# *The Flex Monitoring Team*

Flex Orientation Program
Duluth, Minnesota
October 18, 2011

George H. Pink
University of North Carolina at Chapel Hill

A Performance Monitoring Resource for
Critical Access Hospitals, States, and Communities

Flex Monitoring Team

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

# *Flex Monitoring Team (FMT)*

- Universities of Minnesota, Southern Maine, and North Carolina at Chapel Hill
- Cooperative Agreement with ORHP
- Collaboration with TASC
- A performance monitoring resource for Critical Access Hospitals (CAHs), States, and Communities

# *FMT Objectives*

- Improving access to and the quality of health care services;
- Improving the financial performance of CAHs; and
- Engaging rural communities in health care system development.

# FMT Continuing Projects

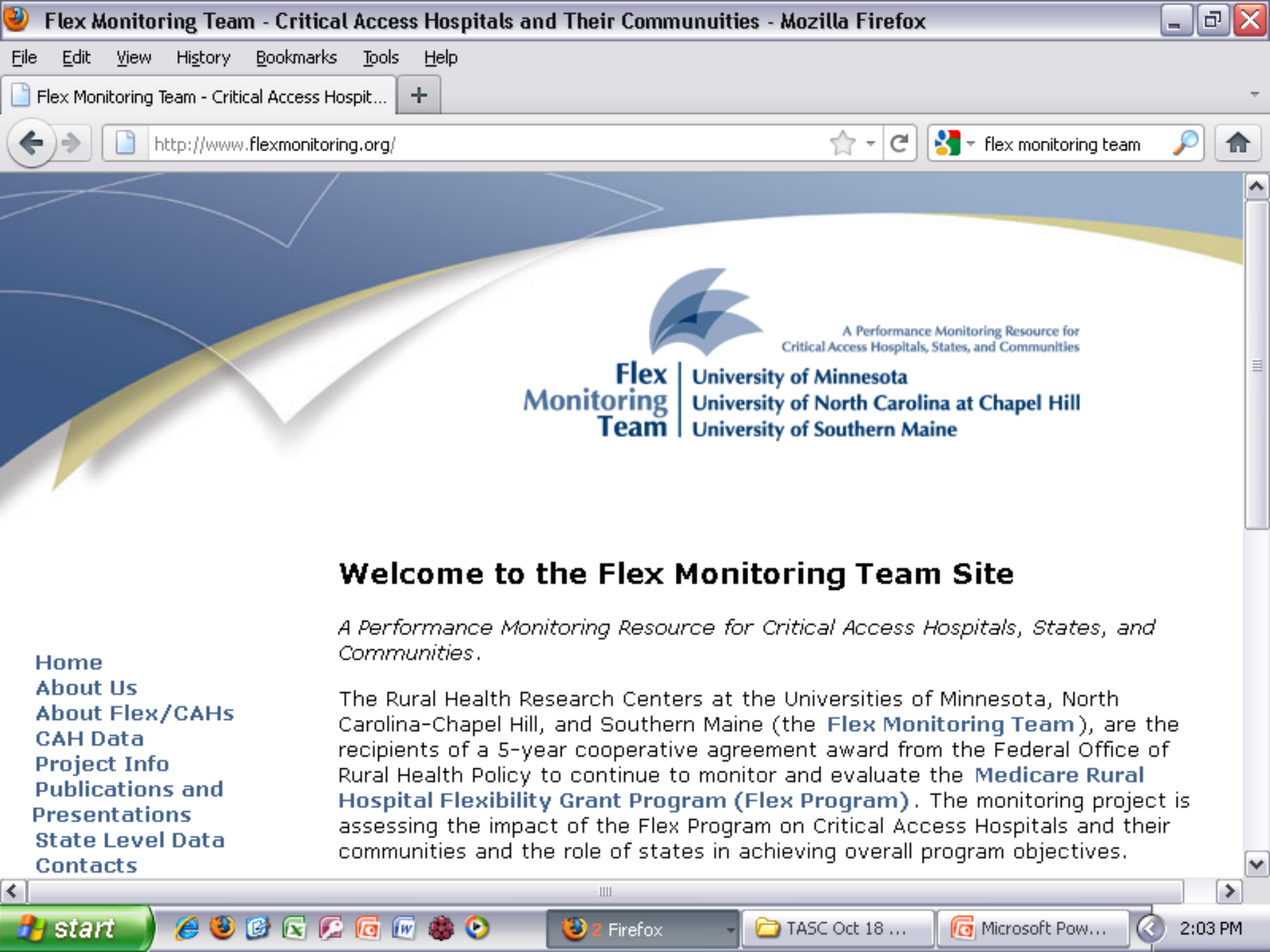
- Maintaining and Updating the National CAH Database
- Measuring Financial Performance in CAHs
- Measuring Quality Performance: National and State CAH Hospital Compare Analyses

