INCORPORATING CQI TO IMPROVE CLINICAL PRACTICE

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Defining Quality Improvement in Healthcare

- Quality improvement seeks to:
  - Standardize processes and structure
  - Reduce variation
  - Achieve predictable results
  - Improve outcomes for patients, healthcare systems, and organizations.
- Providing an environment of safety for both patients and practitioners
- Providing Quality Care to all patients

Quality Improvement in Healthcare

- Framework by IOM
  - Safe
  - Effective
  - Timely
  - Efficient
  - Equitable.
  - Patient-centered

- Shift in focus
- Individual responsibility
- System
- Advancement in technology
- Amount of data available

Advancing the Culture of Patient Safety and Quality Improvement

Thomas E MacGillivray [1]

What is Quality Improvement in Healthcare?

Danielle Gagnon
Jan 28, 2022

Congenital Heart Disease Statistics

• 1% of live births in the United States

• 75% are expected to survive one year

• 69% are expected to survive to 18 years of age

• Adult congenital population 5% per year

• More over the age of 20

Centers for Disease Control and Prevention
MMWR
Weekly / Vol. 66 / No. 2

Morbidity and Mortality Weekly Report
January 20, 2017

Inpatient Hospitalization Costs Associated with Birth Defects Among Persons of All Ages — United States, 2013

Annelise C. Arth, MPH[1]; Sarah C. Tinker, PhD[1]; Regina M. Simeone, MPH[1]; Elizabeth C. Ailes, PhD[1]; Janet D. Cragan, MD[1]; Scott D. Grosse, PhD[2]

Quality Improvement in Congenital Heart Surgery

- Improved outcomes
- Less variability between institutions
- Prioritizing QI and Patient Safety
- Culture
- Commitment
- Participation

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Quality Improvement in Congenital Heart Surgery

Timothy W. Pettitt, MD

Culture

- Focus on improving the system, not the mistakes
- Focus on outcomes, not just the processes
- Pay attention to underlying systems
- Listen to patients
- Have leaders and clinical staff integrally involves

Commitment & Participation

- M&M conferences
- RCA
- QI Review
- National Databases
  - STS
  - CardioAccess
  - Pedi Perf Form
  - ELSO

Quality Improvement in Perfusion

- Actively involved in Quality Improvement?
- Continuously updating and changing clinical practice?

Improve Clinical Practice

- Improvement
  - Processes
  - Systems of Care
- Patient Safety/Harm Prevention
- Validate current practice
- Standardize practice

Motivated for Change

- Team Motivation
- Time
- Resources
- Knowledge
- Ideas

What Motivates Your Team?

