Evidence-Based Medicine Group

Maryland Health Quality and Cost Council

March 14, 2011
Maryland Hospital Hand Hygiene Collaborative

You can count on me to take 5 steps... to help WIPE out hospital infections.

Anthony G. Brown
Lt. Governor
Maryland

Their future is in your hands...
1(a). Hand Hygiene

Intervention: JHH WIPES campaign
Impact: Increase in Hand Hygiene Compliance by 300% (outcomes for avoided HAIs still under evaluation).
Cost: Literature demonstrates that operating costs = 1% of cost savings due to avoided HAIs
Ease of Implementation: ☻ ☻ ☻ ☻ ☻

1(b). Hospital-Acquired Infections (HAIs)

Catheter-Related Blood Stream Infection

Impact:
S$35-56K additional cost per case
+10-24 days additional LOS; +15-35% attributable mortality
Approach: NHSN definitions / methodology for ICUs (except NICU)

Surgical Site Infection

Impact:
S$34K additional cost per case; +7-20 days additional LOS; +9% attributable mortality
Approach: NHSN definitions / methodology for specific procedures (Colon surgery, Hysterectomy, Laminectomy, Hip/Knee, CABG)
Methicillin-Resistant Staphylococcus Aureus (MRSA)

Impact:
S$32K additional cost per case; +additional LOS; + attributable mortality
Approach: Active Surveillance Testing (AST) by nasal culture w/in 48 hrs of admission for all ICUs (except NICU)

Health Care Worker (HCW) Influenza Vaccination

Impact:
Literature shows 50% reduction in all-cause mortality among patients treated by HCWs compliant with Influenza vaccination
Approach: Compliance tracking for acute care facility HCWs
## Hospital Participation Matrix

<table>
<thead>
<tr>
<th>Status of the Hospital as of September 1, 2010</th>
<th>HandStats</th>
<th>Process Measures</th>
<th>Technical Assistance</th>
<th>Learning Sessions</th>
<th>Monthly Calls &amp; Webinars</th>
<th>Listserve</th>
<th>Website &amp; Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full compliance:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard training</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Unknown observers</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>All units involved</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>30 observations/unit/month</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Process measures</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Non-compliant:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not using unknown observers</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

### Notes:
- Full compliance:
  - Standard training
  - Unknown observers
  - All units involved
  - 30 observations/unit/month
  - Process measures
- Non-compliant:
  - Not using unknown observers
**N = number of hospitals previously committed to program. Overall, 67% of Maryland acute care general hospitals are participating in the Collaborative**
**Includes only acute care hospitals with at least an 80% participation rate among required units**
HH Compliance on "Exit" Measure by Month
Sep 2010 - Jan 2011

% Hand Hygiene Compliance

Month | HH Compliance | N
--- | --- | ---
Sep (N = 25) | 70% | 25
Oct (N = 23) | 72% | 23
Nov (N = 20) | 76% | 20
Dec (N = 21) | 76% | 21
Jan (N = 23) | 75% | 23

**Includes only acute care hospitals with at least an 80% participation rate among required units**
Current/Next Steps of the Hand Hygiene Collaborative

• Strengthen Capability of Hospital Programs:
  • Monthly Hand Hygiene team calls/webinars
  • Technical assistance calls
  • Targeted site visits
  • CEO and Executive Sponsor report card
  • Validation of standard methodology

• Continue Collaborative past the original June 2011 termination date
• Comparison of HH compliance to HAIs
• Consider program expansion
  • Additional acute care hospitals
  • non-acute care hospital settings (e.g., long term care, ASC)
On The CUSP: Stop BSI
Project Implementation Timeline

- Recruitment & Formation of State Initiative
- Kick-off meeting for hospital teams; monthly content and coaching calls begin; monthly CLABSI and Team Check-up Tool data submitted
- Final Project Meeting
- Ongoing Data Collection

2010 - 2011 - 2012

- July: Hospitals take first Hospital Survey of Patient Safety Culture
- August: Midcourse face to face meeting for teams
- September: Hospitals take last Hospital Survey of Patient Safety Culture
- October: Immersion calls begin

Michigan Health & Hospital Association / Keystone registers hospitals in data system and hospitals complete Data Use Agreement
CLABSI- Updates

Participation:
• 41 acute care hospitals, 3 specialty
• 76 total units
  – 57 ICUs
  – 19 Medical/Surgical or Other

Recent and Ongoing Activities:
• Hospital Survey Of Patient Safety (HSOPS) survey
• Monthly Team Check Up Tool
• CLABSI data submission
• Monthly Calls- national content, Maryland coaching calls
• Kick-off meeting
Kick-Off Meeting December 6

• Over 300 participants including: Executives, Physicians, Nurses, Managers, Safety Officers, and Infection Preventionists