# *FMT New Projects*

- Strategies for Improving the Safety of Care Delivered by Critical Access Hospitals
- EMS Systems of Care at the Community and Regional Level: State Flex Program Initiatives and Support
- Developing an Evaluation Framework to Support the Multi-State Quality Improvement Project

# FMT New Projects

- Rural Relevant Quality Measures and Small Volume Issues for Critical Access Hospitals
- Evidence-Based Programs and Strategies for Improving the Quality of Care for Critical Access Hospital Patients
- Improving Financial Performance and Condition -- Evidence from the Literature, Hospital Survey and A Sample Of High-Performing CAHs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Welcome to the Flex Monitoring Team Site
A Performance Monitoring Resource for Critical Access Hospitals, States, and Communities.
The Rural Health Research Centers at the Universities of Minnesota, North Carolina-Chapel Hill, and Southern Maine (the Flex Monitoring Team), are the recipients of a 5-year cooperative agreement award from the Federal Office of Rural Health Policy to continue to monitor and evaluate the Medicare Rural Hospital Flexibility Grant Program (Flex Program). The monitoring project is assessing the impact of the Flex Program on Critical Access Hospitals and their communities and the role of states in achieving overall program objectives.
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# FMT Projects

1. CAH database
2. CAH financial performance
3. CAH quality performance
4. Community benefit
5. CAH scope of service

# 1) CAH Database

- Complete list of CAHs: name, city, state, ZIP, date of conversion, # of beds
- Drop down menu of lists by state
- National map of CAHs
- Table of state-level totals

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http://www.flexmonitoring.org/cahlistRA.cgi
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# CAH Information

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The data accessed from this page are assembled from multiple sources. The complete list of CAHs and the CAH list by state contain the most current information and are updated Quarterly. These lists are based on CMS quarterly reports, augmented by information provided by state Flex Coordinators.

- **A Complete List of Critical Access Hospitals (1,327 CAH hospitals, current as of March 31 2011)** (Excel)
  Individual State drop down information is derived from this data set.
- **Number of CAHs per State (the list is current as of March 31 2011)**
- **Map of Critical Access Hospitals (the map is current as of March 31 2011)**

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# 2) CAH Financial Performance

- A website that contains a variety of resources useful to a State Flex Coordinator interested in understanding the financial performance of Critical Access Hospitals.
- Hospital-level Resources:

  CAHFIR 8th Issue *Hospital Summary* for each CAH in your state
  CAHFIR 8th Issue *Hospital Report* for each CAH in your state
  CAHFIR 8th Issue *Hospital Graphs* for each CAH in your state
  CAHFIR 8th Issue *Hospital Cover Letters* for each CAH in your state

# 2) CAH Financial Performance

- State-level Resources:

  CAHFIR 8th Issue *State Summary* for each state
  CAHFIR 8th Issue *State Data* for your state
  CAHFIR 8th Issue *State Medians* for all states
  CAHFIR 8th Issue *State Distribution Graphs* for each state
  CAHFIR 8th Issue *State Indicator Graphs*

- Other Resources:

  CAHFIR 8th Issue *Presentation*
  CAHFIR 8th Issue *Calculator*
  CAHFIR 8th Issue *Primer*
  CAHFIR 8th Issue *SFC Primer*

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# CAH Financial Indicator Reports
## Document Delivery System

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Flex Monitoring Team Website

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## Welcome to the Flex Monitoring Team's CAH Financial Indicators Report Website!

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NOTE (Sep 7 2011): We have discovered an error in the peer group assignment process. Furthermore, we revised our method this year for determining whether indicator values were "about the same"; based on feedback from administrators, we will be changing this method. New reports are being produced and should be available the week of September 12. We apologize for the inconvenience and misunderstanding.