- Support
- Incentives/Rewards
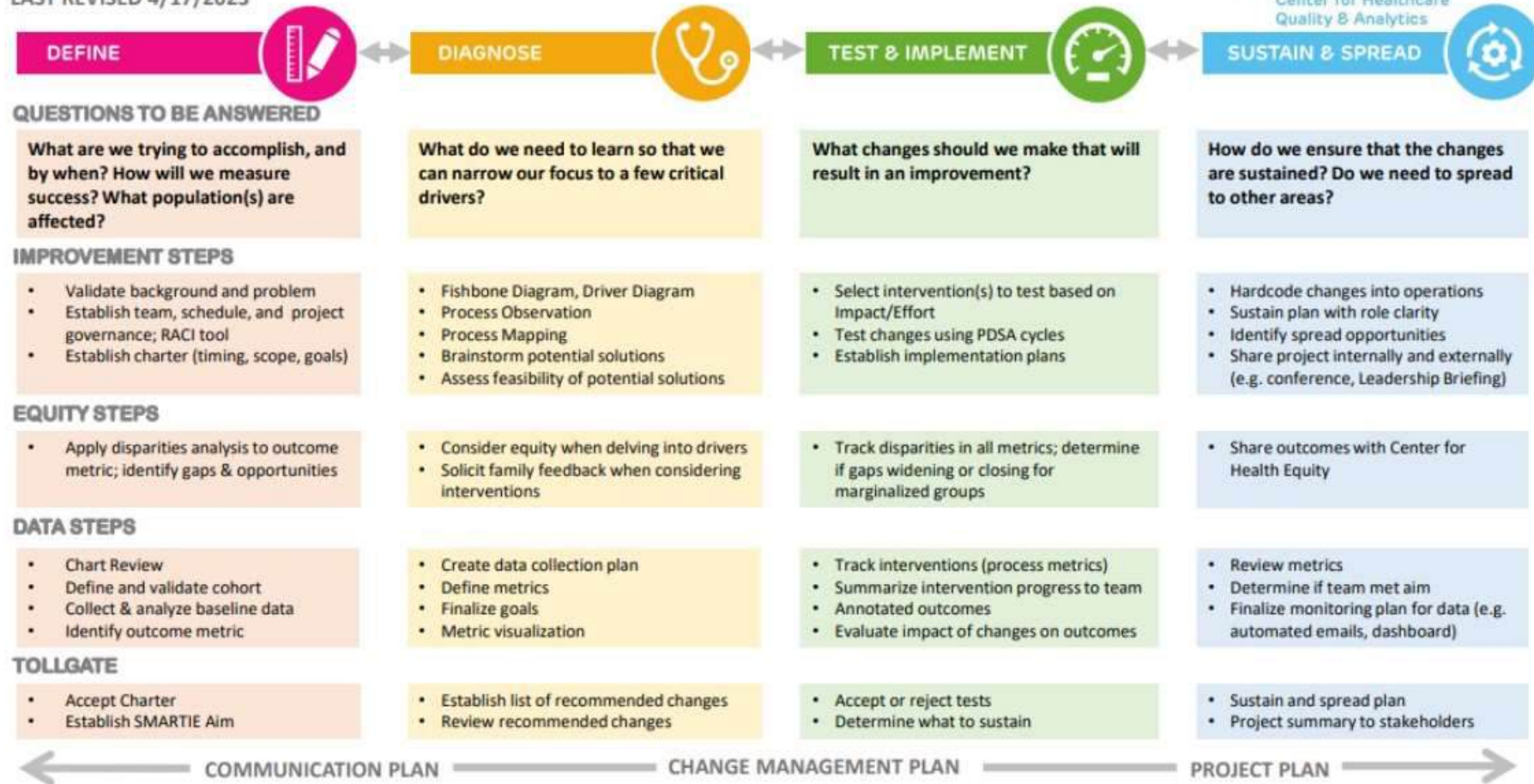- Foster Ideas
- Positive Feedback
- Flexibility

Resources: Hospital Systems

- Patient Safety
- Harm Prevention
- Medication Safety
- Data Analytics
- Human Factors
- Clinical Pathways
- Simulation
- Quality Improvement

CHOP IMPROVEMENT FRAMEWORK

LAST REVISED 4/17/2023

Children's Hospital of Philadelphia®
Center for Healthcare Quality & Analytics

DEFINE	DIAGNOSE	TEST & IMPLEMENT	SUSTAIN & SPREAD

QUESTIONS TO BE ANSWERED

What are we trying to accomplish, and by when? How will we measure success? What population(s) are affected?	What do we need to learn so that we can narrow our focus to a few critical drivers?	What changes should we make that will result in an improvement?	How do we ensure that the changes are sustained? Do we need to spread to other areas?

IMPROVEMENT STEPS

• Validate background and problem • Establish team, schedule, and project governance; RACI tool • Establish charter (timing, scope, goals)	• Fishbone Diagram, Driver Diagram • Process Observation • Process Mapping • Brainstorm potential solutions • Assess feasibility of potential solutions	• Select intervention(s) to test based on Impact/Effort • Test changes using PDSA cycles • Establish implementation plans	• Hardcode changes into operations • Sustain plan with role clarity • Identify spread opportunities • Share project internally and externally (e.g. conference, Leadership Briefing)

EQUITY STEPS

• Apply disparities analysis to outcome metric; identify gaps & opportunities	• Consider equity when delving into drivers • Solicit family feedback when considering interventions	• Track disparities in all metrics; determine if gaps widening or closing for marginalized groups	• Share outcomes with Center for Health Equity

