สถาบันรับรองคุณภาพสถานพยาบาล (องค์การมหาชน)
The Healthcare Accreditation Institute (Public Organization)

Quality Management for Clinical Services

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For Delegates from Bangladesh
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Do we need to be in a hurry about quality & safety?

What should be an incentive to make change?

Topics

1. Transformation 1: review of daily activities
2. Transformation 2: quality management system (QMS)
3. Transformation 3: standard guided QMS
4. Transformation 4: performance excellence

Transformation 1:
Review of Daily Activities

A Simple Set of Questions

What are we doing?

Why are we doing so?

Purpose

Why do we exist?

Design

Action

Learning

How well are we doing?
How do we know?

Improve

How can we **improve** it?

Learning from Daily Activities

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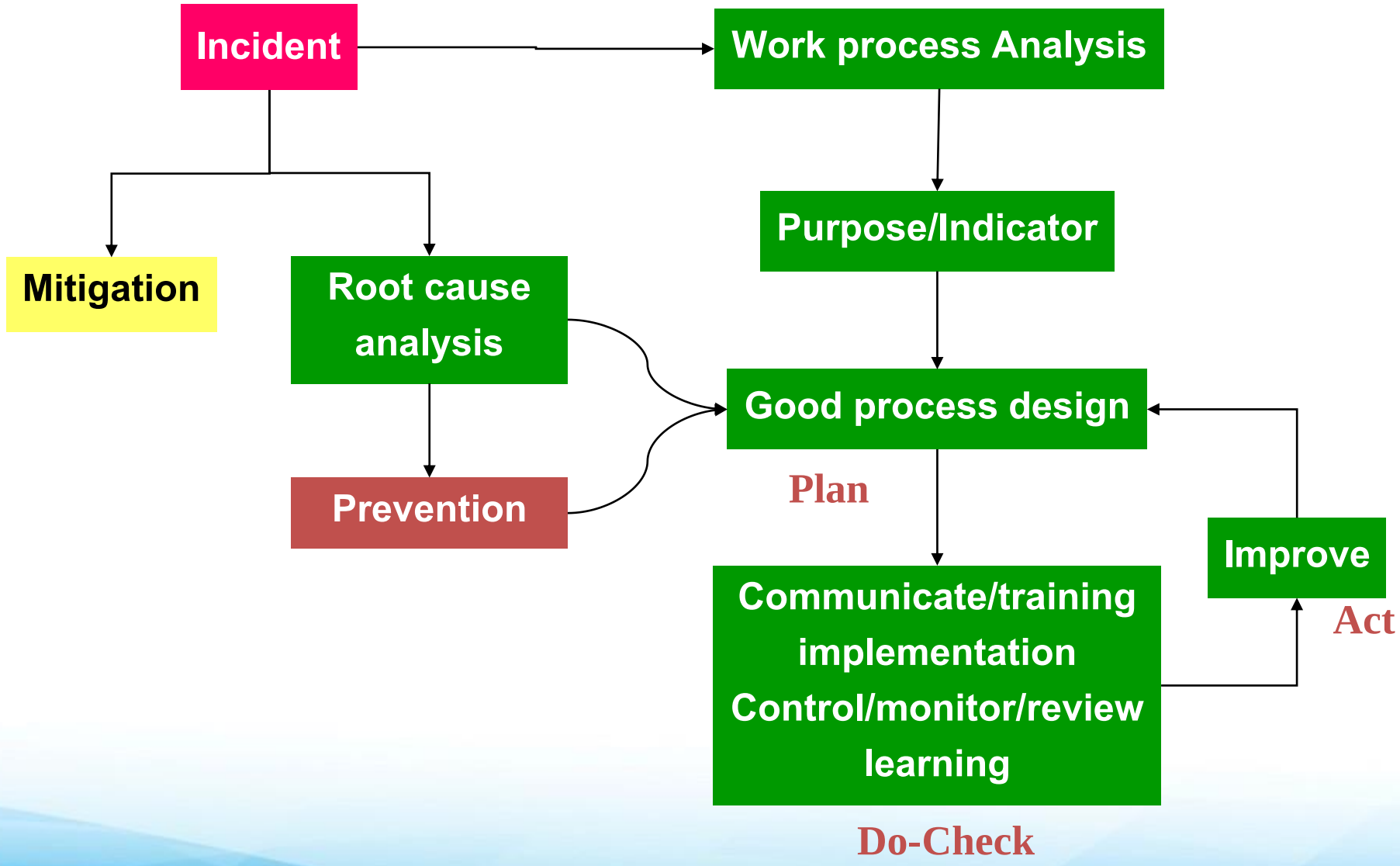
Need & Expectation	Listen, interact, observe Complaint management
Evidence & Knowledge	Evidence-based Gap analysis Knowledge sharing & management
Waste reduction	Identify & get rid of non-value added process Rational use of resources
Safety	Learning from incident/failure Learning from concurrent triggers Learning from feedback (behavior) Learning to build safety culture

Trigger Tools & Concurrent Review

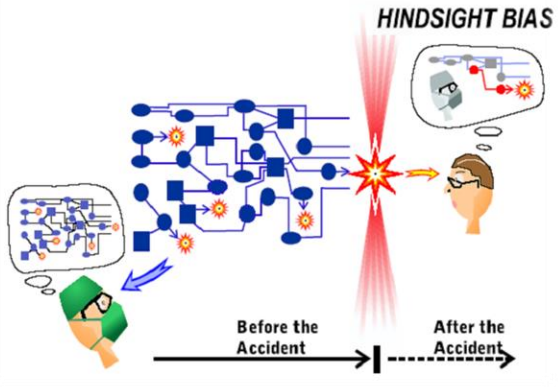
1. Monitoring of daily incident
   - e.g. fall, pressure sore, infection, med error, ADR
2. Concurrent review alerted by triggers
   - Lab (pos blood culture, PTT>100, INR>6, glucose<50, 2x rising BUN)
   - Pharmacy (vit K, Benadryl, Naloxone, Flumazenil, anti-emetic admin)
   - OR (change in proc., intra-op X-ray, intra or post-op death, organ inj/removal)
   - RR (intubation/reintubation/BiPAP use, X-ray in RR)
   - ICU (post-op ICU admission, use of post-op ventilator >24 hrs)
   - LR (instrumented delivery)
   - Blood bank
3. Review of treatment failure
   - ER revisit
   - 30-day readmission
   - ICU readmission
   - Repeat surgery
   - Refer to higher level of care
   - Death
4. Other reviews
   - Patient experience & complaint
   - Efficiency of work process & resource utilization

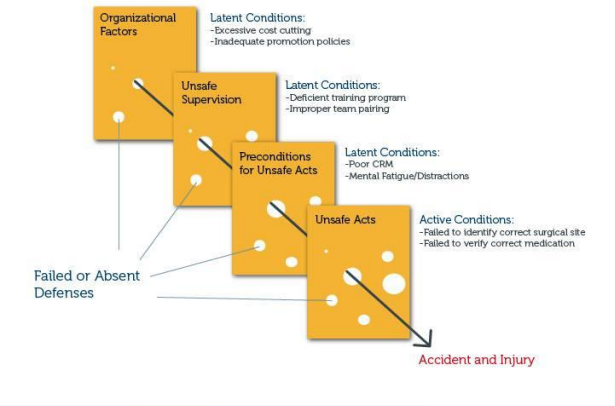
Learning from mistake

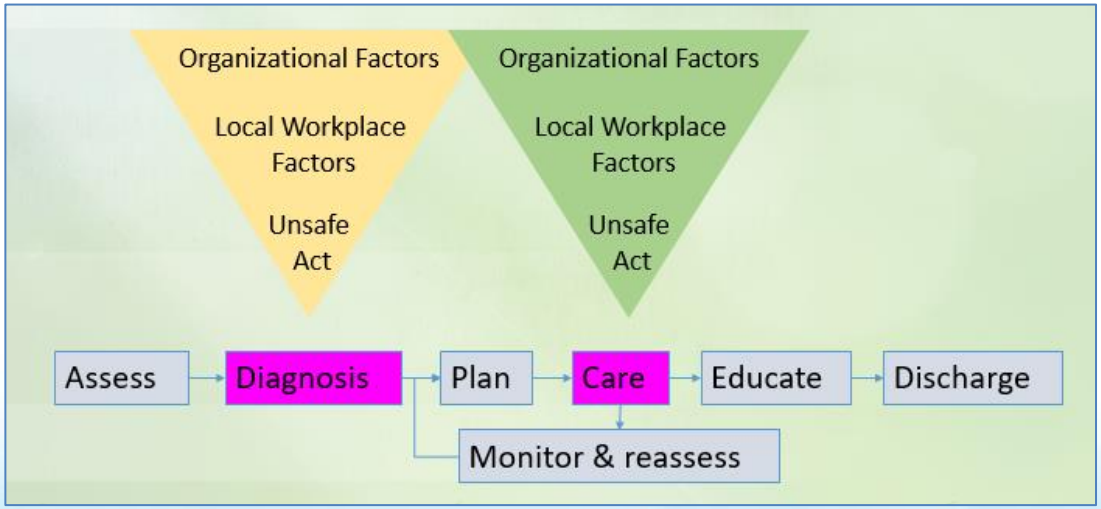


Root Cause Analysis & Action

0. Prioritization & assign RCA team
1. Map story & timeline
2. Identify potential unsafe act (or change)
3. Listen, observe, & investigate
4. Identify root causes / contributing factors
5. Propose creative solution (using human factors concept)



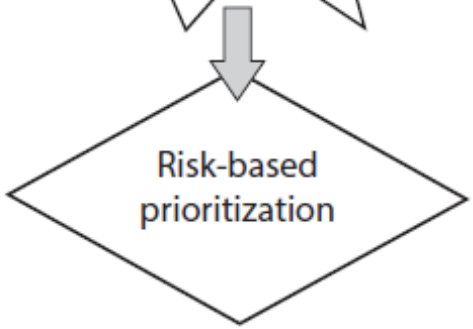




Immediate Action & Prioritization in 72 hours

Figure 2. Individual RCA² Process

Immediate actions are taken to care for the patient, make the situation safe for others, and sequester equipment, products, or materials.