**News from HRSA:** The National Health Service Corps is excited to announce that, starting today, Critical Access Hospitals (CAHs) may now apply to become an NHSC approved site. To apply, please visit http://nhsc.hrsa.gov/communities/apply.htm and click on the "Become an NHSC Site. Apply Here." button. As part of the online application, you will be asked to select your site type. Please note you can find "Critical Access Hospital" under the "Other Health Facility" option on the list. CAHs must apply to become an NHSC-approved site. By becoming an NHSC-approved site, you will gain the ability to recruit NHSC primary care providers in communities with limited access to care. In order to be eligible, CAHs must be aligned with an outpatient setting and must engage in primary health care and related inpatient services. For more information about the Corps, site eligibility, and what it means to be an approved site, we encourage you to review the updated NHSC Service Site Reference Guide and Frequently Asked Questions document, which can be accessed at http://www.nhsc.hrsa.gov/communities. We look forward to working with you in the future. Together, we can continue strengthening the primary care workforce serving in areas with limited access to care.

This website contains a variety of resources useful to ORHP staff interested in understanding the financial performance of Critical Access Hospitals. Click on any of the links below to access these resources.

### *Hospital-level Resources*

CAHFIR 8th Issue *Hospital Summary* for each CAH in the country

CAHFIR 8th Issue *Hospital Report* for each CAH in the country

CAHFIR 8th Issue *Hospital Graphs* for each CAH in the country

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# 2) CAH Financial Performance

- Recent products:
  - CAH Financial Indicators Report: Summary of Indicator Medians by State (data summary report, August 2011)
  - Improving Financial Performance of CAHs (presentation, July 2011)
  - Risk of Financial Distress Among CAHs: A proposed Model (policy brief, April 2011)

# 3) CAH Quality Performance

- National and State Reports on CAH participation – annually and trends over time
- Aggregate data across CAHs nationally and by state (25 patients per measure minimum)
- State report drop down menu on FMT website

# 3) CAH Quality Performance

- Recent products:
  - CAH Quality Measurement and Evidence-Based Quality Improvement (presentation, July 2011)
  - Evidence-Based Pneumonia Quality Improvement Programs and Strategies for Critical Access Hospitals (policy brief, June 2011)
  - Critical Access Hospital Year 6 Hospital Compare Participation and Quality Measure Results (briefing paper, April 2011)

# *4) Community Benefit*

- Community impact framework & CAH-specific indicators
- Community benefit/impact indicator reports
- Track CAH efforts to develop systems of care
- Examine role of Flex Program in supporting CAH community-focused activities
- Monitor national/state community benefit requirements and potential impact on CAHS

# *4) Community Benefit*

- TA & support on impact and benefit reporting
- Support for periodic assessments
- Projects to improve community impact engagement activities
- Networking at the community level
- Identify & promote best practices
- Disseminate information on community impact of CAHs

# 4) Community Benefit

- Recent products:
  - Practical Community Health Needs Assessment and Engagement Strategies (presentation, May 2011)
  - Community Benefits Under Health Reform: Focus on Community Needs and Engagement (presentation, February 2011)

# 5) Scope of Service

- Recent products:
  - Provision of Long Term Care Services by Critical Access Hospitals: Are Things Changing? (policy brief, March 2011)
  - Changes in obstetrical services among Critical Access Hospitals (policy brief, March 2011)

# 6) State Performance

- Recent products:
  - CAH Financial Indicators Report: Summary of Indicator Medians by State (data summary report, August 2011)
  - Implementing the ACA: Rural Opportunities and Challenges (presentation, July 2011)