DATA STEPS

• Chart Review • Define and validate cohort • Collect & analyze baseline data • Identify outcome metric	• Create data collection plan • Define metrics • Finalize goals • Metric visualization	• Track interventions (process metrics) • Summarize intervention progress to team • Annotated outcomes • Evaluate impact of changes on outcomes	• Review metrics • Determine if team met aim • Finalize monitoring plan for data (e.g. automated emails, dashboard)

TOLLGATE

• Accept Charter • Establish SMARTIE Aim	• Establish list of recommended changes • Review recommended changes	• Accept or reject tests • Determine what to sustain	• Sustain and spread plan • Project summary to stakeholders

← COMMUNICATION PLAN ——— CHANGE MANAGEMENT PLAN ——— PROJECT PLAN →

Resources within the Cardiac Center

- Cardiac Center Quality and Safety

- Patient Safety Officer-Nursing

- Quality Improvement Coordinators

- Perfusion Coordinator
  - Point person to help manage and facilitate projects within the department
  - Represent in multidisciplinary projects

How Can We Improve Clinical Practice with QI?

- Quality of care
- Safety of our practice
- Technology for efficiency and productivity
- See improvements in the outcomes of our patients

Ideas?!

New Ideas

- Conferences
- Colleagues
- Work Experiences

Old Ideas

- Expand on previous project
- Ideas that evolved from new protocols or an OR experience

Project Ideas and the 'Why?'

Monthly Chart Review
Standardizing data in charts for accuracy related to the national database
-Rich

Simulation
Give everyone on the team hands on time with all devices
-Justin

Cell Saver
Standardize the product produced to maximize Hct and patient benefit
-Celia

Alpha Stat vs pH Stat
Standardize practice
-Brandon

Project Ideas and the 'Why?'

Arterial cannula project
Validate when we step up cannula sizes & improve upon current practice
-Justin

Data Driven Initiative
To help perfusionists optimize management decisions & improve patient outcomes
-Dave

Methyl Pred
Validate whether steroids improve
Led to practice change and published the data
-Molly

Blood Product Waste
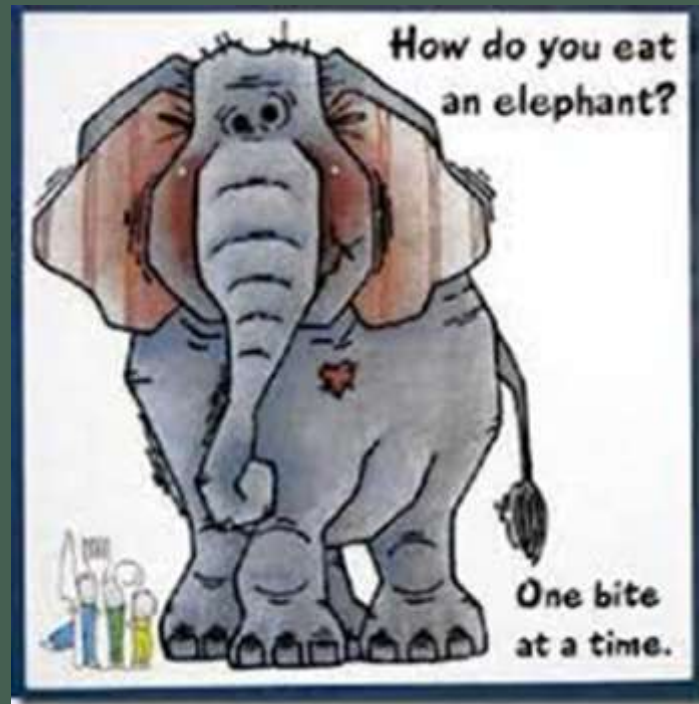Save valuable resources
-Kellie

Goal of Quality Improvement

- Reducing adverse events
- Reducing errors
- Efficiency in techniques
- Improving standards to practice
- Evaluating Technology and Equipment

Improving Patient Outcomes

Food for Thought

THANK YOU

Questions?
Project Ideas?