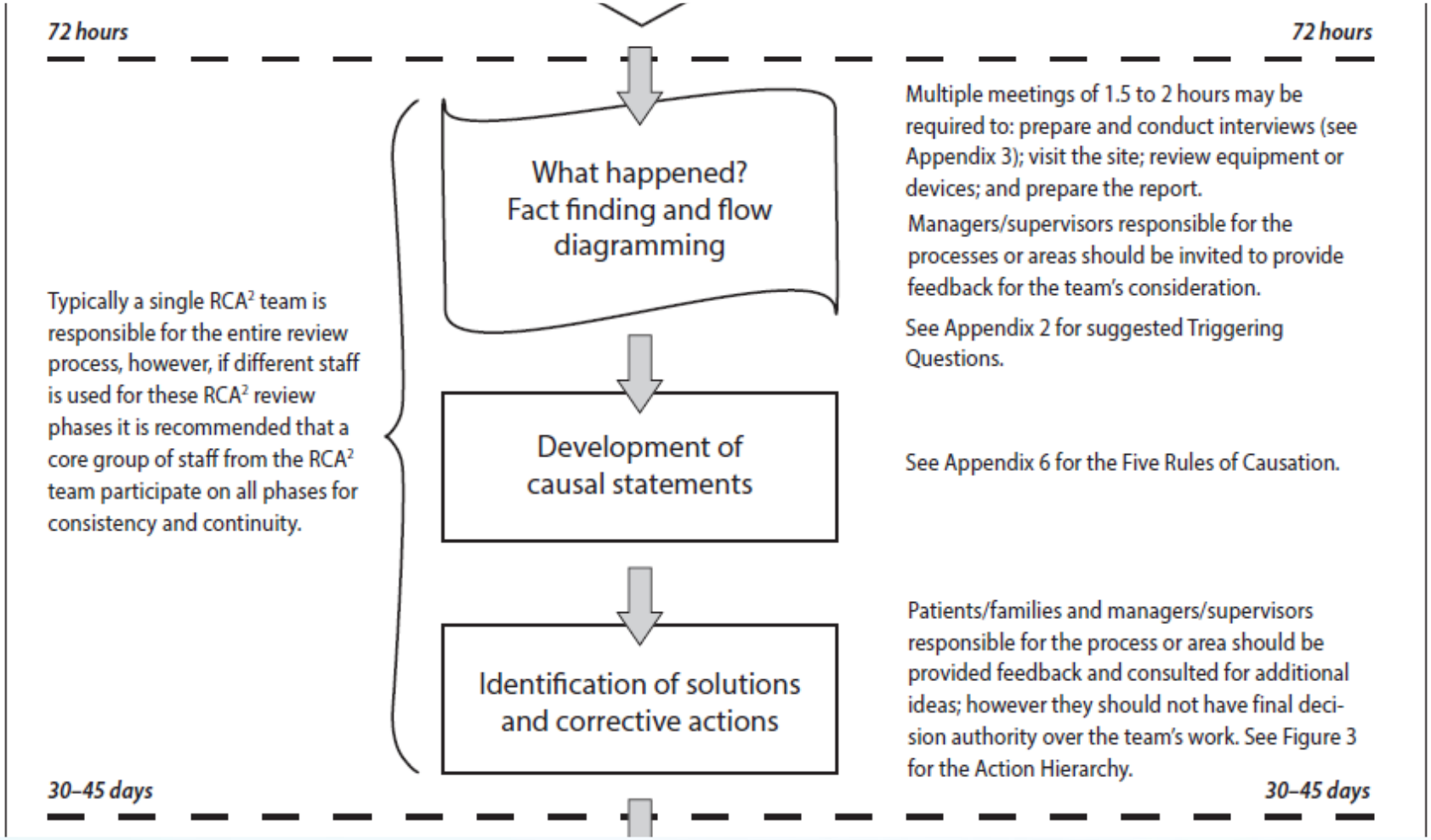


Patient safety, risk or quality management is typically responsible for the prioritization; for consistency one person is assigned responsibility for applying the risk matrix. See Appendix 1.

72 hours — *72 hours*

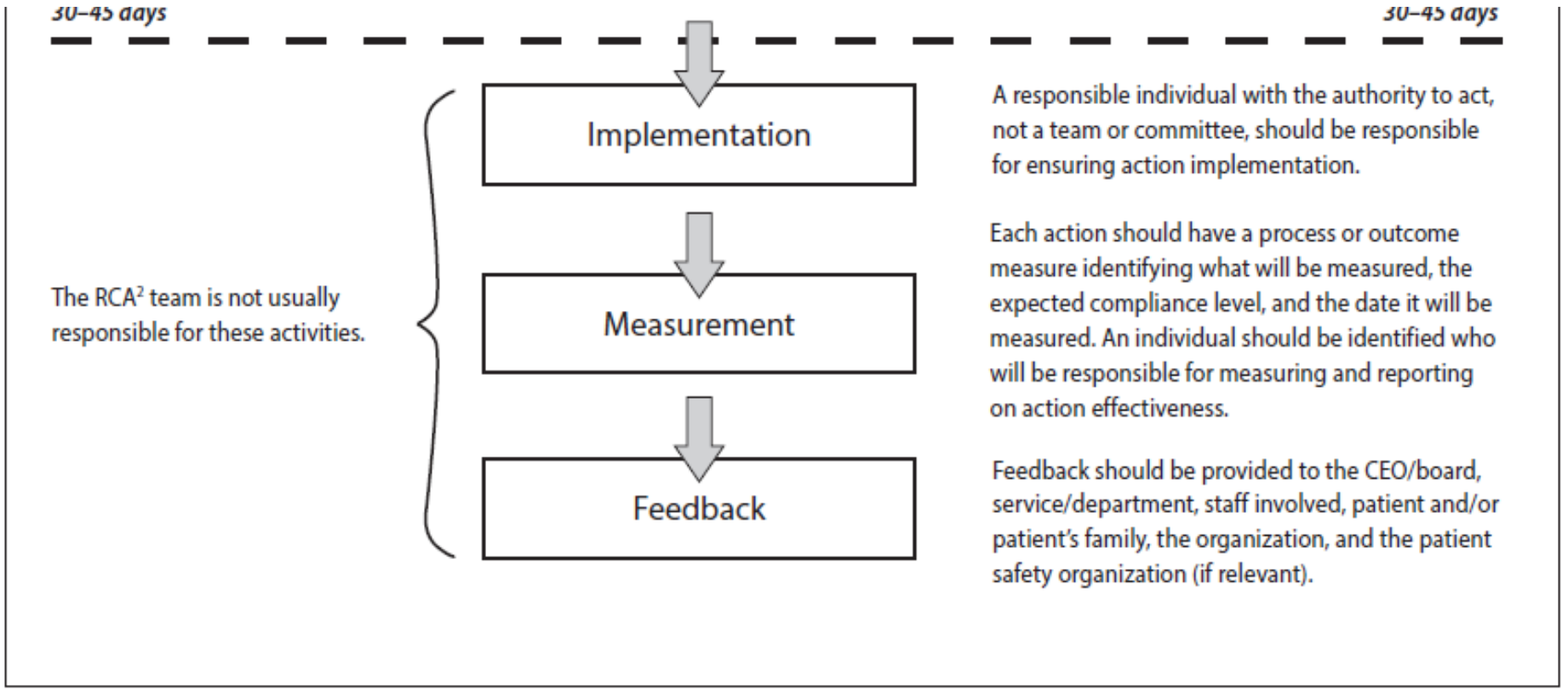
NPSF: RCA^2 Improving Root Cause Analysis and Actions to Prevent Harm

RCA & Solution Identification in 30-45 days



NPSF: RCA² Improving Root Cause Analysis and Actions to Prevent Harm

Implementation of Action



NPSF: RCA^2 Improving Root Cause Analysis and Actions to Prevent Harm

Safety Assessment Codes (SAC) Matrix

SAC Score 3 = mandate for RCA

Severity Score: use potential rather than actual score

Probability	Severity	Catastrophic	Major	Moderate	Minor
	Frequent	**3**	**3**	2	1
	Occasional	**3**	2	1	1
	Uncommon	**3**	2	1	1
	Remote	**3**	2	1	1

(1) Frequent – Likely to occur immediately or within a short period (several times in 1 Y)
(2) Occasional – Probably will occur (may happen several times in 1 to 2 years)
(3) Uncommon – Possible to occur (may happen sometime in 2 to 5 years)
(4) Remote – Unlikely to occur (may happen sometime in 5 to 30 years)

