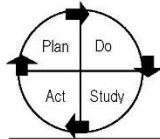
☐   <u>Adapt</u>: Improve the change and continue testing plan. Describe what you will change in your next PDSA:

X   <u>Adopt</u>: Select changes to implement on a larger scale and develop an implementation plan and plan for sustainability
If you plan to adopt, what plans do you have for your next 2 - 3 PDSA cycles
for follow-up tests and implementation:
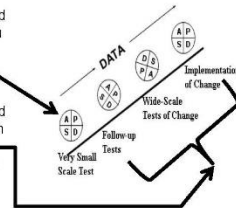
Additional Tools

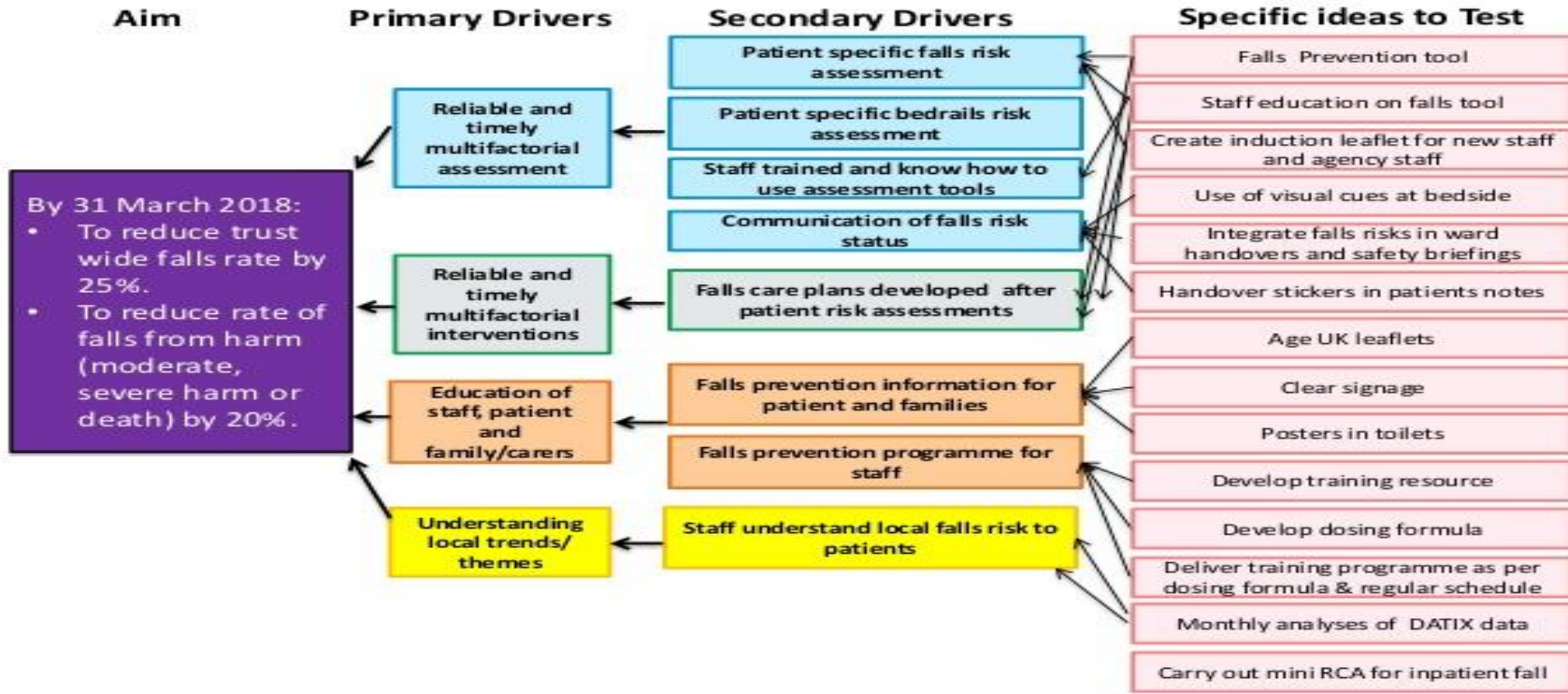| Step Description	Failure Mode Name	Causes	Effects	Likelihood	Likelihood	Severity	RPN
Obtain Privileges	Physician not credentialed administer	Provider competency is not	Harm to patient, death could occur	10	5	10	500
Check provider privileges	Database not accessed	Cumbersome	Harm to patient, death could occur	10	1	10	100
Meet privilege requirements	ACLS certification not up to date	Not enough time to attend	Harm to patient, death could occur	2	9	10	180
Meet privilege requirements	Sedate competency not up to date	Not enough time to attend	Harm to patient, death could occur	2	9	10	180
Meet privilege requirements	Course material unavailable	Vendor issues	Competency expires	10	1	10	100
Monitoring performance	No mechanism for capturing adverse events, other than self reporting or	Lack of peer review	Harm to patient, death could occur	10	1	10	100
Consent	Patient not provided with information related to moderate	Not contained as part of the consent form or part of the	Litigation, unplanned admission	10	1	5	50
