Fundamentals of Health Workflow Process Analysis and Redesign

Unit 10.11

Maintaining and Enhancing Improvements

Unit Objectives

Upon successful completion of this unit, you should be able to:

- Design control strategies for clinic processes.
- Develop and present a sustainability and continuous improvement plan for a healthcare setting
- Working with practice staff, develop a set of plans to keep the practice running if the EHR system fails.
- Working with practice staff, evaluate the new processes as implemented, identify problems and changes that are needed

Topics – Unit 10.11

- CQI
- Process Control
- Business Continuity Plan
  - Natural Disaster
  - Pandemic
  - Downtime

Sustainability

- Important
- Realize full potential
- Organizational metrics and methods

CQI

- The philosophy of continual improvement of the processes associated with providing a good or service that meets or exceeds customer expectations, in this case the service of quality health care
- Adds an emphasis on understanding and improving the underlying work processes and systems in order to add value

CQI

To achieve continuous quality improvement “it is not enough to do your best …”

QI sustainability Motivators

- Increase ability to achieve collaborative goals
  - more release time (60%)
  - additional money (39%)
- Other important motivators were:
  - improving the quality of care
  - professional development
  - personal recognition
  - personal satisfaction
- Relatively few respondents were motivated by:
  - career promotion opportunities (10%)
  - fear of negative consequences (18%)

QI Sustainability Challenges

- Time burden of collecting data during initial QI implementation
- Funding
- Personnel or Staff Turnover (loss of memory of changes)
- Decreasing interest and enthusiasm over time

Tips for promoting a culture of quality improvement

- Educate staff about QI
- Set a routine schedule for reviewing data.
- Communicate results from improvement projects
- Display data where patients can see them.
- Celebrate successes.
- Articulate the values of QI in meetings.
- Provide opportunities for all staff to participate in QI teams.
- Reward staff members in their performance evaluations.

Improvement Worksheet Topics

- Primary goal and completion date
  - Secondary goals and completion dates
- Process problem areas to address (n)
  - Potential causes
  - Most likely causes
  - Root cause
  - Ways to streamline the process
  - Ways you can modify the process

EHR and Quality Improvement

- Data systems that automatically capture and track key clinical information, specifically the metrics of improvement and here the “meaningful use” criteria will make the QI process more efficient and potentially less costly.
- These systems typically require significant initial financial and social investment.

Quality Council

- Establish core quality standards
- Identify Quality metrics
- Identify and define Quality requirements
- Clarify which performance measures are key to gauging actual quality improvement performance
- Collect and analyze data to understand key variables and process drivers
- Legitimize value of QI to ensure best use of resources and measure improvement associated with these activities
- Standardize collection and analysis of quality Trends
- Educate organization and train key staff

Process Control

- **Process control** is a statistics and engineering discipline that deals with architectures, mechanisms, and algorithms for controlling the output of a specific process.
- **Statistical process control (SPC)** is the application of statistical methods to the monitoring and control of a process to ensure that it operates at its full potential to produce conforming product.

Challenges to SPC in Healthcare

- SPC is now transferring into Healthcare
- SPC was first used in manufacturing industry
- SPC is not frequently included in books on medical statistics.
- SPC is a way of thinking which challenges many of our fundamental assumptions about how to deliver improvement

Statistical Process Control

- Key **tools i**n SPC are
  - Control charts,
  - A focus on continuous improvement and
  - Designed experiments
- Examines a process and the sources of variation in that process
- Reduces waste
- Reduces the time required to produce the product or service from end to end

Statistical Process Control

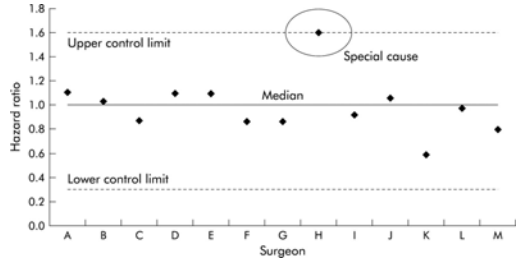
- Statistical Process Control Activities
  - understanding the process;
  - understanding the causes of variation; and
  - elimination of the sources of special cause variation.
- Monitored using control charts to identify variation due to special causes
- Causes for excessive variation must be determined
  - Designed experiments
  - Pareto charts

Features of a Control Chart

- Simplicity
- Retain information in the data by plotting
  - ease of communication associated with (good) graphs
  - incorporating statistical thinking.
- Provide guide for continual action—for common and special cause variation.
- Provide reminder that gains lie in reducing common cause variation
- Overcome the fundamental limitations and negative consequences of comparison with standards.

Examples of CONTROL CHARTS

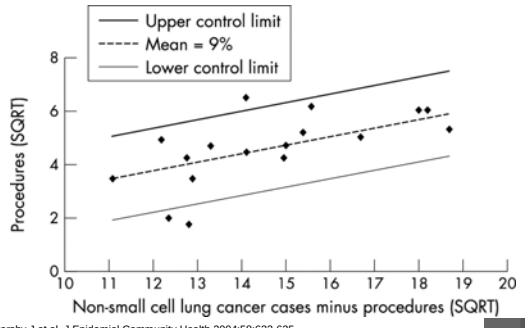
Control Chart of Surgeon Specific Hazard Ratios



Mohammed M A Qual Saf Health Care 2004;13:243-245

QSHC

Control Chart of Surgery to Non-surgery Ratio



Battersby J et al. J Epidemiol Community Health 2004;58:623-625

JECH

Business Continuity Plan

Business Continuity Planning

- Business Continuity Plan
- BCP Team
- BCP Objectives
- BCP Goals
- Essential Functions
- Critical Processes
- Exercises for Success

BCP Team

- Assemble Core Team to oversee BCP development
- Identify BCP Points-of-Contact for organizational units
- Define the overarching BCP program
- Develop a BCP timeline

BCP Plan Objectives

- Ensure continuous performance of an organization's mission essential functions in an emergency
- Ensure safety of employees
- Protect essential equipment, records, and other assets
- Reduce disruptions to operations
- Minimize damage and losses
- Achieve an orderly recovery from emergency operations
- Identify alternate locations and ensure operational and managerial requirements are met before an emergency occurs.

Key BCP Plan Goals

- Essential organizational functions, vital systems, data and information identified and prioritized
- Critical elements capable of being recovered quickly to resume operations
- People know who is in charge
- Back-up personnel are trained
- Alternate work locations are predefined
- Checklists are predefined to guide the organization in responding to an emergency

Essential Functions

- Functions that MUST be performed to achieve the organization's mission
- Communications
- Vital Records, Systems and Equipment
- Key Personnel
- Alternate Work Sites
- Testing, Training & Exercises

Critical Processes

Processes or services that must be recovered within 24 hours after a disruption to ensure resumption of the essential function.

Includes all resources necessary to carry out the critical process:

- Personnel
- Data or vital records; and
- Systems and equipment

Exercise for Success

- Exercises are events that allow participants to apply their skills and knowledge to improve operational readiness
- Goal of exercises is to prepare for a real incident involving BCP activation
- Three types of exercises:
  - Tabletop
  - Functional
  - Full-scale

References

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3. Mohammed, M A, **Using statistical process control to improve the quality of health care,** Editorial in Statistical process control, *Quality and Safety in Health Care 2004;13:243-245*
4. Battersby, J., Flowers, J., Harvey, I., **An alternative approach to quantifying and addressing inequity in healthcare provision: access to surgery for lung cancer in the east of England** *Epidemiology and Community Health,* Theory and methods *2004;58:623-625*