



Flex
Monitoring
Team

University of Minnesota
University of North Carolina at Chapel Hill
University of Southern Maine

Outcome Measurement for Financial and Operational Improvement

John Gale, MS

December TASC 90 Call

December 9, 2021



Learning Objectives

- Review program planning and monitoring issues
 - Theory of change
 - Output/process vs. outcomes
 - Rolling up outcome to connect interventions to desired goals
- Outcome measures for financial and operational improvement (FOI) interventions
 - Educational and collaborative learning
 - In-depth assessment and action planning
 - Revenue cycle management
 - Chargemaster reviews
 - Service line assessments
 - Market share and outmigration analyses
 - Lean and Six Sigma process improvement



Theory of Change (TOC)

- Describes how and why a set of activities are expected to lead to short, intermediate, and long-term outcomes over time
 - Develops a causal pathway to identify necessary and sufficient outcomes needed to achieve a goal
 - Creates a roadmap that shows how a set of actions would help achieve a goal
 - Identifies and highlights interventions and assumptions that are critical to produce an outcome
 - Highlights critical areas addressed by external actors and how the project will link to them



TOC: Key Questions

- What problematic condition exists that demands a programmatic response?
- Why does it exist?
- For whom does it exist?
- Who has a stake in the problem?
- What can be changed?



Evaluating a TOC

- What is the causal chain of events that leads from implementation to the desired outcomes?
- Are outcomes sequenced properly?
 - Do lower-level outcomes lead to higher-level outcomes?
 - Do proposed interventions connect to desired outcomes?
- Are there any large leaps in logic or missing elements?
 - Are short-/intermediate-term outcomes necessary and sufficient to cause the higher-level outcomes?
 - Are all necessary outcomes that others are responsible for included in the TOC?
- Are there sufficient time and resources?

Outputs vs. Outcomes

- Outputs
 - Result from successful completion of program activities
 - Examples: technical assistance provided to CAH staff
- Outcomes
 - Financial and/or operational changes/benefits to CAHs that result from program activities
 - Time specific – short, intermediate, and long term
 - Become more difficult to measure and assess impact as time horizons become longer
 - Chain of outcome evidence becomes important



Program Chain of Outcomes

- Broad goals are difficult to measure
 - Causality/attribution is difficult to prove
 - Many entities, programs, and stakeholders impact CAHs
 - Data collection is expensive
 - Broad goals may have long time horizons
- Program's TOC provides a "chain of outcomes"
 - Describes why and how interim outcomes will monitor progress towards to proposed long term program impact
 - Interim outcomes are less expensive/easier to measure
 - Provides evidence that program is on track to achieve goals



Evaluating Chain of Outcomes

- Do long-term outcomes represent meaningful change in participants' performance?
- Do outputs and short, intermediate, and long-term outcomes relate logically to each other?
 - Check “If-Then” relationships between outputs and outcomes
 - If accurate, then each output/outcome should be expected to result in the next outcome of the chain
- Are outcomes achievable given resources and program's influence over participants?
- Have potential negative outcomes/unintended consequences been identified?



Revenue Cycle Improvement: Outcomes

- Short term – 1 to 2 years
 - Implement improvements to coding and billing systems
 - Reduce rejected claims and days in accounts receivable, minimize billing errors, improve speed of payment from third party payers, and reduce bad debt levels
- Intermediate-term – 3 to 4 years
 - CAHs meet industry and/or peer group benchmarks for efficient revenue cycle operations
- Long-term – 5 or more years
 - CAHs maintain industry and/or peer benchmarks for profitability (e.g., total or operating margins, return on equity) and/or liquidity (e.g., current ratio or days cash on hand)



Measure Selection Criteria

- Relevance
- Meaningfulness and interpretability
- Scientific or clinical evidence
- Reliability or reproducibility
- Feasibility
- Validity
- Importance



Defining and Writing Outcome Measures

- Clarity and specificity are key
 - **S**pecific
 - **M**easureable
 - **A**ttainable
 - **R**esults oriented (they must be actionable)
 - **T**imed
- Identify time frame for expected outcomes
- For which outcomes are measures necessary?
- What are the sources of data for measures?
- Extract measurable objectives from identified outcomes



Educational Activities

- TOC: Provide context and background information to support FOI programming and share knowledge between CAHs
- Measures primarily output/process oriented
 - # of meetings, educational programs, and events held
 - # of CAHs and staff participating in meetings and events
 - % of CAHs reporting significant changes in knowledge and skills
 - % of CAHs that have implemented changes in policies and/or operations