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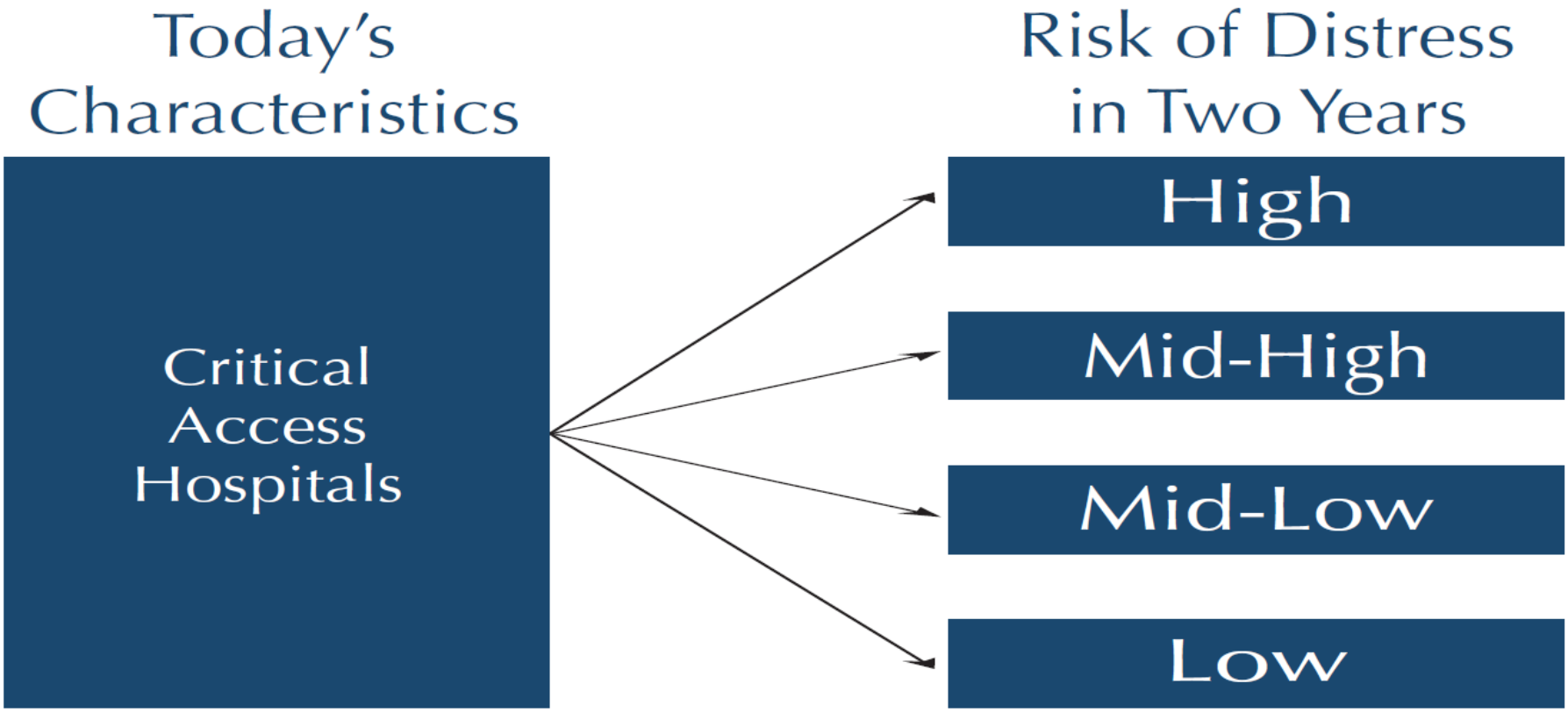
Policy Brief #20
April 2011

# Risk of Financial Distress Among Critical Access Hospitals: A Proposed Model

*Mark Holmes, PhD and George H. Pink, PhD*
*North Carolina Rural Health Research and Policy Analysis Center, University of North Carolina*

http://www.flexmonitoring.org/documents/PolicyBrief20_Strategies.pdf

# Basic model


Today's Characteristics
Critical Access Hospitals
Risk of Distress in Two Years
High
Mid-High
Mid-Low
Low

# Markers of Financial Distress

1. Closure
2. Negative fund balance
3. Declining (>25%) fund balance
4. 3 years negative operating margin
5. Negative cash flow margin

- In some circumstances, there may not be financial distress even though the markers suggest otherwise