Available data
Feeling/opinion
Educated guess

Severity Score

Catastrophic	Major
Patients with Actual or Potential: Death or major permanent loss of function (sensory, motor, physiologic, or intellectual) **not related to the natural course of the patient's illness or underlying condition** (i.e., acts of commission or omission). This includes outcomes that are a direct result of injuries sustained in a fall; or associated with an unauthorized departure from an around-the-clock treatment setting; or the result of an assault or other crime. Any of the adverse events defined by the Joint Commission as reviewable "Sentinel Events" should also be considered in this category. **Visitors:** A death; **or** hospitalization of three or more visitors **Staff**: A death or hospitalization of three or more staff*	**Patients with Actual or Potential:** Permanent **lessening** of bodily functioning (sensory, motor, physiologic, or intellectual) **not related to the natural course of the patient's illness or underlying conditions** (i.e., acts of commission or omission) **or** any of the following: a. Disfigurement b. Surgical intervention required c. Increased length of stay for three or more patients d. Increased level of care for three or more patients **Visitors:** Hospitalization of one or two visitors **Staff:** Hospitalization of one or two staff **or** three or more staff experiencing lost time or restricted duty injuries or illnesses **Equipment or facility:** Damage equal to or more than $100,000**, ♦
Moderate	**Minor**
Patients with Actual or Potential: Increased length of stay **or** increased level of care for one or two patients **Visitors:** Evaluation **and** treatment for one or two visitors (less than hospitalization) **Staff**: Medical expenses, lost time or restricted duty injuries or illness for one or two staff **Equipment or facility:** Damage more than $10,000, but less than $100,000**, ♦	**Patients with Actual or Potential:** No injury, nor increased length of stay nor increased level of care **Visitors:** Evaluated and no treatment required **or** refused treatment **Staff:** First aid treatment only with no lost time, nor restricted duty injuries nor illnesses **Equipment or facility:** Damage less than $10,000 or loss of any utility without adverse patient outcome (e.g., power, natural gas, electricity, water, communications, transport, heat and/or air conditioning)**, ♦

RCA Team

Figure 1. RCA² Team Membership* and Involvement

NOTE: An individual may serve in multiple capacities	Team Member?	Interview?
Subject matter expert(s) on the event or close call process being evaluated	Yes	Yes, if not on the team
Individual(s) not familiar with (naïve to) the event or close call process	Yes	No
Leader who is well versed in the RCA² process	Yes	No
Staff directly involved in the event	No	Yes
Front line staff working in the area/process	Yes	Yes
Patient involved in the event	No	Yes**
Family of patient involved in the event	No	Yes**
Patient representative	Yes	Yes

**Strongly consider including facility engineering, biomedical engineering, information technology, or pharmacy staff on an RCA² team, as individuals in these disciplines tend to think in terms of systems and often have system-based mindsets. Including medical residents on a team when they are available is also suggested.*

*** This might not be needed for some close calls or events that are far removed from the bedside (e.g., an incorrect reagent that is used in the lab).*

NPSF: RCA² Improving Root Cause Analysis and Actions to Prevent Harm

Actions in RCA

- Graphically describe the event using a **chronological Flow Diagram or timeline**.
- Identify **gaps** in knowledge about the event.
- **Visit the location** of the event to obtain firsthand knowledge about the workspace and environment.
- Evaluate **equipment or products** that were involved.
- Identify team-generated questions that need to be answered.
- Use **Triggering Questions** (see Appendix 2) and team-generated open-ended questions that can broaden the scope of the review by adding additional areas of inquiry.
- Identify staff who may have answers to the questions and conduct **interviews** (see the Interviewing Tips in Appendix 3) of involved parties including staff and affected patients.
- Include patients, family, or a patient **representative** as appropriate to ensure a thorough understanding of the facts.
- Identify **internal documents** to review (e.g., policies, procedures, medical records, maintenance records).
- Identify pertinent **external documents** or recommended practices to review (e.g., peer reviewed publications, manufacturers' literature, equipment manuals, professional organization guidance and publications).
- Identify and acquire appropriate **expertise** to understand the event under review. This may require interactions with internal and external sources of expertise (e.g., manufacturers, vendors, professional organizations, regulatory organizations).
- Enhance the Flow Diagram (see the sample in Appendix 4) or timeline to reflect the final understanding of events and where hazards or system vulnerabilities are located.
- Provide **feedback** to the involved staff and patients, as well as feedback to the organization as a whole.

5 Rules of Causation

Rule	Incorrect	Correct
Clearly show the "cause and effect relationship"	RN was fatigued	RN worked 3 16 hour shifts, which led to fatigue and increased risk of misreading…
Use specific and accurate descriptors for what occurred, rather than negative and vague	Manual was poorly written	Manual had 8 point font/no illustrations; RNs didn't use it; increased likelihood of incorrect programming of pumps
Human errors must have a preceding cause	RN selected wrong dose; patient overdosed	Drugs in CPOE are presented without sufficient space between doses, increasing chance of wrong dose and overdose
Violations of procedure are not root causes, but must have a preceding cause	RN didn't follow procedure for CT scan	Noise and confusion in prep area, with production pressures, increased chance that CT scan protocol would be missed…
Failure to act is only causal when there is a pre-existing duty to act	RN did not check for STAT orders every half hour	No assignment for designated RN to check orders at specific times increased likelihood that STAT orders are missed

Action Hierarchy

Less Reliance on Humans

Stronger	Intermediate	Weaker
• New devices with usability testing • Engineering control (forcing function) • Simplify the process • Standardization • Tangible involvement by leadership	• Eliminate/reduce distractions • Education using simulation-based training with periodic refresher sessions and observations • Standardized communication tools	• Double checks • Warnings • New policy • Training

Reliance on Humans

Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Hierarchy of Controls www.cdc.gov/niosh/topics/hierarchy/

Recommendation for RCA^2

1. Leadership (e.g., CEO, board of directors) should be actively involved in the root cause analysis and action (RCA_2) process. This should be accomplished by supporting the process, approving and periodically reviewing the status of actions, understanding what a thorough RCA_2 report should include, and acting when reviews do not meet minimum requirements.
2. Leadership should review the RCA_2 process at least annually for effectiveness.
3. Blameworthy events that are not appropriate for RCA_2 review should be defined.
4. Facilities should use a transparent, formal, and explicit risk-based prioritization system to identify adverse events, close calls, and system vulnerabilities requiring RCA_2 review.
5. An RCA_2 review should be started within 72 hours of recognizing that a review is needed. RCA2 teams should be composed of 4 to 6 people. The team should include process experts as well as other individuals drawn from all levels of the organization, and inclusion of a patient representative unrelated to the event should be considered.

NPSF: RCA^2 Improving Root Cause Analysis and Actions to Prevent Harm

Recommendation for RCA^2

6. Team membership should not include individuals who were involved in the event or close call being reviewed, but those individuals should be interviewed for information.
7. Time should be provided during the normal work shift for staff to serve on an RCA2 team, including attending meetings, researching, and conducting interviews.
8. RCA2 tools (e.g., interviewing techniques, Flow Diagramming, Cause and Effect Diagramming, Five Rules of Causation, Action Hierarchy, Process /Outcome Measures) should be used by teams to assist in the investigation process and the identification of strong and intermediate strength corrective actions.
9. Feedback should be provided to staff involved in the event as well as to patients and/or their family members regarding the findings of the RCA2 process.

Link Academic Activities with Risk Management System

1. **For each MM Conference** or similar activity, add 4 more questions to be considered:
   - Any diagnostic error?
   - Any adverse event (AE)?
   - If yes, what's the root cause?
   - How can we prevent that AE?
2. **Link** those information with the hospital's risk management system

Transformation 2:
Quality Management System

Quality in All Domain/Areas

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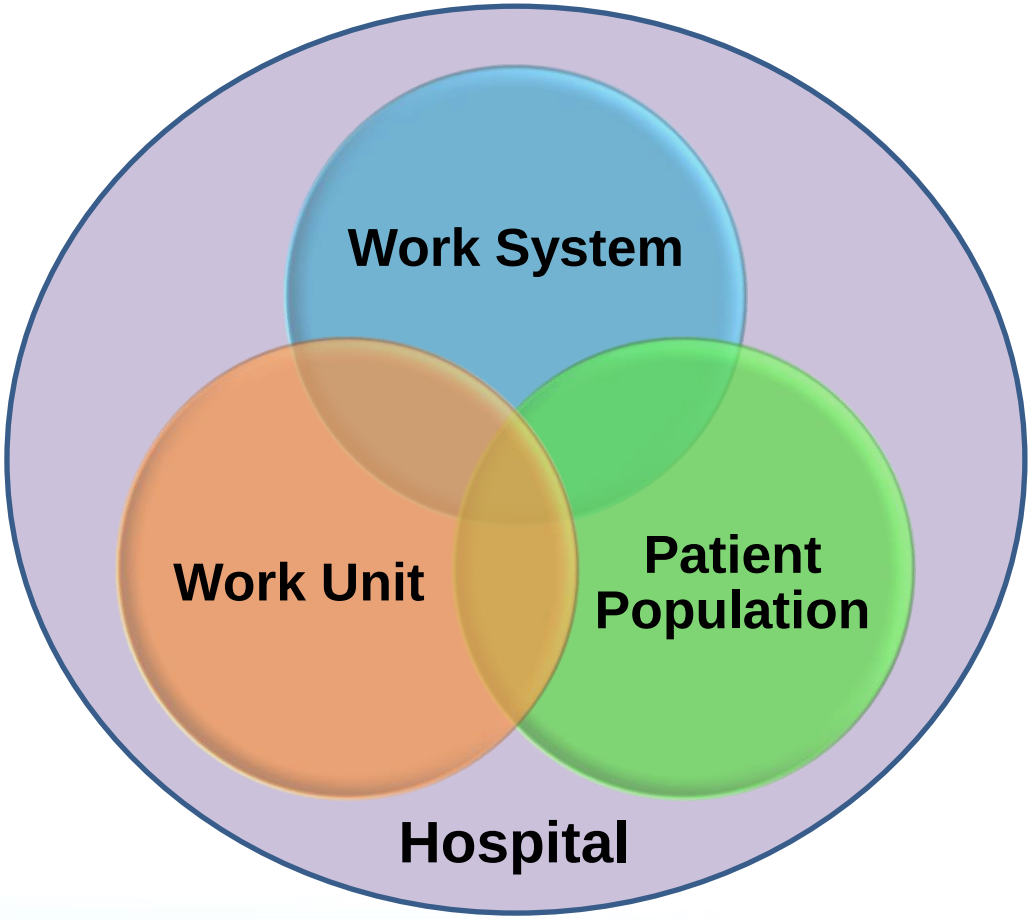
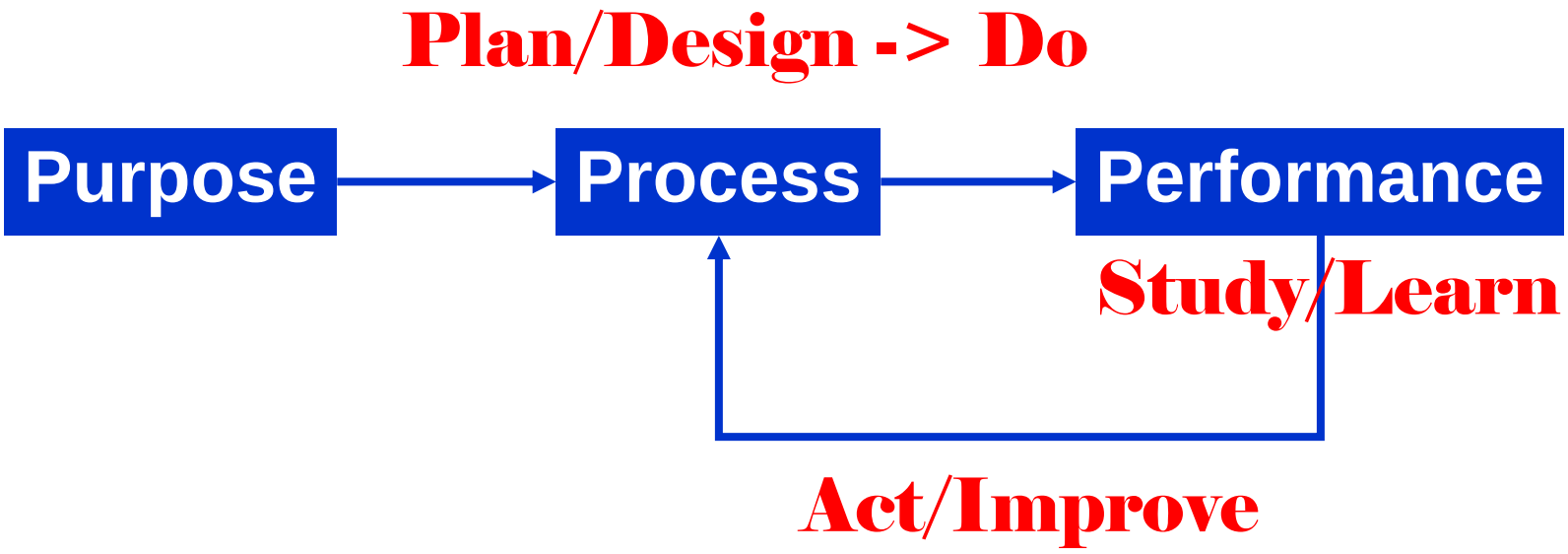


