IHC ATP PROJECT

Cardiac Medications for Patients with AMI & CHF
TEAM COMPOSITION

- Paul Stewart, President/CEO - Facilitator
- Dr. Jim Calvert, Chairman, PIC
- Dr. Kathy Bakke, CE Faculty, Chief of Staff
- Dr. Joanna Jodko, Cardiologist
- Dr. Rick Zwartverwer, VPMA
- Libby Whitis, VP Nursing/CNO
- Cindy Neubauer, CCU Nurse Manager
- Cheryl Taylor, RN, Director of QM
- Becky Arnst, Data Analyst
- Curtis Steven, RN, Information Systems
- Marvin Prince, PharmD, Interim Director of Pharmacy
MAIN OBJECTIVES

- See AIM Statement (overhead)
- Improve to over 90% patients receiving
  - Aspirin upon admission (AMI1)
  - Aspirin upon discharge (AMI2)
  - ACEI for LVSD (AMI3)
  - Beta Blocker upon admission (AMI6)
  - Beta Blocker upon discharge (AMI5)
  - ACEI for LVSD (HF3)
Information to Look At

- MDC Analysis (see overhead)
- Historical volume of admits
- ALOS
- Charges and Reimbursement per case
- Track record of medication administration
- Data Collection Tools (see overhead)
- Clinical guidelines (see overhead)
- Clinical protocols/standing order sets
- Medication ordering and administration process
- Readmission rate
MDC Analysis

- See Overhead
Historical Volume Run Chart

Run Chart Cardiac Discharges/Month
Volume and ALOS

Disch/Month & ALOS

Discharges

ALOS

MERLE WEST MEDICAL CENTER

IN DIS  AVG LOS
Charges and Reimbursement per Case

Charge/Case V. Reimb/Case

<table>
<thead>
<tr>
<th>Month</th>
<th>Charge/Case</th>
<th>Reimb/Case</th>
</tr>
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<tbody>
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<tr>
<td>Aug-04</td>
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MERLE WEST MEDICAL CENTER
Data Collection Tool

- See Overhead
Historical Performance - 18 months
AMI1-ASA @ Arrival

AMI1 - Aspirin at Arrival

% Compliance

Quarter

Data
Mean
Historical Performance - 18 Months
AMI2 - ASA @ Discharge

AMI2 - Aspirin at Discharge

% Compliance

Quarter

Data
Mean
Historical Performance - 18 months
AMI3 - ACEI for LVSD

AMI3 - ACEI for LVSD

% Compliance

Quarter

1 2 3 4 5 6

Data Mean
Historical Performance - 18 months
AMI6 - Beta Blocker @ Arrival

AMI6- Beta Blocker @ Arrival

Compliance %

Quarter

Data Mean
Historical Performance - 18 months
AMI5 - Beta Blocker @ Discharge

AMI5 Beta Blocker @ Discharge

% Compliance

Data
Mean

Quarter

1 2 3 4 5 6

0.4 0.6 0.8 1
Historical Performance - 18 months
HF3 - ACEI for LVSD
Historical Performance - 18 months
Average of All Criteria

Average of all Criteria

% Compliance

Quarter

Data
Mean

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POTENTIAL INTERVENTIONS

1. Nursing Inservice - Q7
2. Implementation of Standing Order Set - Q7
   (overhead)
3. Implementation of Clinical Guideline - Q7
4. Physician Inservice - Q8
5. Individual chart review, letter to doctor - Q8
6. Implementation of automated hand held technologies with “push” reminders to physician - Q14
Standing Order Set

- See Overhead
Performance After 5 Interventions

Average Compliance of All Criteria

<table>
<thead>
<tr>
<th>Quarter</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tbody>
<tr>
<td>% Compliance</td>
<td>0.5</td>
<td>0.55</td>
<td>0.6</td>
<td>0.65</td>
<td>0.7</td>
<td>0.75</td>
<td>0.8</td>
<td>0.85</td>
<td>0.9</td>
<td>1.0</td>
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Interventions

