A Tool for Measuring Quality in Small Rural Hospitals

Ira Moscovice, Ph.D.

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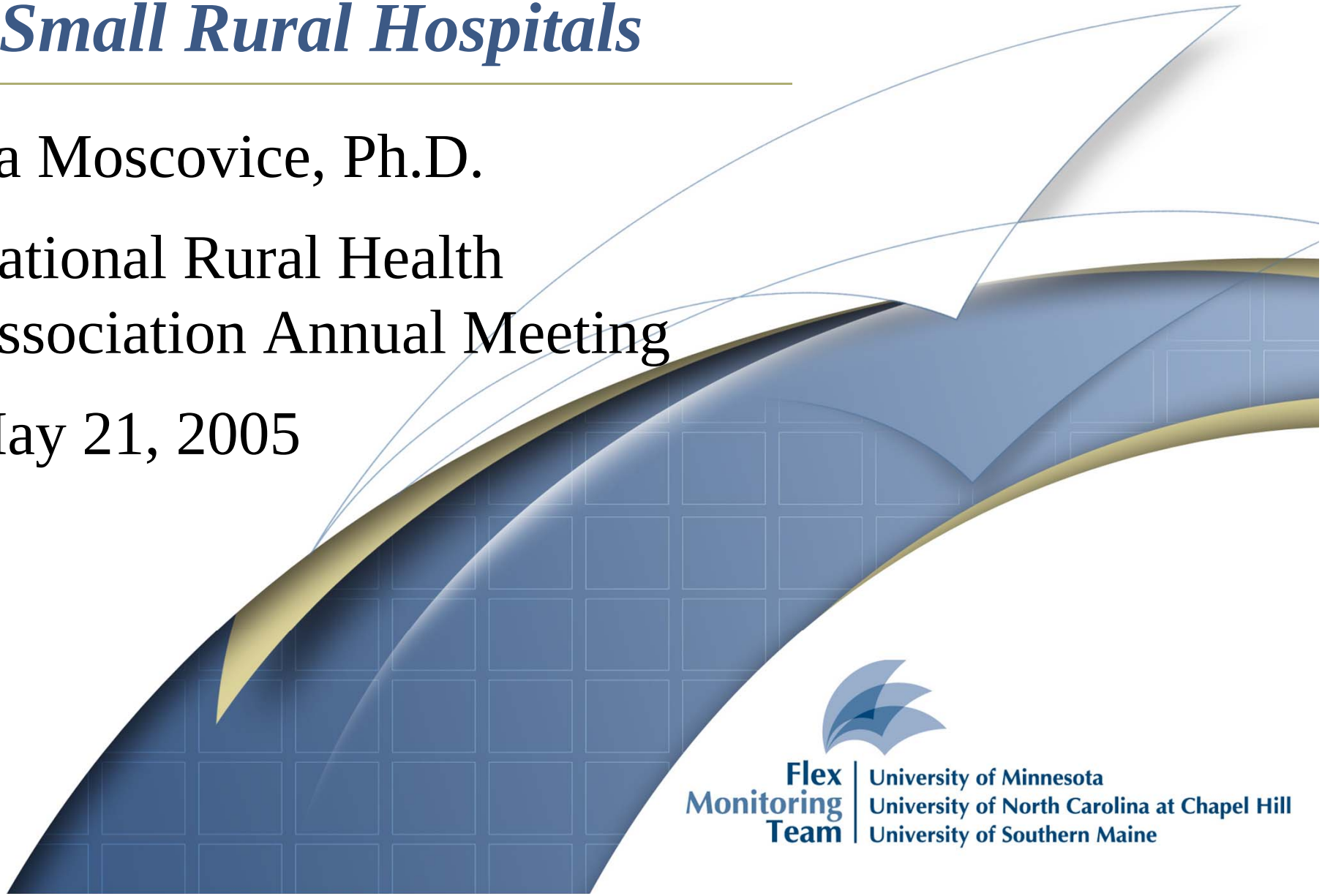

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The Rural Health Quality Mandate

The rural hospitals that survive will be the institutions that demonstrate they are able to provide good quality care.