Key work systems

- Leadership
- Information technology
- Human resource
- Financial management
- Facility management
- Quality & risk management
- Professional governance
- Medication management
- Infection control
- Medical record management
- Patient care
- Ancillary services

3P: Simple Model for Quality

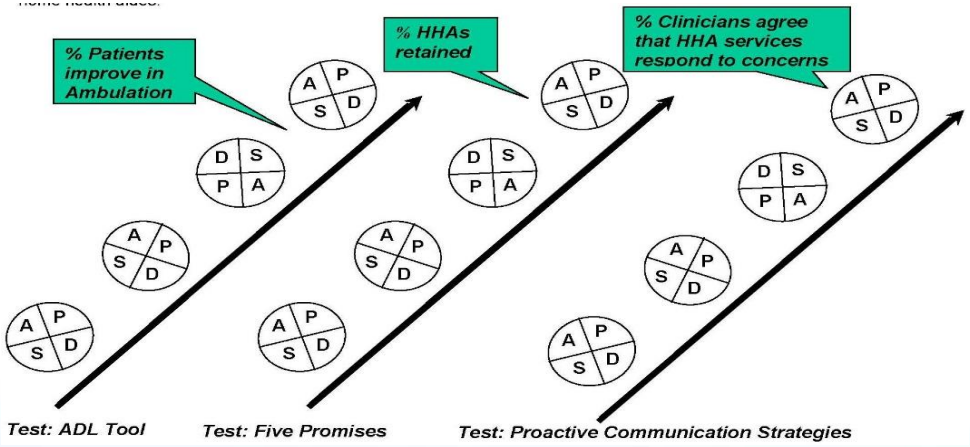


The Model for Improvement

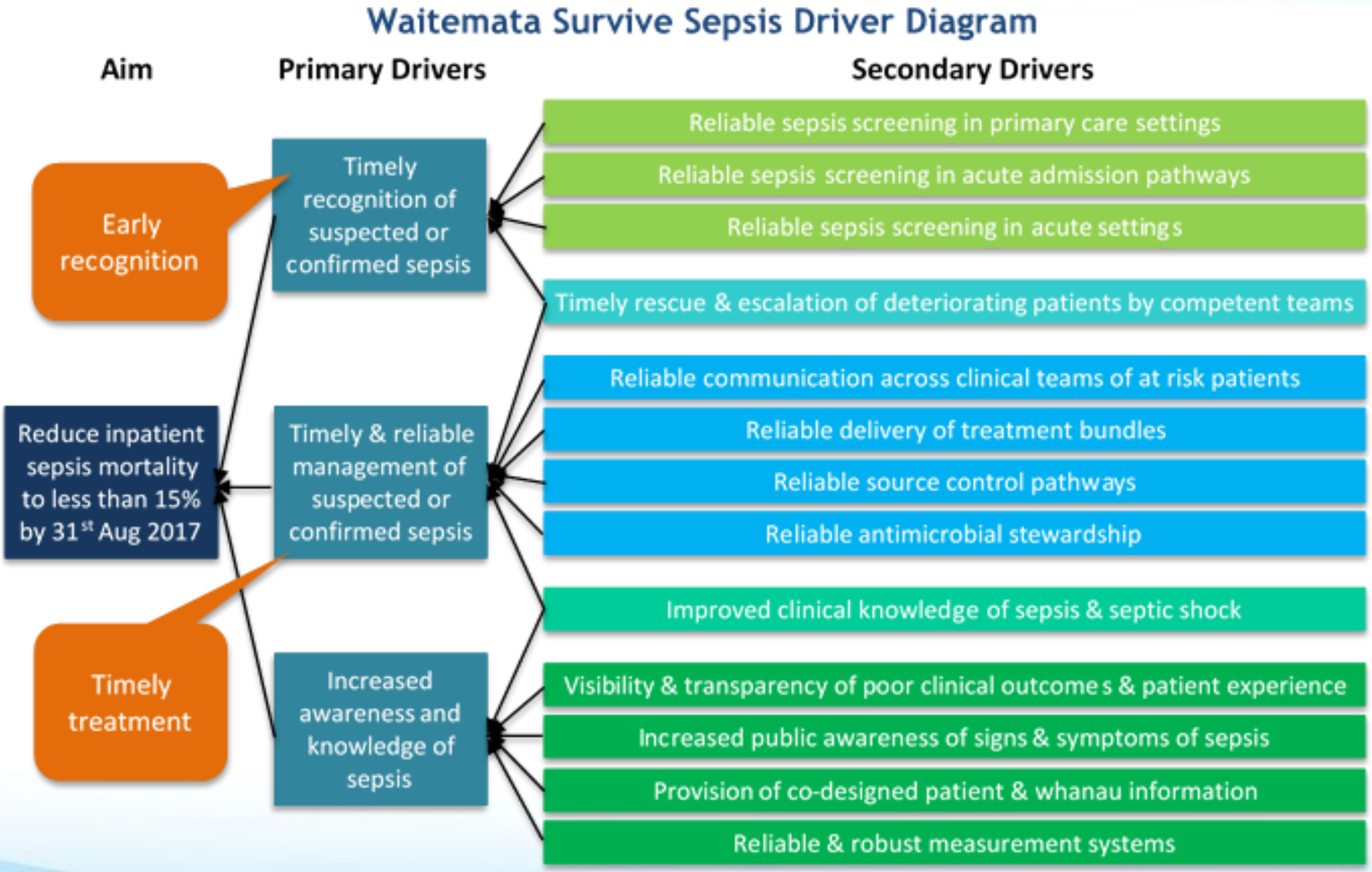
AIM
What are we trying to accomplish?

MEASURES
How will we know that a change is an improvement?

CHANGES
What changes can we make that will result in improvement?



