Hand Hygiene

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Financial Disclosure

The following individuals reported relevant financial relationships with commercial interests:

Planning Committee Members: NA

The following individuals reported no relevant financial relationships with commercial interests:

Planning Committee Member: Stephen B. Greenberg, MD; Matthew Schlueter, RN

Presenters: Stephen B. Greenberg, MD; Merry Philip, RN

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Registration is open until 11:00 PM.

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Building Blocks to Achieving High Reliability

- All people always experience the safest, highest quality, best value health care across all settings
- Robust Process Improvement
  - Widespread Adoption of RPI
  - Process Improvement Training
  - Process Improvement Methods
- Safety Culture
  - Identifying Unsafe Conditions
  - Strengthening Systems
  - Trust
  - Accountability
  - Assessment
- Leadership Commitment
  - Quality & Safety Strategy
  - Quality & Safety Measures
    - Governing Body Commitment
    - CEO/Senior Leadership Commitment
    - Physician Leadership
    - Information Technology

Compliance with Joint Commission Standards & National Patient Safety Goals
Excellent Accountability Measure Performance

The Joint Commission
Robust Process Improvement Using Lean Six Sigma DMAIC

<table>
<thead>
<tr>
<th>DMAIC Phase</th>
<th>Define</th>
<th>Measure</th>
<th>Analyze</th>
<th>Improve</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPI Principles</td>
<td>Specify what customers value</td>
<td>Identify all steps and inputs in the value stream</td>
<td>Eliminate waste and variation at the root cause</td>
<td>Stabilize, reduce variation and defects and create flow letting the customer pull</td>
<td>Standardize, level flow sustain and continuously improve</td>
</tr>
</tbody>
</table>

Questions we answer:
- What are the opportunities for improvement that will achieve strategy and goals?
- What is our current performance level?
- What are the wastes and root causes for gaps or problems in performance?
- What are the possible solutions and how do we implement the best solution?
- How do we maintain the gains we have achieved and standardize?

Is the organization prepared for change?

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Is There Such a Thing as Too Clean?
Germs are everywhere. They are within and on our bodies and on every surface you touch. But not all germs are bad. We need some of these germs to keep us healthy and our immune system strong.

Your hands have good germs on them that your body needs to stay healthy. These germs live under the deeper layers of the skin.

Your hands can also have bad germs on them that make you sick. These germs live on the surface and are easily killed/wiped away by the alcohol-based hand sanitizer.

Using an alcohol-based hand sanitizer is the preferred way to keep your hands clean.

Alcohol-based hand sanitizers kill the good and bad germs, but the good germs quickly come back on your hands.

Washing with Soap and Water: 15 vs. 20 Seconds
• Wash your hands for at least 15 seconds, not specifically 15 seconds.
• The time it takes is less important than making sure you clean all areas of your hands.
• Alcohol-based hand sanitizers are the preferred way to clean your hands in healthcare facilities.

Which One?

Soap and Water vs. Alcohol-Based Hand Sanitizer
An alcohol-based hand sanitizer is the preferred method for cleaning your hands when they are not visibly dirty because it:

- Is more effective at killing potentially deadly germs on hands than soap
- Requires less time
- Is more accessible than handwashing sinks
- Produces reduced bacterial counts on hands, and
- Improves skin condition with less irritation and dryness than soap and water

Areas Frequently Missed When Cleaning Your Hands
These areas are most often missed by healthcare providers when using alcohol-based hand sanitizer:

- Thumbs
- Fingertips
- Between fingers

Glove Use is Not a Substitute for Cleaning Your Hands
Hand Hygiene in Healthcare Settings

• Always clean your hands after removing gloves. Dirty gloves can soil hands.

• It is important to change your gloves:

<table>
<thead>
<tr>
<th>IF:</th>
<th>THEN:</th>
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<tbody>
<tr>
<td>Gloves are damaged</td>
<td>Remove gloves and clean your hands</td>
</tr>
<tr>
<td>Moving from contaminated body site to clean body site</td>
<td></td>
</tr>
<tr>
<td>Gloves look dirty or have blood or bodily fluids on them after completing a task</td>
<td></td>
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</table>

Technique Matters
Hand Hygiene in Healthcare Settings

• Use the right amount of alcohol-based hand sanitizer product to clean your hands
• The efficacy of alcohol-based hand sanitizer depends on the volume applied to the hands

Clostridium difficile
and Alcohol – Based Hand Sanitizer
Hand Hygiene in Healthcare Settings

• *Clostridium difficile* is a common healthcare-associated infection that causes severe diarrhea.

• *C. difficile* forms spores that are not killed by an alcohol-based hand sanitizer.

• The spores can be transferred to patients via the hands of healthcare providers who have touched a contaminated surface or item.