ASA	Assessment not consistently	Accountability a key	Harm to patient, death could occur	7	1	10	70
ASA	Documentation	Documentation is fractured	Harm to patient, death could occur.	7	1	5	35
ASA	Risk Management	No criteria to facilitate	Harm to patient, death could occur	1	2	10	20
Medication Order	O2 not being administered per policy.	Not routinely ordered.	Harm to patient.	5	1	7	35
Medication Order	Verbal or telephone orders given for	MD not entering first order	miscommunication	5	7	10	350
Medication Order	When MD enters order can be paper	Hybrid documentation	Harm to patient, death could occur	10	1	3	30
Medication Order Review	Some orders are not reviewed by	Verbal or paper orders are	Harm to patient, death could occur	10	5	10	500
Medication Administration	Syringes not consistently labeled per	Considered unnecessary	Harm to patient, death could occur	5	1	10	50
Medication Administration	MD is not consistently administering the first dose as per policy	Not considered necessary	Harm to patient, death could occur	5	1	10	50
Monitoring	Immediate vital signs prior to administration not consistently	Not considered necessary	Harm to patient, death could occur	5	1	10	50
Monitoring	Variation in the continuous monitoring of vital signs per policy	Not considered necessary, or not documented	Harm to patient, death could occur	10	1	2	20
Monitoring	Monitoring of LOC is not being	Not considered necessary	Harm to patient, death could occur	10	1	7	70
Recovery	Assessment lack criteria	Not evidence	Harm to patient, death could occur	8	1	10	80
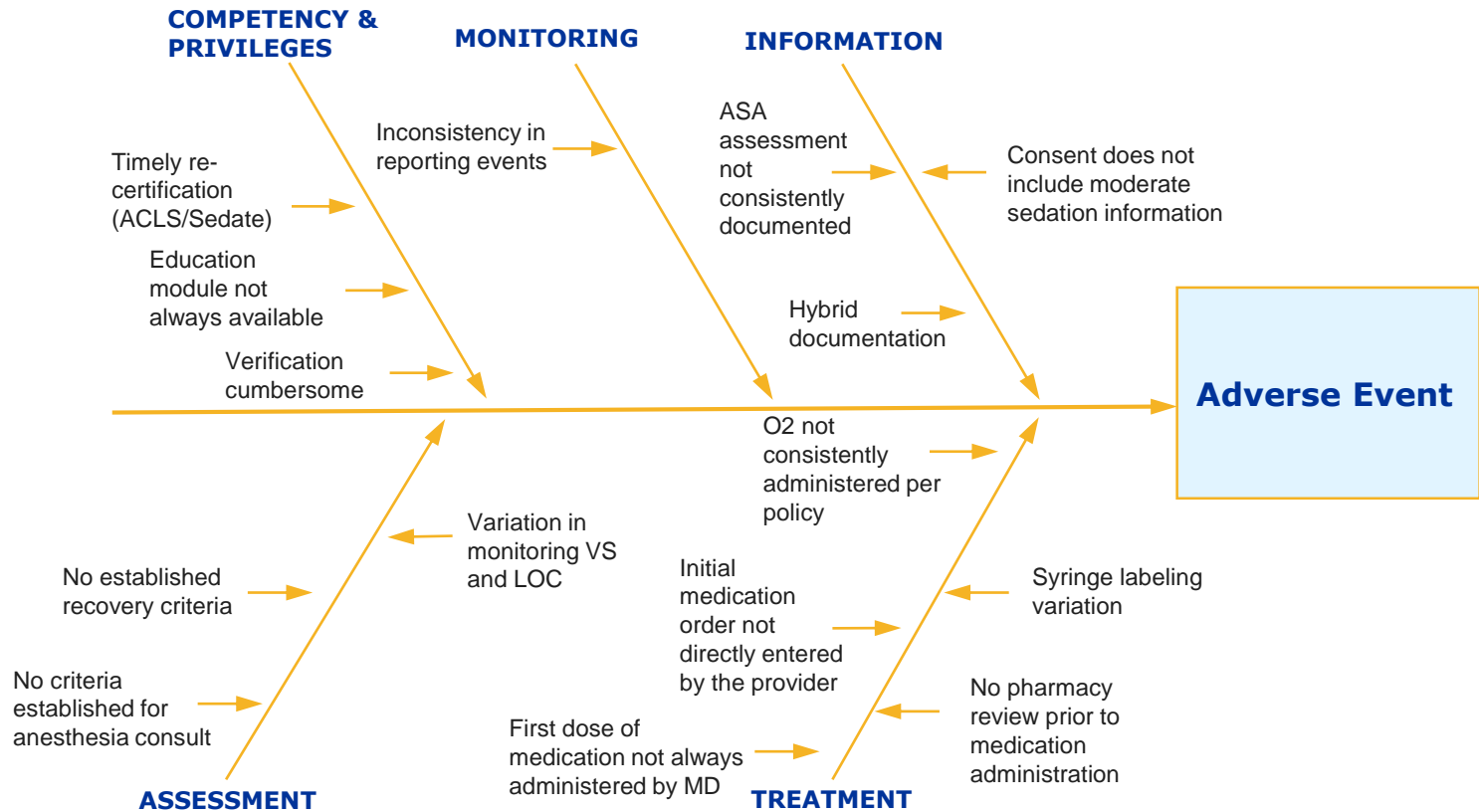
Fishbone Diagram