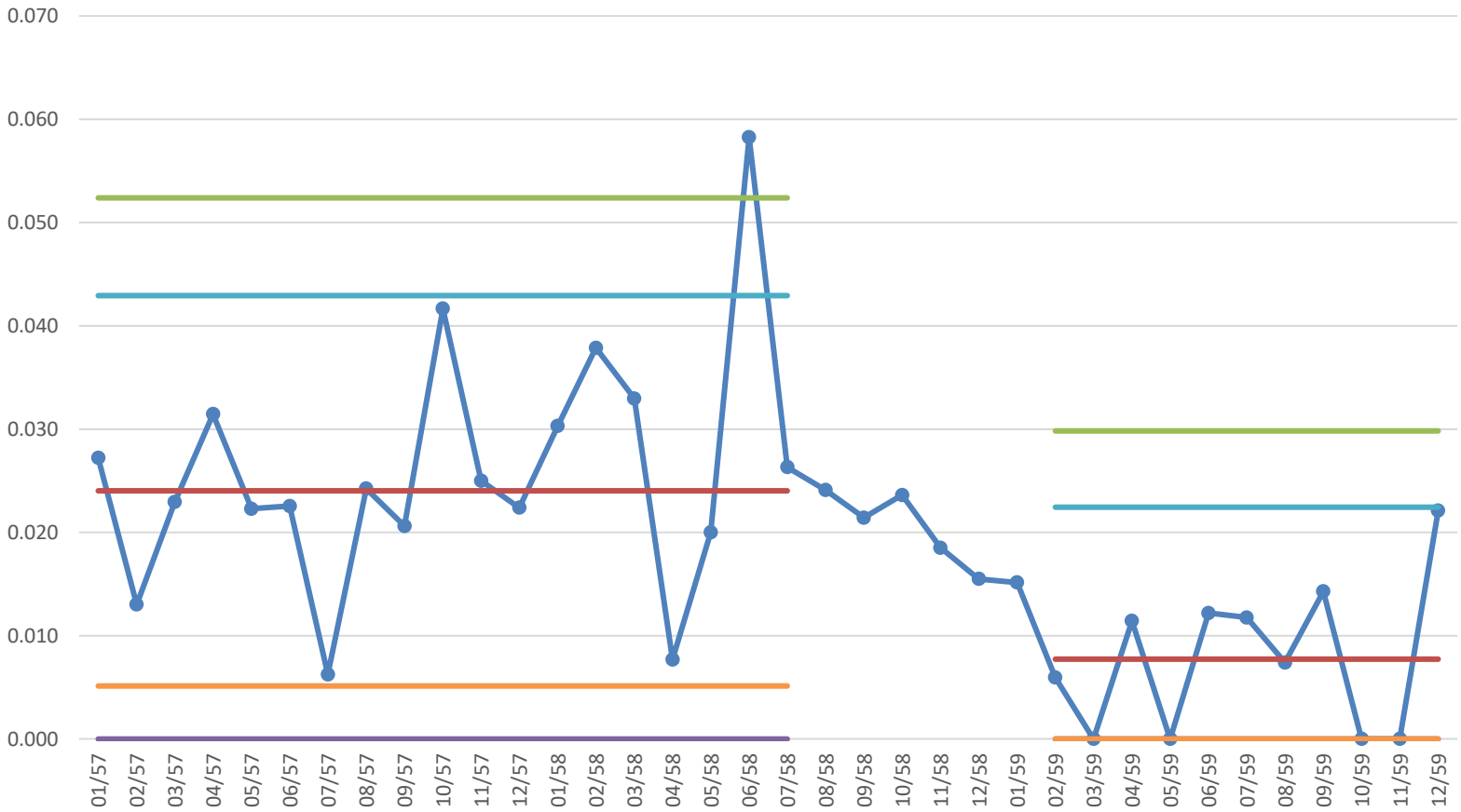
Driver Diagram as a Conceptual Framework



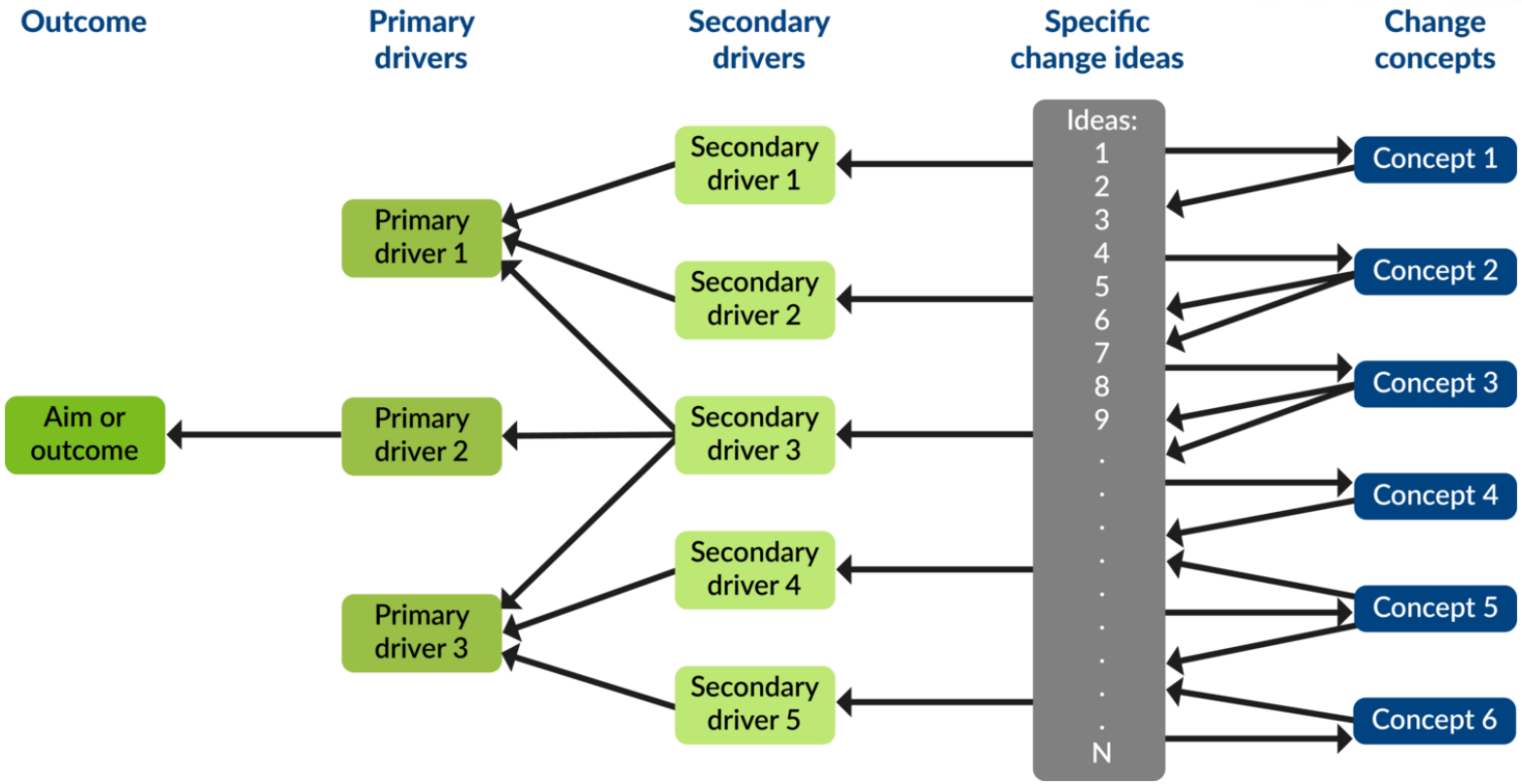
Defining Measures/Indicators

1. "What are we **trying to accomplish**?"
2. Think of **"outcome"** & **"process"** indicators.
3. Think of **various perspective** of quality:
   - Safety
   - Satisfaction
   - Efficiency
   - Access
4. Define indicators for various boxes in **driver diagram**
5. Define indicators for **key processes**