Collaborative Learning Activities

- TOC: Provide a foundation to implement FOI initiatives. Encourages shared learning, use of best practices, implementation of common interventions, and consistent reporting of common metrics
- Measures primarily output/process oriented
 - % of CAHs participating in collaborative activities
 - % of CAHs reporting satisfaction with their participation
 - % of CAHs implementing the common intervention
 - % of CAHs reporting data on impact throughout the project lifecycle



In-Depth Assessments and Action Plans

- TOC: Evaluate challenges faced by vulnerable CAHs, identify areas for improvement, and provide action plans to address their vulnerabilities
- Measures primarily output/process oriented, outcome measures will depend on interventions implemented
 - # & % of CAHs receiving in-depth assessments/action plans
 - # assessment reports and action plans completed
 - # and % of CAHs implementing identified strategies



Revenue Cycle Management

- TOC: Improve administrative functions related to claims processing and payment to ensure prompt and appropriate payment for services rendered
 - Net collection %
 - Net patient revenue per patient encounters
 - Net patient revenue as a % of total patient revenue
 - Bad debt expense as a % of total patient revenues
 - Total uncompensated care as a % of total patient revenues
 - Days in accounts receivable
 - Point of service patient collections as a % of net revenue
 - % of claims denied



Chargemaster Review

- TOC: Identify and correct errors/omissions in a CAH's list of procedures and related codes and charges to provide a solid foundation for its revenue cycle
 - Gross price per discharge
 - Gross price per visit
 - Gross revenue per adjusted admission
 - Net revenue per adjusted admission



Service Line Assessments

- TOC: Evaluate which service lines are essential to a CAH's long-term success, which should be discontinued, which can be improved, and which may be added based on market demand and/or the needs of the community
 - Average daily census by service line
 - Outpatient utilization by service line
 - Contribution margin (contribution to profitability) by service line
 - Acute care discharges by service line
 - Outpatient gross revenue as a % of gross patient revenue



Market Share / Outmigration Analyses

- TOC: Quantify market share or outmigration patterns; determine where residents go for care, what services they obtain outside of the community, and why they are seeking care elsewhere; analyze factors impacting market share or outmigration
 - Inpatient market share (by service line)
 - Increase in utilization (by service line)
 - Increase in utilization by individuals living in the community compared to local population growth (by zip code)
 - Improvement in patient satisfaction
 - Changes in average daily census (or patient volume)



Lean / Six Sigma

- TOC: Minimize waste in processes, procedures, and tasks through ongoing system of improvement (Lean). Reduce variations in care delivery by minimizing medical errors and removing defects from care processes (Six Sigma).
 - FTE personnel per adjusted average daily census
 - FTE personnel per 100 adjusted discharges
 - Salary and benefits expense per FTE personnel
 - Overhead expense as a percentage of operating expense
 - Worked hours per patient day
 - Worked hours per emergency department visit
 - Worked hours per service or visit