- Interventions 1,2,3
- Interventions 4,5

Data: Blue line
Mean: Pink line
RESULTS TO DATE

- Historical Performance over 18 months: Average compliance rate of 72%
- Average Performance rate since 5 interventions implemented: 85%
Still To Be Done

- Completion of Implementation of Hand Held Technologies
  - Completion of MData Wireless handheld technology implementation
    - Current Applications
      - Results Reporting - Lab, Vitals, Rad, Meds
    - Future Applications
      - Link to Clinical guidelines and Standing Order Sets
      - Push reminders to hand held
      - Link to evidence based literature
1) Patient demographics and pertinent account information from the ADM module. Access to patient data secured by PCI module site criteria.

2) All results from all Lab modules (LAB, MIC, PTH, BBK).

3) All reports from RAD and OE Departmental modules.

4) Active and discontinued medications from PHA module.

5) Vital signs, Intake/Output, and other select information from NUR.

MData for MEDI TECH Magic

Please note: Data shown on slides 23-30 use “dummy” data. The data is not actual patient/physician information.

MERLE WEST MEDICAL CENTER
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<table>
<thead>
<tr>
<th>DETAIL</th>
<th>1534.1 POLING</th>
</tr>
</thead>
<tbody>
<tr>
<td>VANCOMYCIN 1GM</td>
<td></td>
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</table>
| VIAL/SODIUM CHLORIDE 0.9%...
| DATE     | 05/11 - N/A    |
| DOSE     | 1250MG/250ML   |
| ROUTE    | IV             |
| STATUS   | ACTIVE         |
| FREQ     | Q12H-ALT       |

Please note: Data shown are “dummy” data. The data is not actual patient / physician information.
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Still To Be Done (cont.)

- Analysis of Readmission Rates
  - Does increased compliance with cardiac medication administration decrease the risk of readmission?

- Drill down Cost/Case Analysis
  - Is lack of compliance with cardiac medication administration increasing charges (and costs)?

- See Final Aim Statement (overhead)
AIM: Improve to over 90% the proportion of cardiac patients, without specific contraindications, receiving appropriate medications:

- **Acute MI**
  - Aspirin @ Arrival
  - Aspirin @ Discharge
  - ACEI for LVSD
  - Beta Blocker at Arrival
  - Beta Blocker at Discharge

- **Heart Failure**
  - ACEI for LVSD

**Process Measures**: Among those with no specific contraindications, proportion receiving each of the above meds at the appropriate time during hospital stay.

**Baseline**: Established based upon report ORYX criteria compliance for 6 previous quarters (4th quarter 2002 through 1st quarter 2004). Results of baseline:

**Summary Results**:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Baseline (4q’02 – 1q’04)</th>
<th>Intervention</th>
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</thead>
<tbody>
<tr>
<td>AMI - Aspirin @ Arrival</td>
<td>.938</td>
<td>.877</td>
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<tr>
<td>AMI - Aspirin @ Discharge</td>
<td>.877</td>
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<tr>
<td>AMI - ACEI for LVSD</td>
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<tr>
<td>AMI – BB @ Discharge</td>
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<td></td>
</tr>
<tr>
<td>AMI – BB @ Arrival</td>
<td>.674</td>
<td></td>
</tr>
<tr>
<td>HF – ACEI for LVSD</td>
<td>.662</td>
<td></td>
</tr>
<tr>
<td>OVERALL AVERAGE</td>
<td>.721</td>
<td></td>
</tr>
</tbody>
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**Team Members**:
Paul R. Stewart (President and CEO); Dr. Kathy Bakke (FP Residency Faculty/Chief of Staff); Dr. Joanna Jodko (Cardiologist); Dr. Rick Zwartverwer (VPMA); Sarah Whitis, RN, PhD (Director of Nursing); Cheryl Taylor, RN (Director QM); Becky Arnst (ORYX Data Analyst); Cindy Neubauer, RN (Director CCU/Tele); Curtis Stevens, RN (Information Systems); Marvin Prince, Rx (Interim Pharmacy Director)
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<td><strong>OVERALL AVERAGE</strong></td>
<td>.721</td>
<td>.850</td>
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