Using Control Chart to Understand Variation

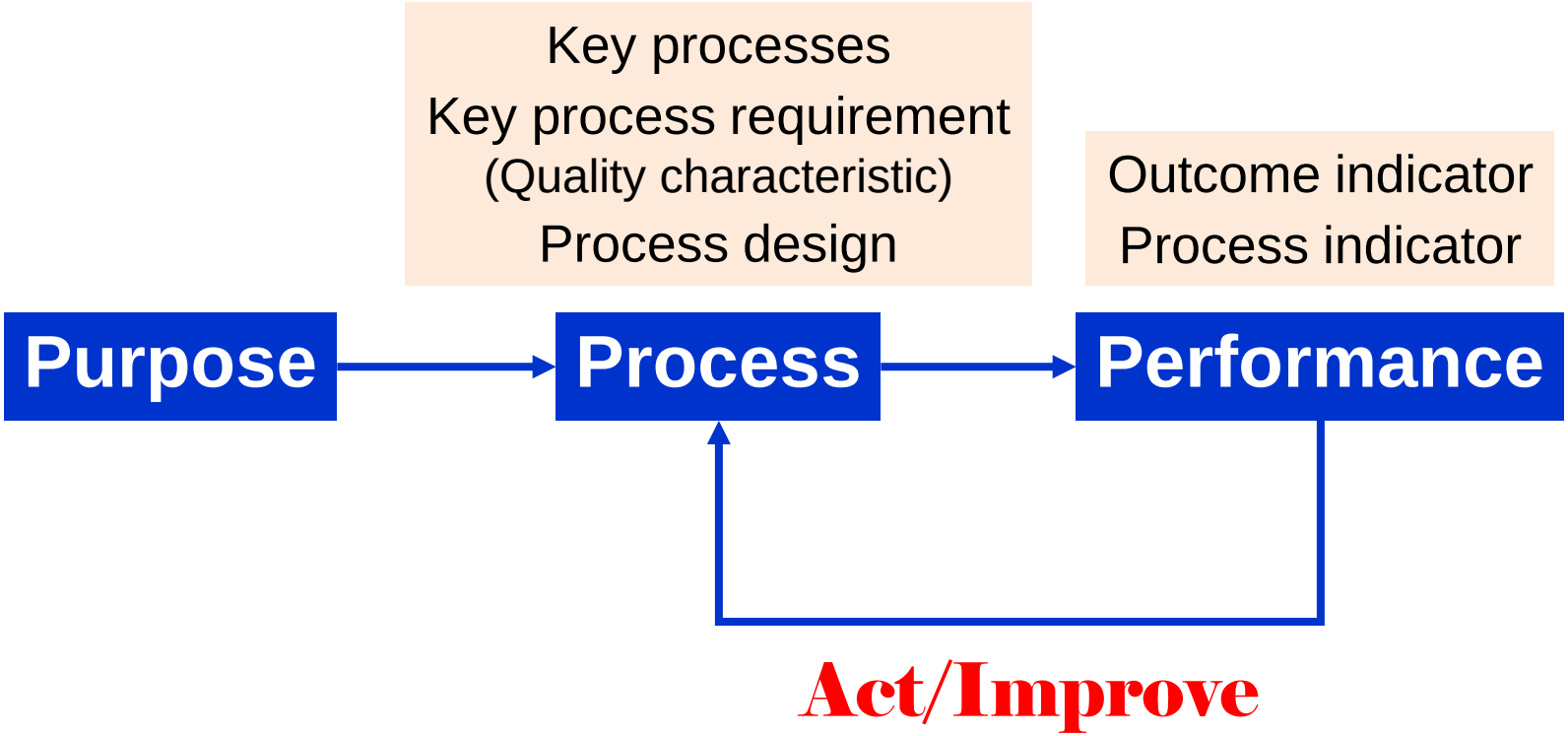


Conceptual view of a driver diagram



Change concepts: Lean, Human Factor Engineering, technology,

Process Management

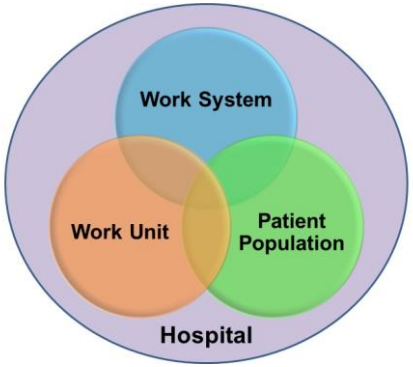


Design Principle

- ❑ Avoid reliance on memory
- ❑ Simplify process
- ❑ Standardize common process
- ❑ Use forcing functions and constraints
- ❑ Use redundancies (double check, cognitive review)
- ❑ Take advantage of habits and patterns
- ❑ Promote effective team functioning
- ❑ Task analysis & workflow

Ensure Consistency of Practice

Information & education
Process control
Observation, Go & See
Leadership rounding
Huddle, AAR & refinement



Purpose

Action

Design

Learning

Plan

Do

Improve

Act

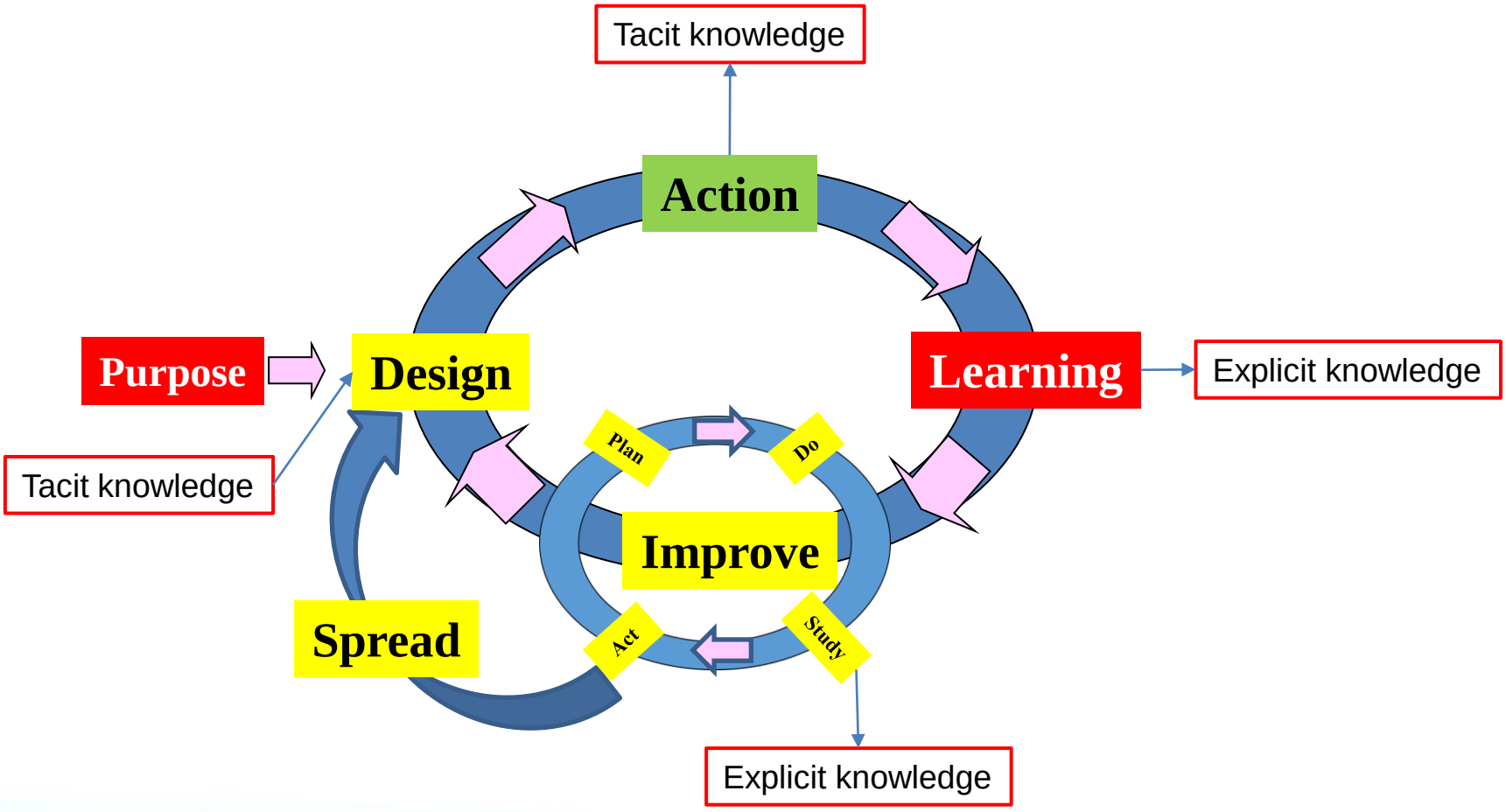
Study

Spread

KPI
Trace
Quality Check Score
Maturity level
Rapid Assessment
Research

Adopt
Adapt
Abandon

Integrate Quality & KM



Transformation 3:
Standard Guided Quality Management System

Healthcare Accreditation Standards

Standards: a framework of key components of a quality healthcare organization and the relationship among those components

Use standards with new paradigm

- A basis for comparison.
- A principle use for the measure of quality.

→

- An explicit statement of expected quality
- Performance specifications that, will lead to the highest possible quality in the system.

↓

HA use evaluation to encourage improvement of hospital work systems, resulted in learning and continuous improvement

Hospital and Healthcare Standards, 4th Edition

Part I Organization Management Overview

I-4 Measurement, Analysis, & KM

I-1 Leadership

I-2 Strategy

I-3 Patient/ Customer

I-5 Workforce

I-6 Operation

IV Results

Part IV Results

IV-1 Healthcare Results
IV-2 Patient/ Other Customer-Focused Results
IV-3 Workforce Results
IV-4 Leadership Results
IV-5 Key Work Process Effectiveness Results
IV-6 Financial Results

Part II Key Hospital Systems

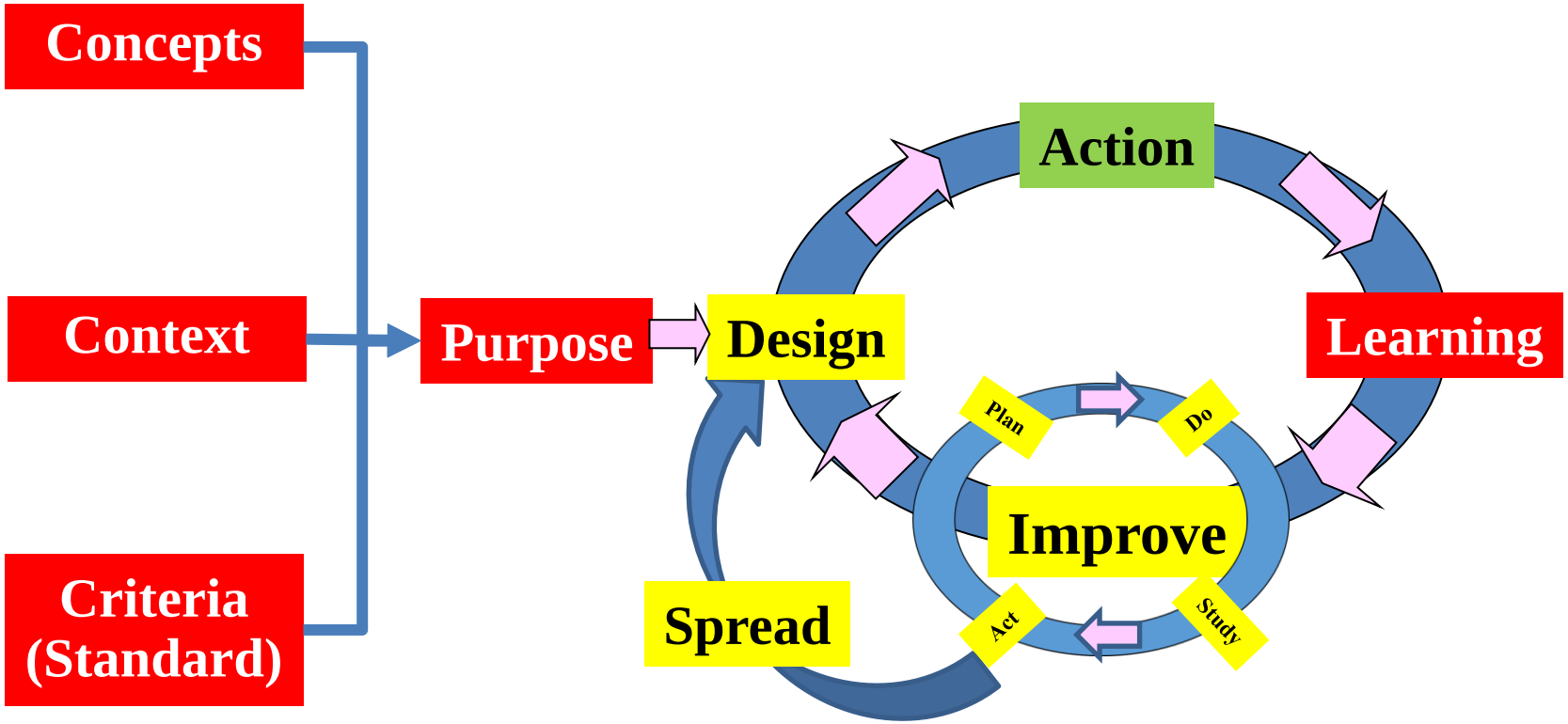
II-1 Risk, Safety, & Quality Management
II-2 Professional Governance
II-3 Environment of Care
II-4 Infection Prevention & Control
II-5 Medical Record System
II-6 Medication Management System
II-7 Diagnostic Investigation & Related Services
II–8 Disease & Health Hazard Surveillance
II–9 Working with Community

