The Joint Commission’s Center for Transforming Healthcare aims to solve health care’s most critical safety and quality problems. The Center’s participants – the nation’s leading hospitals and health systems – use a proven, systematic approach to analyze specific breakdowns in patient care and discover their underlying causes to develop targeted solutions that solve these complex problems. In keeping with its objective to transform health care into a high reliability industry, The Joint Commission will share these proven effective solutions with the more than 18,000 health care organizations it accredits.

Bringing the Leading Health Care Organizations Together to Solve Challenging Health Care Problems

Cedars-Sinai Health System
Cleveland Clinic
Exempla Healthcare
Fairview Health Services
Froedtert Hospital
Intermountain Healthcare
The Johns Hopkins Hospital and Health System
Kaiser Permanente
Lifespan
Mayo Clinic
Memorial Hermann Healthcare System
New York-Presbyterian Hospital
North Shore-Long Island Jewish Health System
Northwestern Memorial Hospital
OSF Saint Francis Medical Center
Partners HealthCare System
Stanford Hospital & Clinics
Trinity Health
Virtua
Wake Forest University Baptist Medical Center

How Will We Get There?

The Roadmap to Developing Solutions

Change Management • Lean Six Sigma • High Reliability

• Measureable Success
• Targeted Solutions
• Industry Engagement
• Sustainability
In the United States, one in 136 hospital patients become seriously ill as a result of acquiring an infection in the hospital. This is equivalent to two million cases a year.

And the costs.....“the overall annual direct medical costs of HAI to U.S. hospitals ranges from $28.4 to $45 billion.. the benefits of prevention range from a low of $5.7 to $6.8 billion to a high of $25.0 to $31.5 billion.”

R. Douglas Scott II, Economist, Division of Healthcare Quality Promotion, CDC, March 2009

“Every day, 247 people die in the USA as a result of a health care-associated infection.”
This is equivalent to a 767 aircraft crashing every day or more than 90,000 deaths annually.”

"Yet hand hygiene improvement is not a new concept… long lasting improvements remain difficult to sustain……"

WHO, Guide to Implementation of the WHO Multimodal Hand Hygiene Improvement Strategy
## Hand Hygiene Project: Participating Hospitals’ Characteristics and Project Details

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Location</th>
<th>Teaching hospital</th>
<th>Number of Beds</th>
<th>Medical Surgical</th>
<th>Intensive Care Unit</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cedars-Sinai Health System</td>
<td>California</td>
<td>Yes</td>
<td>950</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Exempla Lutheran Medical Center</td>
<td>Colorado</td>
<td>No</td>
<td>400</td>
<td></td>
<td></td>
<td>x*</td>
</tr>
<tr>
<td>Froedtert Hospital</td>
<td>Wisconsin</td>
<td>Yes</td>
<td>486</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>The Johns Hopkins Hospital</td>
<td>Maryland</td>
<td>Yes</td>
<td>1,041</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Memorial Hermann The Woodlands</td>
<td>Texas</td>
<td>No</td>
<td>252</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Trinity Health - St. Joseph Mercy Hospital</td>
<td>Michigan</td>
<td>Yes</td>
<td>537</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Virtua - Memorial</td>
<td>New Jersey</td>
<td>No</td>
<td>270</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Wake Forest University Baptist Medical Center</td>
<td>North Carolina</td>
<td>Yes</td>
<td>872</td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

*Implemented throughout hospital
Hand Hygiene Measures: Expectations vs. Reality; Solutions Impact

**Hand Hygiene Compliance (Aggregated)**

- **Baseline Reality:** Low Compliance & High Variability
- **Solutions Beginning**
- **How The Future Must Look**

Hand hygiene compliance improvement in pilot sites

Similar findings from WHO Pilots

Hand Hygiene Performance at Sample Hospital Unit
Main Causes of Failure to Clean Hands (across all participating hospitals)

<table>
<thead>
<tr>
<th>Main Causes of Failure to Clean Hands (across all participating hospitals)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ineffective placement of dispensers or sinks</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Hand hygiene compliance data are not collected or reported accurately or frequently</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of accountability and just-in-time coaching</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Safety culture does not stress hand hygiene at all levels</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ineffective or insufficient education</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Hands full</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Wearing gloves interferes with process</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Perception that hand hygiene is not needed if wearing gloves</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health care workers forget</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Distractions</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

Note that not all of the main causes of failure appear in every hospital. The chart above represents the validation of the root causes across hospitals. This underscores the importance of understanding hospital-specific root causes so that appropriate solutions can be targeted.
Identifying Causes, Targeting Solutions

**Causes**

- Hand Hygiene compliance data are not collected or reported accurately or frequently
- Safety culture does not stress hand hygiene at all levels
- Ineffective placement of dispensers or sinks
- Hands full

**Solutions**

- Data provide a framework for a systematic approach for improvement
- Utilize a sound measurement system to determine the real score in real time
- Scrutinize and question the data
- Measure the specific, high-impact causes of hand hygiene failures in your facility and target solutions to those causes
- Make washing hands a habit – as automatic as looking both ways when you cross the street or fastening your seat belt when you get in your car
- Commitment of leadership to achieve hand hygiene compliance of 90+ percent
- Serve as a role model by practicing proper hand hygiene
- Hold everyone accountable and responsible – doctors, nurses, food service staff, housekeepers, chaplains, technicians, therapists
- Provide easy access to hand hygiene equipment and dispensers
- Create a place for everything: for example, a health care worker with full hands needs a dedicated space where he or she can place items while washing hands

Joint Commission Center for Transforming Healthcare
Effective Hygiene is in Our HANDS

Habit
- Always wash in and wash out upon entering/exiting a patient care area and before and after patient care
- Make washing hands a habit – as automatic as looking both ways when you cross the street or fastening your seat belt when you get in your car

Active Feedback
- Coach and intervene to remind staff to wash hands
- Clearly state expectations about when to sanitize hands to all staff members
- Communicate frequently – provide visible reminders and ongoing coaching to reinforce effective hand hygiene expectations
- Engage staff – real time performance feedback
- Tailor education in proper hand hygiene for specific disciplines
- Provide just-in-time training
- Use technology-based reminders and real time feedback
- Celebrate improved hand hygiene

No One Excused
- Protect the patient and the environment – everyone must wash in and wash out
- Make it comfortable to wash hands with soap or use waterless hand sanitizer
- Identify proper hand hygiene as an organizational priority and performance expectation
- Hold everyone accountable and responsible – doctors, nurses, food service staff, housekeepers, chaplains, technicians, therapists
- Apply progressive discipline from the top – managers must hold everyone accountable for proper hand washing
- Commitment of leadership to achieve hand hygiene compliance of 90+ percent
- Serve as a role model by practicing proper hand hygiene

Data Driven
- Data provide a framework for a systematic approach for improvement
- Utilize a sound measurement system to determine the real score in real time
- Use trained, certified independent observers to monitor appropriateness of hand hygiene
- Scrutinize and question the data
- Measure the specific, high-impact causes of hand hygiene failures in your facility and target solutions to those causes

Systems
- Focus on the system, not just on people
- Make it easy; examine work flow of health care workers to ensure ease of washing hands:
  - Provide easy access of hand hygiene equipment and dispensers
  - Create a place for everything: for example, a health care worker with full hands needs a dedicated space where he or she can place items while washing hands
  - Limit entries and exits from a patient’s room – make supplies available in room and eliminate false alarms that require staff to leave room to turn alarm off
  - Identify new technologies to make it easy for staff to remember to wash hands, i.e. radio frequency identification, automatic reminders, warning systems, real time scoring