• Agenda: *On The CUSP: Stop BSI* overview, leading change, data management, improving communication, and learning from defects

• Overall program rating (167 respondents)
  – Good- 11%
  – Very Good- 47%
  – Excellent- 42%

• Value of Session
  – Program details
  – Networking, discussion
  – Call to action, enthusiasm
  – Tools and exercises
Areas of Participant Concern

- Administration/Leadership Support
- Lack of Resources
- Staff Engagement (nurse, physician)
- Communication
- Implementation and Sustainability
- Clinical Practice (following the checklist)
- Culture
CLABSI Data Reports

Data Comparisons
- Organizational Unit
- Maryland
- National Comparative
Maryland Regulated Medical Waste ("RMW") Reduction Collaborative
Next Steps Regulated Medical Waste

• DHMH to staff project beginning Summer 2011
3. Blood Wastage

Intervention: Application of Lean Sigma Methodology to improve usage and storage of blood products

Impact: ★★★

Within first two years of project, JHH resulted in a savings of over 4,700 units of blood, which corresponds to a savings of $900,000 for the hospital.

Cost: Purchase of coolers and temperature readers

Ease of Implementation:
Maryland Blood Wastage Collaborative

Work Group Members

• Co-Chairs: Page Gambill, American Red Cross
  Donna Marquess, LifeBridge Health

• Members: Joan Boyd, JHH
  Janice Hunt, UMM
  Mary Mussman, DHMH
  Lisa Shifflett, JHH

• Facilitator: I-Fong Sun, JHM
## Total Savings for State: 15 Months

(*as of February 22, 2011)

<table>
<thead>
<tr>
<th>Blood Component</th>
<th>Units Saved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platelets</td>
<td>763 units</td>
</tr>
<tr>
<td>Plasma</td>
<td>492 units</td>
</tr>
<tr>
<td>Allo Red</td>
<td>43 units</td>
</tr>
<tr>
<td>Auto/Dir Red</td>
<td>-185 units</td>
</tr>
</tbody>
</table>

**Total Units Saved:**

= 1255 units

**Total $s Saved:**

= $414,191

*Note: The Collaborative’s focus has been on platelets and plasma based on the project charters. Thus, Allo Red and Auto/Dir Red Cells have been excluded in the calculations.*

- 35* out of 44 hospitals have submitted November data = 80% participation rate
Inventory Visibility System

Currently in 30 facilities (including those in the DC Metropolitan area) with future expansion across the Nation
New Goals for CY11

Platelets: Reduce Effective Wastage Rate by 7% = 240 Units = $121K SAVED

<table>
<thead>
<tr>
<th>Month</th>
<th>Sep-09</th>
<th>Oct-09</th>
<th>Nov-09</th>
<th>Dec-09</th>
<th>Jan-10</th>
<th>Feb-10</th>
<th>Mar-10</th>
<th>Apr-10</th>
<th>May-10</th>
<th>Jun-10</th>
<th>Jul-10</th>
</tr>
</thead>
<tbody>
<tr>
<td># of units wasted</td>
<td>281</td>
<td>272</td>
<td>368</td>
<td>368</td>
<td>368</td>
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<td>368</td>
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<td>368</td>
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</tr>
</tbody>
</table>

Plasma: Reduce Effective Wastage Rate by 10% = 453 Units = $25K SAVED

<table>
<thead>
<tr>
<th>Month</th>
<th>Sep-09</th>
<th>Oct-09</th>
<th>Nov-09</th>
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<th>Feb-10</th>
<th>Mar-10</th>
<th>Apr-10</th>
<th>May-10</th>
<th>Jun-10</th>
<th>Jul-10</th>
</tr>
</thead>
<tbody>
<tr>
<td># of units wasted</td>
<td>415</td>
<td>415</td>
<td>317</td>
<td>317</td>
<td>317</td>
<td>317</td>
<td>317</td>
<td>317</td>
<td>317</td>
<td>317</td>
<td>317</td>
</tr>
</tbody>
</table>

*Projected units wasted at specified % wastage rate reduction assuming same volume in Year 3 as Year 2. = calculation in cell.
Blood Wastage Prevention Next Steps

• Collaborative Meeting: March 14, 2011
• Inventory Visibility System (aka Craig’s List)
  – Continue to work with facilities to increase use
  – Expand types of products that are posted
• Provide training for new staff: Date is TBD
• Publish results
Next Steps, EBM* Workgroup

- Analysis of HAIs and HH compliance
- Expansion of HH Collaborative to other non-acute care hospital settings

- Solicit feedback from provider, payer, quality improvement organizations across settings regarding initiatives for consideration of action
  - Bring items to Council’s June 10, 2011 meeting

*Short term, quick wins