

**Agency for Healthcare Research and Quality**

State Healthcare Quality Improvement Workshop:

**Tools You Can Use to Make a Difference**


January 17-18, 2008



**DATA to Maine PEOPLE**  
*Information Actually*


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Agency for Healthcare Research and Quality  
State Healthcare Quality Improvement Workshop:  
**Tools You Can Use to Make a Difference**  
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**Goals of Presentation**


- Brief background and principles of Maine Quality Forum
- Understand Maine's data advantages
- Demonstrate and explain *Maine Hospital Quality Snapshots* web site



Data show less nursing care at EMMC  
Hours logged at Bangor hospital below level of similar centers

By Meg Haskell  
OF THE NEWS STAFF

Source:  
*Bangor Daily News*  
Thursday, 10/11/2007  
Edition: all, Section: a, Page 1



**EMMC NURSING CARE HOURS DATA (2006)**

Number of RN care hours per patient day:


TIME PERIOD	AT EMMC	AT SIMILAR MAINE HOSPITALS*
January-September '06	5.81	6.31
October-December '06	6.94	6.86

Number of total nursing care hours (including RNs, LPNs and nursing assistants) per patient day:

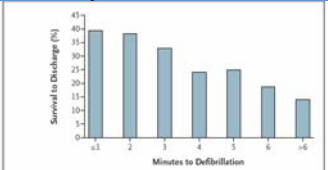
TIME PERIOD	AT EMMC	AT SIMILAR MAINE HOSPITALS*
January-September '06	7.93	8.82
October-December '06	9.42	9.52

\* Hospitals in EMMC's category include Central Maine Medical Center in Lewiston; Maine General Medical Center in Augusta and Waterville; and Maine Medical Center in Portland.

Source: Maine Quality Forum (Dingo Health)




**Delayed Time to Defibrillation after In-Hospital Cardiac Arrest**



Minutes to Defibrillation	No. of Patients	Survived to Discharge	Unadjusted Odds Ratio [95% CI]	Adjusted Odds Ratio [95% CI]	P Value
<=1	3994	1577	Reference	Reference	—
2	750	286	0.94 (0.81-1.10)	1.02 (0.85-1.21)	0.83
3	472	160	0.78 (0.64-0.96)	0.84 (0.67-1.05)	0.12
4	291	87	0.46 (0.35-0.61)	0.50 (0.37-0.67)	<0.001
5	194	98	0.51 (0.40-0.64)	0.54 (0.42-0.70)	<0.001
6	145	27	0.35 (0.23-0.54)	0.39 (0.25-0.61)	<0.001
>=6	743	103	0.25 (0.20-0.31)	0.27 (0.21-0.34)	<0.001

Oliver, Korthuis, Nishi, Nakamoto. "Delayed Time to Defibrillation After In-Hospital Cardiac Arrest." *West English Journal of Medicine*. Vol. 206, No. 1, January 3, 2006, p. 16.



## The Maine Quality Forum

- Created as part of the Dirigo Health Agency
  - Access, Cost and Quality Triad
- Tasked with assessing the quality of healthcare in Maine and reporting information to the people of Maine
- Tasked with promoting and public reporting of comparative use of best practices in Maine
- Pursue mission of providing actionable information about health care quality in easily accessible format



7

## Addressing the Mandates

- Used IOM definition (STEEP) as guiding framework
  - right thing, the right way, at the right time for each patient
- Employ known levers of change



8

## Levers of Change

- Change requires accountability and transparency
  - Both healthcare system and MQF
- The People of Maine as a constituency
- Data describing best practices and outcomes are essential



9

## Supporting Levers of Change

- Both “administrative” data and provider submitted data
- Common understanding of metrics is essential
- Information understandable by the public is a key driving force
- Communication target not necessarily the change target



10

## Maine Advantages

- Tradition of self-examination: Maine Medical Assessment Foundation (MMAF) and small area variation analysis (SAVA)
- Long standing discharge data base
- Leader in “all payer”, paid claims database
- Accomplished partners in Maine Health Data Organization (state) and Maine Health Information Center (private)
- MQF drives data submission through rule making (science confused with self interest)



11

## Creating the Maine Snapshots



## Data Process

- Started with Small Area Variation Analysis (SAVA)
- Participated in the Tri-partite group of Pathways to Excellence to gain buy in of metrics
- Developed initial website with a key data component



13

## Initial Website

- Used small area variation analysis on procedures and inpatient activity of interest
- Presented data via bar charts developed in Excel
  - Graphs presented hospitals significantly different from the expected
- Provided data tables for drill down
- Good start but difficult to understand
- Very difficult to update new data runs
- MQF site for example [www.mainequalityforum.gov](http://www.mainequalityforum.gov)



14

## Revision Process

- MQF and Advisory Council concurred:
  - Simpler representation
    - *Don't Make Me Think*
  - Broader audience
  - More than one view of the data
  - Drill down from simplest to most complex (visual to raw data)
- Needed to include new data (Chapter 270)\*



15

## Next Steps

- Intrigued by dial graphics representation used by AHRQ Quality Snapshots
- Reached out to AHRQ (Dwight) who brokered relationship with Thomson and Academy Health
- Connected with Thomson (aka Medstat)
- Provided us with code



16

## Medstat

- MQF Determined a need for support
  - Methods
  - Web design
  - Training
- Contracted with Medstat
- Contracted with RADCorp
- Began process of applying methodology to Maine's data
- Training MHDO Epidemiologist



17

## Methodological Challenges Encountered

- Small "N"
  - Limited by number of hospitals
- Small "n"
  - Limited by number of measures
  - Limited by number of cases within measure
- Regression Model
- Nursing Data
- Phase II SAVA-Geographic Information Systems (GIS) design



18