Driver diagram

- ## What is a driver diagram?

  - A simple visual tool used to guide achieving your targeted goal(s)

- ## How do I use it?

  - Evaluate Primary and Secondary driver systems and processes

    - Gap analysis

Source: http://www.ihi.org/education/IHIOpenSchool/resources/
Pages/Activities/GoldmannDriver.aspx

Driver Diagram

| Aim | Primary Drivers | Secondary Drivers | Specific ideas to Test |

By 31 March 2018:
- To reduce trust wide falls rate by 25%.
- To reduce rate of falls from harm (moderate, severe harm or death) by 20%.

Source: NHS

SWOT analysis

- An instrument within strategic planning that generates information that is helpful in matching an organization's or group's goals, programs, and capacities to the social environment in which it operates.

- When combined with dialogue, it is a participatory process that examines four elements:

STRENGTHS → Internal attributes and resources that support a successful outcome

WEAKNESSES → Internal attributes and resources that work against a successful outcome

OPPORTUNITIES → External factors that the entity can capitalize on or use to its advantage

THREATS → External factors that could jeopardize the entity's success

SWOT analysis - Readmissions

STRENGTHS
- Buy-in: Leaders, providers and nursing
- Teamwork between acute and post-acute service lines

WEAKNESSES
- Competing priorities
- Identification of patients who have been admitted within 30 days

OPPORTUNITIES
- Aligning priorities
- Information sharing (internal and external)

THREATS
- Regulatory penalties
- High-turnover of case managers

Source: Konsus

In closing . . .

- There are many tools and methodologies.

- You need to find the right fit for your organization.
  - Consistency
  - Standardization

Thank you.

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The Statewide Voice for New York's Hospitals and Health Systems