Hackensack University Medical Center

Healthcare team committed to quality
A Healthcare Team Committed to Quality

- 781 bed teaching hospital
- Largest provider of inpatient and outpatient service in NJ and largest employer in Bergen County
  - 10 miles outside of NY city and multiple large academic medical centers
- Magnet Nursing Designation since 1995
  - 8% percent turnover rate, no agency or travelers since 1989
- 90% Board Certified Medical Staff
- Governors Award for Performance Excellence
- RWJ/IHI Pursuing Perfection Grantee
- Recipient of 8 “Gold Seal of Approval” from JCAHO for disease specific certified programs
- Top performer in CMS Demonstration project
## HQI (Yearly Comparison) P4P

<table>
<thead>
<tr>
<th>Project</th>
<th>Year 1 4Q03-3Q04</th>
<th>Reliability</th>
<th>Year 2* (4Q04-3Q05)</th>
<th>Reliability</th>
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<tbody>
<tr>
<td>AMI</td>
<td>96.53%</td>
<td>$10^{-2}$</td>
<td>98.25%</td>
<td>$10^{-2}$</td>
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<tr>
<td>HF</td>
<td>94.22%</td>
<td>$10^{-1}$</td>
<td>95.57%</td>
<td>$10^{-2}$</td>
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<tr>
<td>PN</td>
<td>89.88%</td>
<td>$10^{-1}$</td>
<td>93.87%</td>
<td>$10^{-1}$</td>
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<tr>
<td>Hip and Knee</td>
<td>93.85%</td>
<td>$10^{-1}$</td>
<td>98.09%</td>
<td>$10^{-2}$</td>
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<td>CABG</td>
<td>97.45%</td>
<td>$10^{-2}$</td>
<td>99.13%</td>
<td>$10^{-2}$</td>
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</table>

- Top Ranking Decile
- Second Decile Ranking
- *Preliminary results
Quality Paradigms

IOM
- Safe
- Effective
- Patient-centered
- Timely

Donabedian
- Outcome
- Process
- Structure

Chassin/Rand
- Misuse
- Underuse
- Overuse
Approach to Improvement

- Use of small multidisciplinary expert teams
- Adopted a Rapid cycle (P-D-S-A) model
- Developed Unit based multidisciplinary rounds for enhanced communication and treatment planning
- Evolve MDR teams to unit based improvement teams
- Developed unit based score cards for line of site alignment
Formula for Success

- Empower well constructed expert teams
- MDR rounds to facilitate the spread of defect free care
- Provide central support (PI Dept) to create data that fosters analysis & action
  - Variance reports, control charts, segmentation of processes and populations, real-time information exchange
- Using Improvement tools; FMEA, Process Flows, Rapid Cycle Tests of Change
- Keep expectations and current status visible
- Learning from Failures and recognizing successes
### Simple Rules for the 21st Century Health Care System

<table>
<thead>
<tr>
<th>Current Approach</th>
<th>New Rule</th>
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<tbody>
<tr>
<td>Care is based primarily on visits.</td>
<td>Care is based on continuous healing relationships</td>
</tr>
<tr>
<td>Professional autonomy drives variability</td>
<td>Care is customized according to patient needs and values</td>
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<tr>
<td>Professionals’ control care.</td>
<td>The patient is the source of control.</td>
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<tr>
<td>Information is a record.</td>
<td>Knowledge is shared and information flows freely</td>
</tr>
<tr>
<td>Decision-making is based on training and experience.</td>
<td>Decision-making is evidence-based.</td>
</tr>
<tr>
<td>Do no harm is an individual responsibility.</td>
<td>Safety is a system property.</td>
</tr>
<tr>
<td>Secrecy is necessary.</td>
<td>Transparency is necessary.</td>
</tr>
<tr>
<td>The system reacts to needs.</td>
<td>Needs are anticipated.</td>
</tr>
<tr>
<td>Cost reduction is sought.</td>
<td>Waste is continuously decreased.</td>
</tr>
<tr>
<td>Preference is given to professional roles over the system.</td>
<td>Cooperation among clinicians is a priority.</td>
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</tbody>
</table>
### Patient Centered Approach