- IOM Reports
- AHA/CMS Hospital Quality Alliance
- Pay for Performance

The Environmental Context of Rural Health Quality

- There is a strong environmental context to quality issues. Differences in organizational size and complexity result in different types of quality issues that need to be addressed and different responses to these issues.

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Developing Relevant Quality Measures for Rural Hospitals

- Evaluate existing quality indicator and performance measurement systems to assess their relevance for rural hospitals.
- Convene an expert panel to make recommendations for quality measures that are relevant for rural hospitals.
- Develop and test a performance improvement system that provides a core set of quality measures for rural hospitals on an ongoing basis.

Sources of Quality Measures

JCAHO

AHRQ

National Quality Forum

CMS

Apples to Apples

Rural Wisconsin Health Cooperative

Maryland Hospital Association QI Project

Georgia Hospital Association CARE

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Criteria Used for Evaluating Quality Measures

- Prevalence in rural hospitals with less than 50 beds
- Ease of data collection effort in rural hospitals with less than 50 beds
- Internal usefulness for rural hospitals with less than 50 beds
- External usefulness for rural hospitals with less than 50 beds

A Set of Relevant Quality Measures for Rural Hospitals with Less Than 50 Beds

- 11 core JCAHO measures related to pneumonia, congestive heart failure, and AMI.
- 3 medication dispensing and education measures.
- 1 infection control measure.
- 2 procedure-related measures.
- 1 financial measure.
- 2 other measures (monitoring of ER trauma vital signs, use of advanced directives).

Source: Moscovice, I., Wholey, D., Klingner, J. and Knott, A. *Measuring Rural Hospital Quality*. Available at http://www.hsr.umn.edu/rhrc/pdfs/wpaper/wpaper053.pdf

Additional Measurement Areas

- Develop quality measures for core rural hospital functions not considered in existing measurement sets
  - Emergency Department
  - Transfer Communication
  - Medication Safety Practices

Emergency Department Measures

- Timeliness of care
  - Chest Pain/AMI
  - Pneumonia
  - Trauma

Transfer Communication

- For all ER transfers to another acute care facility, was communication sent on:
  - Patient identification
  - Patient care (e.g. vital signs, test results, provider documentation)
  - Patient management (i.e. pre-transfer provider communications)

(Includes components from EMTALA and CCR)

Medication Safety System Checklist

- Includes elements from AHA, Leapfrog, Institute for Safe Medication Practices
  - Renal dosing
  - Allergy documentation
  - High risk medication storage, distribution and administration
  - Anticoagulation monitoring services
  - Insulin sliding scale protocol
  - Medication information availability
  - Pharmacist available in person, on-call, or by phone 24/7

Field Test

- Partnership with Stratis Health/ *HealthInsight*
- Rural hospitals with ≤50 acute beds in MN, NV, UT recruited by Stratis Health and *HealthInsight*
- 22 rural hospital participants collected data over 6 months (3/04-9/04)

Findings

- Measure Readiness
- Hospital Readiness
- Support Process Readiness

Measure Readiness Assessment

- Can be used for comparative measurement as is or with minimal modifications.
- Will need changes and additional testing in order to be used for comparative measurement, but the general approach seems appropriate.
- Important subject for comparative measurement, but need a new measurement approach.
- Not an important subject for comparative measurement (e.g. uniformly high results)

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Inpatient Heart Failure
Measurement Results

Measure	CMS National Data	Sample Range	Sample Average	Comments
LVF Assessment	70%	0-90.5% 7 hospitals	49.2% 69 cases	Ready
ACEI at Discharge	68%	50%-77.8% 7 hospitals	69.2% 13 cases	Ready
Six Discharge Instructions	4%	0-50% 7 hospitals	16.2% 37 cases	Ready
Smoking Assessment and Counseling	29%	0% 1 hospital	0% 2 cases	Usefulness Issues: Consider cross-cutting approach