• If you have a *C. difficile* infection, make sure your healthcare providers wear gloves when examining you.

• The most important way that you can prevent the spread of *C. difficile* is by washing your hands with soap and water after touching potentially contaminated surfaces.

Alcohol – Based Hand Sanitizers Do Not Cause Antibiotic Resistance
The antimicrobial activity of alcohols can be attributed to their ability to denature proteins. They kill germs quickly and in a different way than antibiotics.

Alcohol-based hand sanitizers containing at least 60%-95% alcohol are most effective at denaturing proteins.

There is no chance for the germs to adapt or develop resistance.
Some Healthcare Providers Clean Their Hands Less Than Half of the Times They Should
Hand Hygiene in Healthcare Settings

Studies show that some healthcare providers practice hand hygiene less than half of the times they should. Healthcare providers might need to clean their hands as many as 100 times per 12-hour shift, depending on the number of patients and intensity of care. Know what it could take to keep your patients safe.
Guideline for Hand Hygiene in Health-Care Settings

Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force

INSIDE: Continuing Education Examination
Harris Health Hand Hygiene

• Program started in 2014

• Initial compliancy rate was 90%/100%

• Program reboot started in 2015
# Task Force Members

<table>
<thead>
<tr>
<th>Member</th>
<th>Title</th>
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<tbody>
<tr>
<td>Stephen Greenberg MD</td>
<td>BT - Deputy Chief of Staff</td>
</tr>
<tr>
<td>Merry Phillips RN</td>
<td>LBJ – Director of Nursing, Women &amp; Infants</td>
</tr>
<tr>
<td>Charles Ericsson MD</td>
<td>LBJ Infection Prevention Medical Director</td>
</tr>
<tr>
<td>Robert Atmar MD</td>
<td>BT Infection Prevention Medical Director</td>
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<td>Brian Reed MD</td>
<td>ACS Infection Prevention Medical Director</td>
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<td>Yolonda Wall RN</td>
<td>LBJ Director of Quality</td>
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<td>Angela Russell</td>
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<td>Christine Victorian RN</td>
<td>ACS Director of Quality</td>
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<td>Beatriz Martinez RN</td>
<td>LBJ Infection Prevention Manager</td>
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<td>Charise Miltenberger RN</td>
<td>BT Infection Prevention Manager</td>
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<td>Natalie Anene RN</td>
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</tr>
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<td>Herbert Maduro</td>
<td>LBJ – EVS Director</td>
</tr>
<tr>
<td>Margaret Turpin</td>
<td>BT – EVS Operations Manager</td>
</tr>
<tr>
<td>John Sullivan</td>
<td>ACS – EVS Director</td>
</tr>
<tr>
<td>Claire Lauzon-Vallone RN</td>
<td>Facilitator: Associate Admin Quality and Accred.</td>
</tr>
</tbody>
</table>
Fishbone Diagram: Hand Hygiene Root Causes

HAND HYGIENE COMPLIANCE CAUSE & EFFECT

Measurement

- Lack of streamlined reporting
- Infrequent compliance reporting
- Lack of detailed compliance data by HCW, unit, etc.
- Difficult to read Hand Hygiene report

Material

- Lack of emollient lotion (ACS)
- Lack of standardized hand gel
- Poor visibility of gel dispenser
- Ineffective placement of gel dispensers (ie high traffic areas)
- Lack of standardized template for gel dispenser placement
- Lack of work place reminders and/or standardized work place reminders

Low Hand Hygiene Compliance

Environment

- Lack of Just Culture/Safety Culture
- Lack of financial support for positive reinforcement
- Lack of Incentives
- Lack of recognition for compliance

Methods

- Lack of best practice literature success examples
- Lack of just-in-time coaching
- Lack of patient education
- Lack of general public education (visitors)

Manpower

- Lack of volume of denominator per unit
- Lack of accountability for staff and providers
- Lack of continued awareness
- Lack of participation in secret shopper program
- Perceptions that gloves are sufficient alternatives to handwashing

Note: Not all causes are identified across the system, some are pavilion specific but have an effect on overall compliance
# Hand Hygiene Program

**Memorial Hermann**
- Just in time
- Secret Shoppers
- Decrease in infections
- Program length

**Vanderbilt**
- Secret Shoppers
- Decrease in infections
- Program in length
Hand Hygiene Corrective Action Plan: As of 03-18-16 1 of 2

### Problem Statement (PLAN: Identify main cause, analyze problem, numerator and denominator specifics on fall out.)

The Hand Hygiene compliance rate in each pavilion is below benchmark of 90%. Numerous pavilion efforts have not achieved the goal nor demonstrated sustained improvement trend to benchmark. Hand Hygiene has been designated as a System Performance Improvement initiative. A multi-disciplinary task force has been formed to develop a system corrective action plan to address the problem root causes. **Status of CAP as of 03-18-16. Root cause themes drawn from Fishbone Diagram for Hand Hygiene.**