<table>
<thead>
<tr>
<th>AIM</th>
<th>IOM DIMENSION</th>
<th>PROMISE TO PATIENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Identification</td>
<td>Patient Centered</td>
<td>100% of all patients presenting with dyspnea and/or associated signs of heart failure will be tested with point of service B-type natriuretic peptide assay (BNP).</td>
</tr>
<tr>
<td>Stratification (process)</td>
<td>Effectiveness</td>
<td>All potential heart failure patients will be evaluated with admission criteria for exacerbation of heart failure. In addition to dyspnea, abdominal bloating and peripheral edema, patient should have one of more of the following:</td>
</tr>
<tr>
<td>Intervention</td>
<td>Timeliness</td>
<td>Availability of pertinent patient information at the time of daily multidisciplinary rounds.</td>
</tr>
<tr>
<td>Intervention</td>
<td>Effectiveness</td>
<td>Criteria for aggressive diuretic Rx (ADR) in decompensated heart failure.</td>
</tr>
<tr>
<td>Intervention</td>
<td>Effectiveness, Safety</td>
<td>All patients who meet euvolemic criteria will be prescribed beta blocker therapy as appropriate at discharge.</td>
</tr>
<tr>
<td>Intervention</td>
<td>Effectiveness, Safety</td>
<td>Appropriate use and nonuse of ACEI/ARB.</td>
</tr>
<tr>
<td>Access to Care</td>
<td>Patient Centered</td>
<td>Education will be performed to empower all patients in self care to include supportive literature.</td>
</tr>
<tr>
<td>Access to Care</td>
<td>Safety</td>
<td>All patients will receive coordinated care across the continuum.</td>
</tr>
<tr>
<td>Access to Care</td>
<td>Patient Centered</td>
<td>All patients discharged from HUMC will have access to appropriate follow up care, information, and service.</td>
</tr>
<tr>
<td>AIM</td>
<td>IOM DIMENSION</td>
<td>PROMISE TO PATIENT</td>
</tr>
<tr>
<td>------------------------------</td>
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<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Early Identification And stratification</td>
<td>Patient Centered Effectiveness</td>
<td>100 % of all patients presenting to the ETD with dyspnea and/or associated signs of heart failure will have BNP assay</td>
</tr>
<tr>
<td></td>
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<td>BNP Assay results will be available within one hour</td>
</tr>
<tr>
<td>Intervention</td>
<td>Timeliness Effectiveness Patient-centered Safety</td>
<td>Availability of pertinent patient information at the time of daily multidisciplinary rounds (I&amp;O associated dosage of diuretics, vital signs, Laboratory results Documentation of EF%, BNP )</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Achievement of euvoemia by day 3 of hospitalization in 80% of patients defined as: no radiological evidence of fluid overload, or no rales, minimal or no peripheral edema and/or ascites, absence of significant dyspnea, paroxysmal nocturnal dyspnea, or orthopnea, , patient at baseline weight if available</td>
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<td>All patients with EF&lt; 40% will receive ACEI/ARB unless contraindicated</td>
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<td>All patients with a diagnosis of HF will receive education regarding: signs and symptoms of HF, daily weight monitoring, medications., diet, activity level, smoking cessation (when appropriate, what do to if symptoms worsen, F/U appointment)</td>
</tr>
<tr>
<td>Access to care</td>
<td>Safety Equity</td>
<td>All patients D/C from HUMC will have availability of multiple avenues of access for general questions of care</td>
</tr>
<tr>
<td></td>
<td>Patient-centered</td>
<td>All patients will receive coordinated care across the continuum</td>
</tr>
</tbody>
</table>
Goals of MDR

1. Understand Plan of Care – Education
   - Evidence Based
   - Effectiveness*

2. Facilitate Plan of Care
   - Timely and Efficient*

3. Maximize Pt. Safety*

4. Maximize Public Reporting/documentation

5. Facilitate appropriate DC Planning

6. Appropriate involvement in process of Utilization Review

7. Focus on Patient Centeredness*

* IOM Dimensions
MDR Evaluation Results

Best Performer (Lowest Variance)
- High Evaluative Score
  - Effective leadership and collaboration
  - Staff level empowerment and satisfaction
- High volume of project specific case type
- Homogeneous patient population
- 100% CQI education and APN mentoring

Average Performers (Mean Variance)
- Mean Evaluative Score
  - Membership and role definition
  - Robust process and good knowledge base
- Moderate volume of project specific case type
- Homogeneous patient population

Poor Performer (Highest Variance)
- Low Evaluative Score
  - Team collaboration less mature
  - Educational initiatives not fully developed
    - Staff level empowerment
    - Mentorship by APN
    - Knowledge deficit
- Low volume of project specific case type
- Heterogeneous patient population
Physician Documentation is written in CLINICAL terms. Document for coding, profiling & compliance requires specificity in DIAGNOSIS terms. Alignment of documentation and coding creates a bridge between the gap.
Approaches

- Accurate Capture and Exchange of information at all portals
- Adopt an internal monitoring and evaluation model to allow for concurrent knowledge transfer
- Continue to use multiple views of external data to understand the “public/regulatory” view of HUMC
- Alignment of Clinical Documentation and Coding as a Performance Improvement Priority for the Organization
## Data Distinctions

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<tr>
<th>Data Collection</th>
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<tr>
<td></td>
<td>Retrospective</td>
<td>Prospective</td>
<td>Prospective</td>
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<tr>
<td>Data Analysis</td>
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<tr>
<td></td>
<td>Retrospective</td>
<td>Retrospective</td>
<td>Prospective</td>
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<tr>
<td>Examples</td>
<td>JCAHO Core Measures</td>
<td>Trauma Registry</td>
<td>Public Reported data</td>
</tr>
<tr>
<td>Cost</td>
<td>$</td>
<td>$</td>
<td>$$$</td>
</tr>
<tr>
<td>Accuracy/Reliability</td>
<td>+</td>
<td>++</td>
<td>+++</td>
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<tr>
<td>Impact</td>
<td><em>Post hoc</em> analysis</td>
<td>Monitoring &amp; Evaluation</td>
<td>Rapid Cycle Improvement</td>
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</table>
Data Flow Process