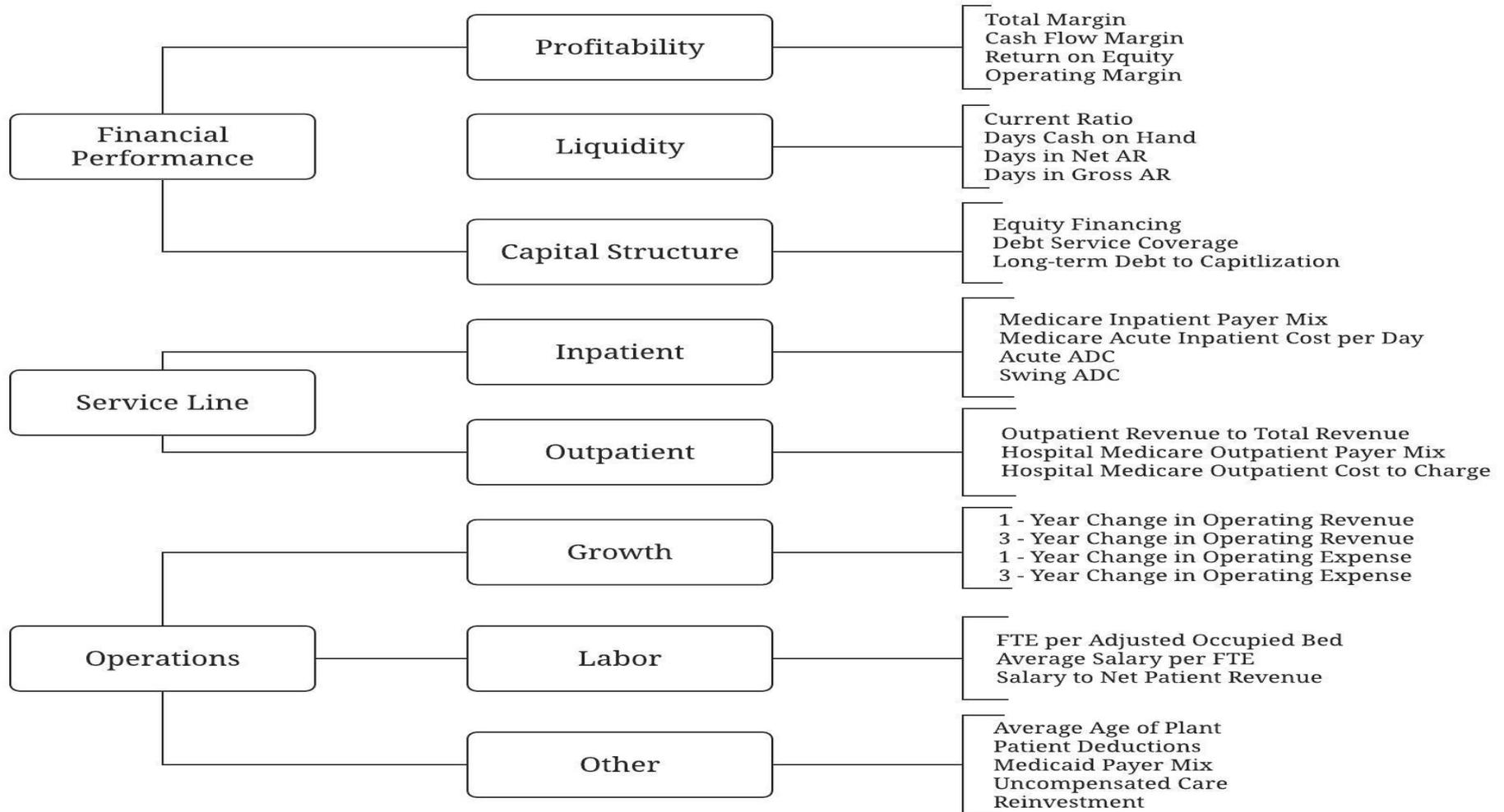


Flex Monitoring Team Resources

- Critical Access Hospital Measurement and Performance Assessment System
 - Domains: finance and operations, quality, community benefit and health improvement
 - Searchable database of CAH-relevant performance measures in the three domains
 - Website: <https://cahmpas.flexmonitoring.org/>
- Creating Program Logic Models: A Toolkit for State Flex Programs
- Outcome Measures for State Flex Program Financial and Operational Improvement Interventions
 - Website: <https://www.flexmonitoring.org/>



CAHMPAS Financial Domains





Recommendations

- Reduce emphasis on output measures
 - Useful for monitoring and managing activities
 - Does not reflect outcomes/impact of activities
- “An early emphasis on outputs often obscures a clear focus on outcome measures”
- Primary focus should be on:
 - Short-/Intermediate-term outcomes (chain of evidence)
 - TOC that describe how these outcomes lead towards long-term outcomes and goals



Conclusions

- The key points to remember are:
 - Successful programs build on a clear TOC
 - Use TOC and evidence-base for your interventions to identify potential measures
 - Be clear about data sources
 - Balance the need for original data against the costs of collecting the data
 - Roll up short, intermediate, and long-term measures to document progress towards achievement of high-level goals
 - Don't reinvent the wheel, use measures that have been tested in other programs and adapt them to your specific needs



**Flex
Monitoring
Team**

University of Minnesota
University of North Carolina at Chapel Hill
University of Southern Maine

Thank You!

Subscribe to FMT email updates, access publications, and contact us at

www.flexmonitoring.org

This project is supported by the Federal Office of Rural Health Policy (FORHP), Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services (HHS) under cooperative agreement #U27RH0180. The information, conclusions and opinions expressed in this presentation are those of the authors and no endorsement by FORHP, HRSA, or HHS is intended or should be inferred.