### PLAN

**Root Cause(s)**  
(Based on analysis made on the problem; Why)

<table>
<thead>
<tr>
<th>Material: Lack of emollient and standardized hand gel.</th>
<th>ACS: Standardize to approved soap and implementation of approved lotion dispensers.</th>
<th>Natalie Anene</th>
<th>1/14/2016</th>
<th>In progress. Goal for changeover March 2016</th>
</tr>
</thead>
</table>

Assess location and placement in all environments. Assess visibility for use.  
Design templates for hand gel for 2 bed room, 4 bed room, patient bays and clinic exam rooms.  
Assessment of costs and supply needs for placement of hand gel per templates. | Natalie Anene  
Charise Miltenberger  
Beth Martinez | 1/14/2016 | Review of room templates and costs/supply needs at 04/11/16 meeting. |
| --- | --- | --- | --- | --- |

| Material: Lack of workplace reminders and standardized signage to promote handwashing and encourage patient “Speak Up” communication and messaging. | Assess signage available via CDC, WHO and best practice in nation to standardize hand washing messaging.  
Assess screen savers for reminders. | Yolonda Wall  
Angela Russell | 1/14/2016 | Drafts reviewed. Finalize 1 sign for patients and 1 sign for employee audiences. Match for simplified screen saver.  
Present drafts at 4/11/16 meeting.|
| --- | --- | --- | --- | --- |
Hand Hygiene Corrective Action Plan: As of 03-18-16  2 of 2

### Problem Statement (PLAN: Identify main cause, analyze problem, numerator and denominator specifics on fall out.)

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### PLAN

<table>
<thead>
<tr>
<th>Root Cause(s)</th>
<th>Action (Use action verbs; How)</th>
<th>Responsible Person (Specific person who will implement the action)</th>
<th>Implementation Date</th>
<th>Status &amp; Effectiveness of Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MATERIAL</strong></td>
<td>Assess and revise staff educational materials for orientation and annual staff development.</td>
<td>Charise Miltenberger</td>
<td>1/14/2016</td>
<td>Deferred to 4/11/16 meeting.</td>
</tr>
<tr>
<td><strong>MEASUREMENT</strong></td>
<td>Assess data from Readiness Rounds on level of compliance for problem identification or rule-out as a root cause.</td>
<td>Claire Lauzon-Vallone</td>
<td>1/14/2016</td>
<td>Complete. No audit tool speaks to inappropriate glove use. Retired. See new audit tool.</td>
</tr>
<tr>
<td><strong>DATA</strong></td>
<td>15 contributing causes for lack of hand hygiene added to audit tool per the MHHS article source of public domain from Joint Commission.</td>
<td>Claire Lauzon-Vallone</td>
<td>2/19/2016</td>
<td>Complete. Ready for Readiness Rounds launch 3/1/16. Done.</td>
</tr>
<tr>
<td><strong>METHODS</strong></td>
<td>Assessment of best practice methodology by article authors at MHHS who demonstrated high hand hygiene compliance program with sustained results.</td>
<td>Dr. Greenberg, Merry Philip, Dr. Babber, Claire Lauzon-Vallone</td>
<td>3/14/2016</td>
<td>Chair, Co-Chair, QMS fact finding meeting with best practice authors: MHHS : 4/5/16 Vanderbuilt Video Conf: 4/11/16</td>
</tr>
</tbody>
</table>

### DO

**(What specific steps will be taken to solve the root cause and prevent problem from recurring; use SMART - Specific, Measurable, Attainable, Relevant, Time-bound)**

- Effective, then standardize
- Ineffective, review action or start all over

### ACT

- Deferred to 4/11/16 meeting.
- Retired. See new audit tool.
- Done.
- Done.
- Done.

### METHODS

- Assessment of best practice methodology for hand hygiene compliance.
Expectations Vs. Reality

Hand Hygiene Compliance (Aggregated)

- **Where We Thought We Were**
  - Baseline Reality: Low Compliance & High Variability

- **How The Future Must Look**

Joint Commission Center for Transforming Healthcare
Primary Causes of Failure in Hand Hygiene

- Faulty data on performance
- Inappropriate use of gloves
- Inconvenient location of sinks or hand gel dispensers
- Hands full
- Ineffective education of caregivers
- Lack of accountability

Each requires a different strategy to eliminate
Joint Commission Hand Hygiene

Center for Transforming Healthcare

MHMG Hand Hygiene

Compliance Rate

Patient Observers
Foam First!