INFORMATION

Right Data

Right Form

Right Time

Right People

KNOWLEDGE

Enhanced Decision Making & Take Action to Improve
Horizontal Integration

Strategy for Reducing Mortality

HSMR  Actual mortality outcome  • Decrease actual rate by 25%

Build Reliable Processes of Care

Concurrent Activity

Rapid Response Team
- Reduce Failure to Rescue occurrences
- Reduce Codes Outside the ICU
- Reduce transfers to the ICU

Communication
- SBAR
- Shift Report
- Transitions

Risk Assessment & Intervention
- Promote Early Identification and Treatment

Glycemic Control
- Vent Bundle
- VAP
- Central Line Bundle
- CLBSI

Advanced Directives
- Sepsis
- DVT/PE
- Decubiti

Early Mobilization
- Functional Status

Retrospective Activity

100% Mortality Review
- Using Box 4 Methodology
- Selected specialty review
  - AMI Mortality
  - Bariatric Mortality
  - All unexpected deaths

MICU
- CCU
- SICU
- CSICU

CPR Committee
- Results of Resuscitation
  - Codes/ 1000 D/C
  - % of codes D/C Alive

Program Development

- Palliative Care
- Critical Care Criteria for admission
  - Advanced Directives
  - Hospice Criteria

Global Trigger Tool
- Monthly Randomized review for Adverse Events
  - Adverse Drug Event
  - Medication Reconciliation

Cascading Metrics
- Yet to be Implemented
Furnish Tools to Support Measurement and Analysis

- Use of statistical tools to foster analysis
  - Control charts to determine if processes are in control or highly variable
  - Run charts to identify emerging trends
  - Annotated charts to determine cause and effect of interventions
  - Paredo diagrams for analysis of frequent causes
SIP Regulatory Indicators
All-or-Nothing Score with Rapid Cycle Notations

- Education
  - Global mailings
  - Department meetings
  - Kickoff presentation
  - Unit based education

Orthopedics added to SIP project

- Process Redesign
  - Re-education of processes

- Standards/Reminders
  - Standing orders/guidelines
  - Chart triggers
  - Posters

- Education
  - Reeducation of residents and nurses to utilize the cardiac pre and post-op order sets

- Direct Intervention
  - Anesthesia counseling

- Standards/Reminders
  - Adopt generic TKR Order Set for post-op TKR care.

- Direct Intervention
  - MDR
  - Peer/Peer counseling
  - Building redundant systems

- Monitoring Compliance
  - Revised and monitored anesthesia sheet
  - Small teams came together to assess process flow, barriers and issue resolution

- Monitor Use of Order Sets
  - Concurrent review of total joint cases and intervention by APN
  - Excel worksheet set up for accurate capture of Orthopedic unit APN activity to identify trends.
Department of Ob/Gyn
Patients with Third or Fourth Degree Lacerations
Datasource: Premier Informatics

HUMC Observed
HUMC Mean
Linear (HUMC Observed)

Clinical Coding Alignment
Statistically Significant: Shift in Process
<table>
<thead>
<tr>
<th>Initiative</th>
<th>Database</th>
<th>Vendor</th>
<th>Date Initiated</th>
<th># of Indicators by Project</th>
<th>Population</th>
<th>Comparator</th>
<th>Type of Ranking</th>
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<tbody>
<tr>
<td>HQA (NVHRI)</td>
<td>QNET</td>
<td>Premier</td>
<td>1Q2004 (Expanded</td>
<td>AMI- 8 indicators</td>
<td>100% All Payor</td>
<td>National</td>
<td>Decile and Median</td>
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<td>January 06)</td>
<td>HF- 4 indicators</td>
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<td>PN- 7 indicators</td>
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<td>SIP- 3 indicators</td>
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<tr>
<td>RHQDAPU (Market Basket)</td>
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<td>Premier</td>
<td>1Q2004 (Expanded</td>
<td>AMI- 8 indicators</td>
<td>100% All Payor</td>
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<td>January 06)</td>
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<td>CAP- 7 indicators</td>
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<td>NJ DHSS</td>
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<td>AMI- 11 indicators</td>
<td>100% All Payor</td>
<td>State</td>
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<td>SIP-3 indicators(1Q06)</td>
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<td>3Q2002 (CAP/CHF)</td>
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<td>100% All Payor</td>
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<td>Decile and Median</td>
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<td>HQSS (PRO) 8th SOW</td>
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<td>July 06 Discharges</td>
<td>SCIP - 14 Indicators</td>
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<td>CAP- 7 indicators</td>
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<td>HipKnee- 5 indicators</td>
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<td></td>
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<td>100% Medicare</td>
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</table>
Expanding P4P

- Build Capacity for Reliable data capture and exchange
  - Avoids unnecessary rework at the delivery

- Develop performance thresholds,
  - avoid rankings
  - unintended consequences

- Deliberate focus on important measures
  - Identify key processes, avoid duplication
  - key case types (high risk, high cost)
  - Minimize additional abstraction requirements
Tip of the Iceberg