Patient Care Processes →

Part III Patient Care Processes

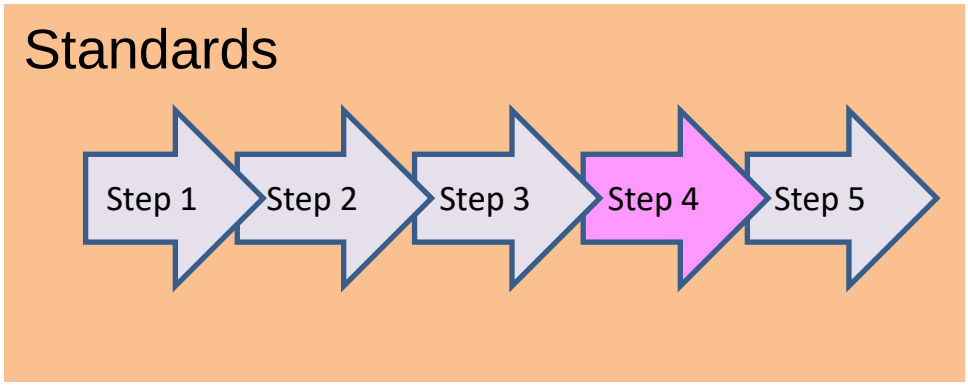
III-1 Access & Entry
III-2 Patient Assessment
III-3 Planning
III-4 Patient Care Delivery
III-5 Information & Empowerment
III-6 Continuity of Care

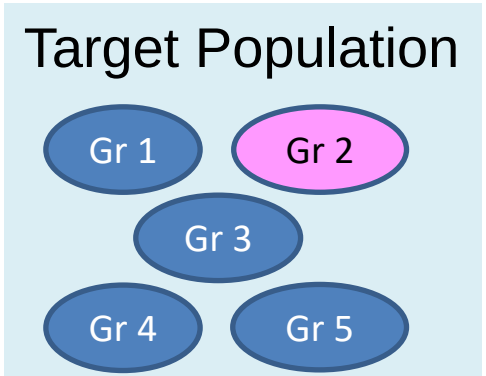
Systematic Approach to Implement HA Standards



Context & Standards -> Key Issues to Improve

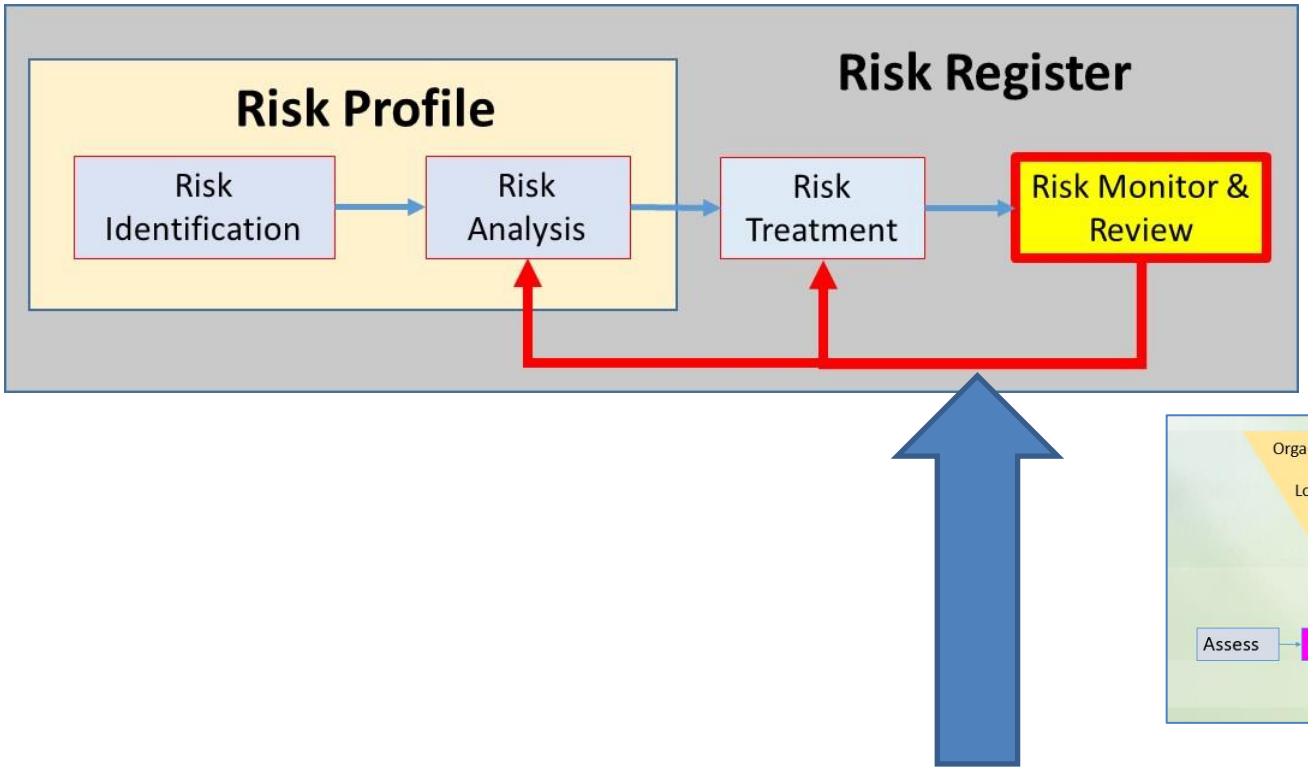
- WHO : concern with special group of patients or staff
- WHERE : concern with some service area
- WHEN : concern with specific timing





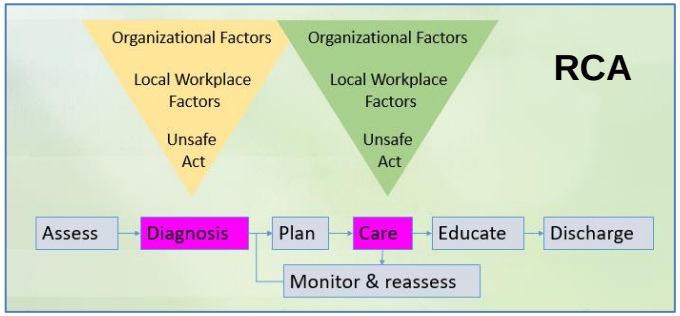
- What is the purpose of the standard
- What are the gaps in standard implementation
- Is there any missing in the linkage between key steps
- What is the impact of those gaps

From RCA to Risk Register



Monitoring & Review

- Compliance to the preventive measure
- Trend of incident
- Result of RCA



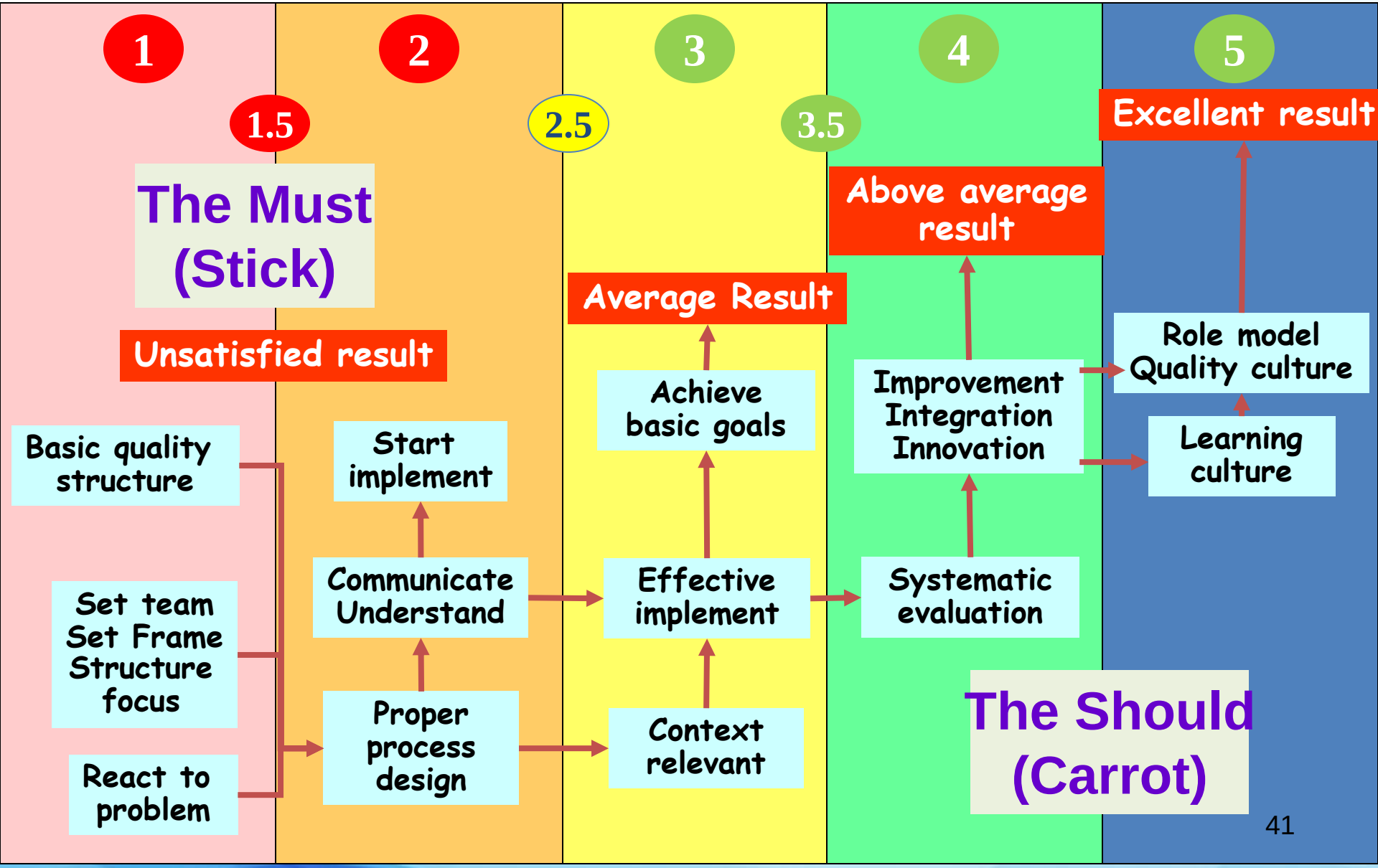
Review of Risk Treatment Plan

What preventive measure should be added or improve?