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Inpatient Pneumonia
Measurement Results

Measure	CMS National Data	Sample Range	Sample Average	Comments
Antibiotics within 4 Hours	62%	42.9%-100% 8 hospitals	76.2% 84 cases	Ready
Oxygenation Assessment within 24 Hours	95%	100% 8 hospitals	100% 84 cases	Little variation
Pneumococcal vaccine assessment and administration	17%	0%-100% 8 hospitals	32.6% 43 cases	Consider cross-cutting approach

Inpatient Pneumonia (cont.)

Measure	CMS National Data	JCAHO	Sample Range	Sample Average	Readiness
Smoking Assessment and Counseling	NA	41%	0-100% 7 hospitals	15% 20 cases	Consider cross-cutting approach

Inpatient SIP
Measurement Results

Measure	CMS National Data	Sample Range	Sample Average	Comments
Antibiotics Administered with 1 Hour of Incision	48%	20%-100% 7 hospitals	49.4% 77 cases	Ready
Antibiotics Discontinued within 24 Hours of Closure	41%	0% - 100% 7 hospitals	68.8% 77 cases	Ready
Appropriate Antibiotic for Procedure	91%	46.2% - 100% 7 hospitals	72.7% 77 cases	Ready

ED Chest Pain/AMI
Measurement Results

Measure	CMS* National Data	Sample Range	Sample Average	Comments
Aspirin within 24 Hours of Arrival	NA	25%-93.8% 22 hospitals	59.9% 466 cases	Needs sample adaptation
ECG within 10 Minutes of Arrival	NA	16.7%-83.3% 22 hospitals	50.8% 500 cases	Needs sample adaptation
Blood Draw within 10 Minutes of Arrival	NA	0%-45.8% 22 hospitals	15.8% 449 cases	Needs sample adaptation
Thrombolytics within 30 Minutes of Arrival	NA	0%-83.3% 11 hospitals	33.3% 33 cases	Needs sample adaptation

*CMS measures use inpatients not ED patients.

Other ED
Measurement Results

Measure	CMS National Data	Sample Range	Sample Average	Comments
Trauma Vital Signs	NA	27.3%-77.3% 20 hospitals	51.5% 779 cases	Needs trauma sample that includes transfers, admissions, surgery

Administrative Measures

- C-section rates
  - Needs risk adjustment
- Laparoscopic Cholecyctsectomy rates
  - Little variation
- Medication Error rates
  - Needs standard definition and collection process
- Adverse Drug Reaction rates
  - Needs standard definition and collection process
- Medicaid Denial rates
  - Validity issues

Cross-cutting Measures

- Advance Directive Screening
  - Ready
- Medication Teaching Measure
  - Documentation issues
- Medication Safety Checklist
  - Ready as improvement tool but not measure
- Transfer Communication Checklist
  - Ready

Hospital Readiness

- Team Approach
  - Administrators, quality leads, abstractors
    - Involvement in participation decision
    - On-going champions
- Early Assessment of Capacity
  - Process to identify cases through computerized coding system
  - Access to medical records
  - Consistent documentation in charts
  - Interpretation of results
  - Plan to use the data

Support Process Readiness

- Training
  - Tailored to participant capacity
  - Capacity building
  - Networking opportunity
- Inter-rater Reliability
  - Essential for consistent comparable measurement

Conclusion

Relevant quality measures can be systematically collected from small rural hospitals who receive appropriate training and support from QIOs.

Next Steps

- Summarize Expert Panel Meeting (April 2005)
  - Review field test findings
  - Recommend new measure development for rural hospitals
- Refine training and support models
- Coordinate with other measurement efforts (e.g. QIO 8th Scope of Work)