# Predicting variables

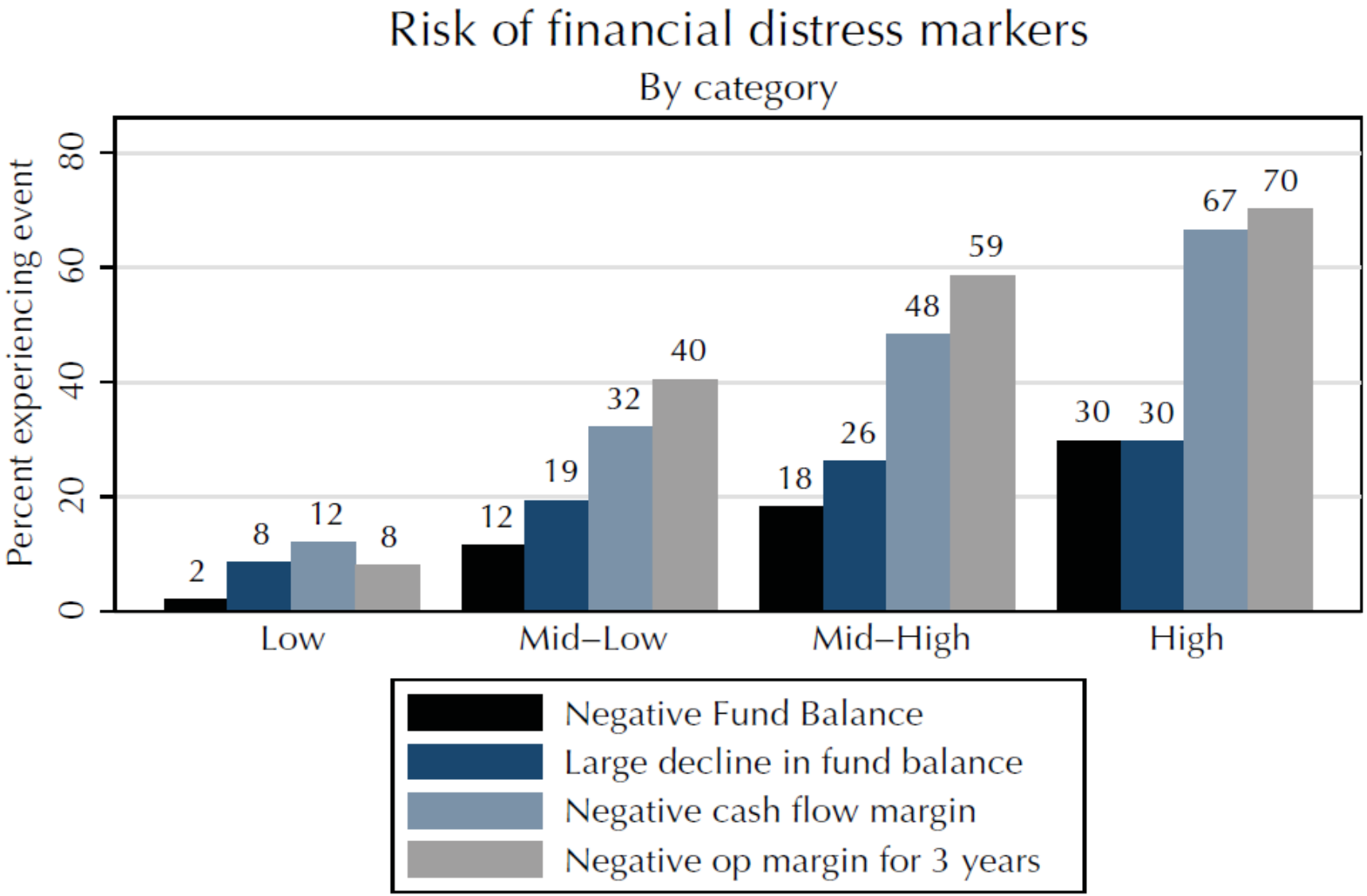
- We considered a broad list of potential variables expected to predict whether a CAH would be in distress within two years:
  - Financial (profitability, liquidity, etc.)
  - Market (geographic and/or population size, characteristics of market area, competition)
  - Plus trends in these values (e.g. a declining population)

# Predicting variables

- Financial
  1. EBITA / total expenses
  2. Operating margin
  3. Operating margin two years earlier
  4. Retained earnings / total assets
  5. Net patient revenue

# Predicting variables

- Hospital
  6. Distance to nearest hospital with 100 beds
  7. Market share (if <25%)
- Market
  8. Unemployment rate
  9. Population