Find the Root Causes

Local Workplace Factors	Organizational Factors
Patient characteristics	Guideline for this type of patient
Staff fatigue, stress, loss concentration	Work system & environment to prevent
Staff knowledge & skill	Training, information, reminder
Clarity of role & responsibility	Job assignment
Communication among team members	Guideline for documentation, communication, hand-over
Readiness of equipment, device, medication & supplies, facilities	Resource management & adequacy
	Monitoring system & response
	Work process design
	Organization policy & culture

Scoring Guideline:
For Continuous Improvement to Excellence



Rapid Assessment

- Aim to find opportunity for improvement in a short period of time
- Be clear on the issues to be assessed and the results to be used
- Use as small samples as possible
- Use a few valid questions, combine quantitative and qualitative questions

Transformation 4:
Performance Excellence

Performance Excellence

- Measure key performance
  - Key work system
  - Key patient population
- Benchmarking & continuous improvement
- Improve maturity of the organization
  - React to problem -> improvement orientation -. Systematic evaluation & improvement -> learning & strategic improvement -> organizational innovation
- Pursue strategic opportunities
- Prepare for future organizational needs

Moving with Spirituality

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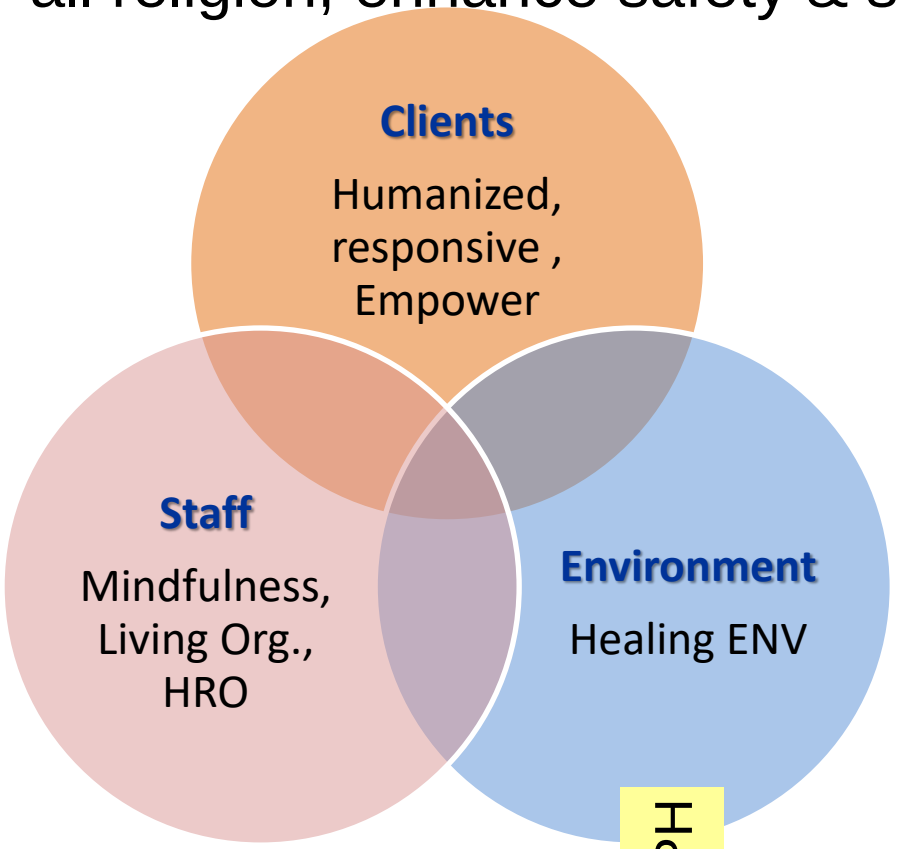
Concepts: Spirituality is our capital, universal to all religion, enhance safety & standard compliance



Spiritual HA

Forum: **Humanized** Healthcare

Forum: **Living** Organization

Spiritual Recognition

Forum: **Wholeness** of Work & Life

Forum: High **Reliability** Organization

Forum: **Engagement** for Quality

Forum: **Inner Power**, Together We Can

5	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17

Transformation 0:
Change individual's way of thinking, way of communication, and way of treating each other

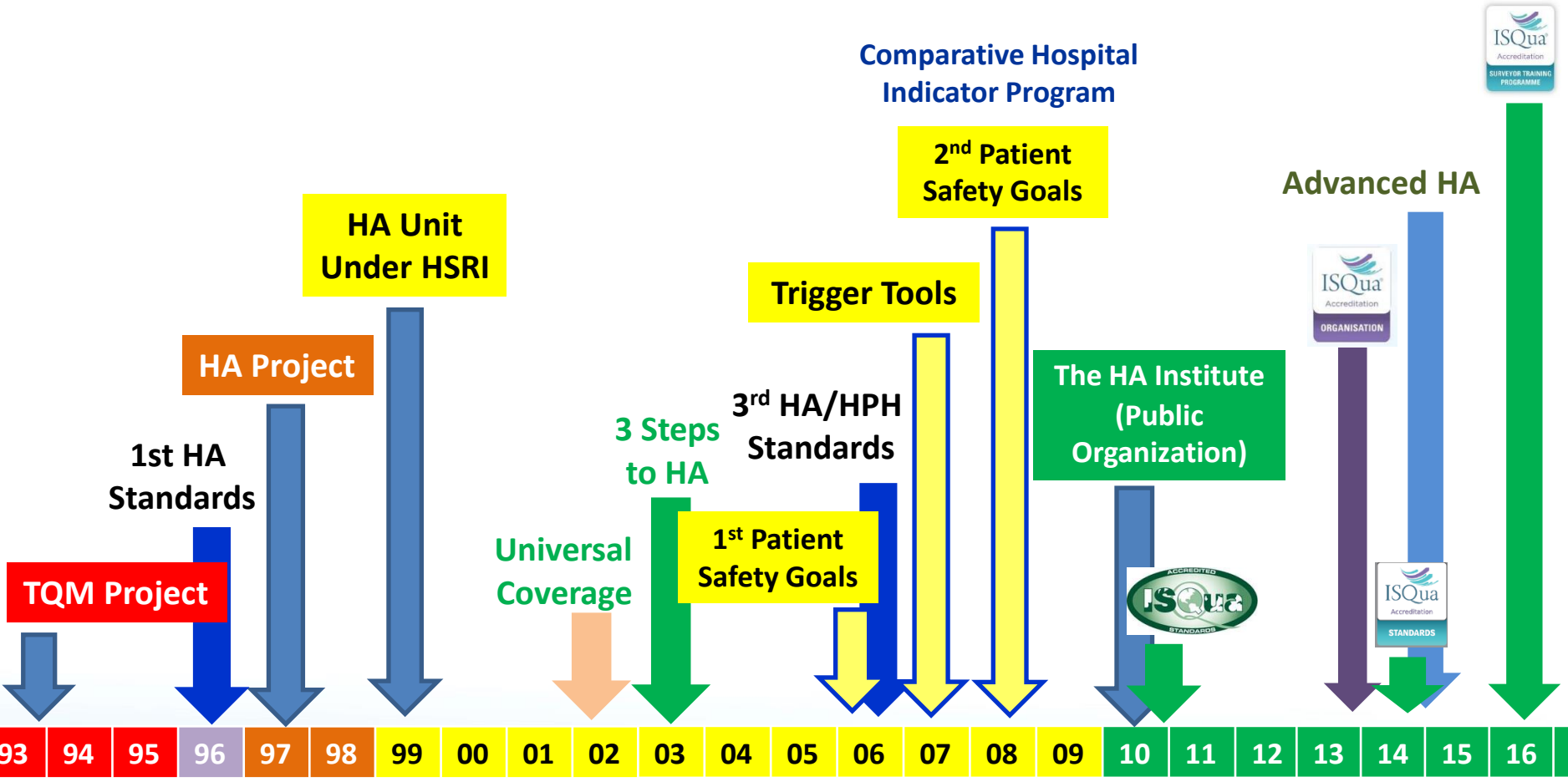
Baldrige Core Values & Concepts

- Systems perspective
- Visionary leadership
- Customer driven excellence
- Valuing people
- Organizational learning and agility
- Focus on success
- Managing for innovation
- Management by fact
- Societal responsibility
- Ethics and transparency
- Delivering value and results

Question & try

Thailand Healthcare Accreditation Journey

Quality Improvement vs Accreditation




Thank
You