Risk of financial distress markers
By category
Percent experiencing event
0
20
40
60
80
2
8
12
8
12
19
32
40
18
26
48
59
30
30
67
70
Low
Mid–Low
Mid–High
High
Negative Fund Balance
Large decline in fund balance
Negative cash flow margin
Negative op margin for 3 years

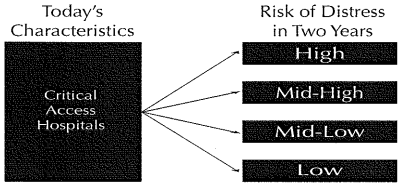
## Financial Distress Report for [redacted] County Hospital

*What is the purpose of trying to predict financial distress?*

A well-functioning prediction model can be used by administrators and boards as an early warning system so that remedial action may be taken before financial distress occurs.

*How was the model developed?*

After reviewing the research literature and conducting focused discussions with multiple lenders and consultants specializing in critical access hospitals, we developed a model of CAH financial distress. Figure 1 shows that today's characteristics (recent financial performance and measures of a market in which a hospital operates) are used to assign CAHs to one of four "risk levels" that predict whether a CAH will be in financial distress two years later.




*What variables are included in the model?*

The model uses financial performance variables (current profitability, reinvestment, and hospital size) and market characteristics variables (competition, economic status, and market size) to predict financial distress (equity decline, unprofitability, and closure) two years later. Many measures of financial performance and market characteristics were considered for model inclusion; the final model was selected based on simplicity, face validity, and predictive performance.

For the financial performance variables:

- **Profitability** was measured by earnings before interest and taxes / total assets, operating margin, and the 2-year change in operating margin;
- **Reinvestment** was measured by retained earnings / total assets, and;
- **Hospital Size** was measured by net patient revenue.

For the market characteristic variables:

- **Competition** was measured by distance to the nearest hospital with at least 100 beds and percent market share, if less than 25 percent;
- **Economic status** was measured by the percent unemployment in the market area, and;
- **Market size** was measured by the population in the market area.





For the financial distress measures, five events considered as a "signal" of financial distress were used:

- **Equity decline** was measured by 1) whether the fund balance declined more than 25%, and 2) whether the fund balance was negative;
- **Unprofitability** was measured by 1) whether the CAH had a negative cash flow margin, and 2) whether the CAH had three consecutive years of negative operating margin; and
- **Closure** was whether the hospital closed.

Models predicting the subsequent occurrence of the five distress events, as predicted by the financial performance and market characteristics, were constructed. The predictive variables together determined a financial distress index value. Four categories that reflect different risk of financial distress in the near term were created by separating the financial distress index into deciles and then grouping deciles with similar rates of financial distress events.

Based on 2009 data (the most recent year available), [redacted] Hospital is predicted to have a **Mid-High** risk of financial distress in 2011.

**Risk of Financial Distress for [redacted] Hospital**

| *Year* | *Risk Level* |
|---|---|
| 2002 | Low |
| 2003 | Mid-High |
| 2004 | Low |
| 2005 | Mid-High |
| 2006 | Mid-Low |
| 2007 | Mid-Low |
| 2008 | Low |
| 2009 | Low |
| 2010 | Mid-Low† |
| 2011 | Mid-High† |

† Because of data release timing issues, some community data were not available for recent years, so the most recent data available were used.

*How well does the model work?*

The models ability to predict financial distress is good, but not perfect. Some CAHs designated at high risk of financial distress do not actually experience distress and vice versa. Important operating information such as capital projects, medical staff changes, and other circumstances that may affect your hospital cannot be readily captured in the model.

*Where can I find more information on the Financial Distress model or provide feedback?*

More information is available from Policy Brief #20 on the Flex Monitoring Team website. We welcome and invite feedback. You may email us at `CAH.finance@schsr.unc.edu`.

# Additional Information

- Flex Monitoring Team website: flexmonitoring.org
- Questions on FMT Financial Products
  - University of North Carolina at Chapel Hill - George H. Pink CAH.finance@schsr.unc.edu or gpink@email.unc.edu
- Questions on FMT Quality Products
  - University of Minnesota – Michelle Casey mcasey@umn.edu
- Questions on FMT Community Impact Products
  - University of Southern Maine – John Gale jgale@usm.maine.edu