



# DEVELOPING INTERVENTIONS TO IMPROVE HAND HYGIENE COMPLIANCE

September 26, 2018

- I. Review of the Literature on Effective Hand Hygiene Interventions
- II. Current Hospital Performance on Hand Hygiene
- III. Tailoring an Intervention to the Hospital

# STATE OF THE LITERATURE ON HAND HYGIENE INTERVENTIONS

**Systematic reviews suggest that improving hand hygiene compliance is important, but the evidence base around effective interventions is lacking.**

- “Despite the importance of hand hygiene to reduce HAIs and increase in the number of intervention studies since July 2006, the evidence base remains poor.” (Gould et al., 2010)
- “There is a lack of rigorous evidence linking specific hand hygiene interventions with the prevention of [HAIs].” (Backman et al., 2008)



# EFFECTIVE INTERVENTIONS IN HIGH-QUALITY STUDIES

## (Gould et al., 2011)

- Educational training on universal precautions (Huang et al., 2002)
- Implementation of the VigiGerme social marketing and WHO “Clean Care is Safer Care” campaigns (Vernaz et al., 2008)
- “Geneva” and “Washington” programs (Whitby et al., 2008):
  - Alcohol-based hand rub placed at end of beds, on chart trolleys, in medication prep areas (selected by staff in Washington program)
  - Talking-wall promotional cartoons and posters (developed by staff and/or with staff input)
  - Promotional screensaver (developed with staff input)
  - Prizes and promotional items
  - Medical and nursing executive walk-arounds and motivational posters
  - Semi-structured meetings with all clinical and nonclinical ward staff to discuss hand hygiene programs (Washington program)
  - Verbal and written support from senior staff



# KEY FEATURES OF SUCCESSFUL EDUCATION PROGRAMS

(Mathai et al., 2010)

- Continuous reinforcement of messages
- Surveys of worker perceptions
- Local practice monitoring and feedback
- Practical educational tools
- Senior staff role modeling of behavior
- Available infrastructure and equipment to support compliance
- Multimodal strategy (e.g., training, reminders, performance feedback)
- Multiple teaching methods



# LEVELS OF OBSTACLES TO HAND HYGIENE COMPLIANCE

(Grol and Grimshaw, 2003)

- Individual professional
  - Cognitions
  - Attitudes and motivation
  - Routines
- Team or unit
  - Social influence and leadership
- Hospital or health system
  - Organizational
  - Resources



# JOINT COMMISSION FINDINGS

(Chassin et al., 2015)

- Eight-hospital Center for Transforming Healthcare pilot program using Lean, Six Sigma, and change management to identify causes of hand hygiene noncompliance and improve performance
- Compliance rates:
  - Baseline (Feb.-July 2009): **47.5%**
  - Improve period (Aug.-Oct. 2009): **76.1%**
  - Control period (Nov. 2009-Sep. 2010): **81.0%**



# JOINT COMMISSION FINDINGS

(Chassin et al., 2015)

- 24 different causes of noncompliance identified
- 2-9 key causes identified at each hospital
- Key causes differed and were distributed unevenly across hospitals
- **Each cause required different remedies and solutions**





# KEY CAUSES OF NONCOMPLIANCE

(OHA; Chassin et al., 2015)

## IMMEDIATE

- Use of gloves
  - Interference with the process
  - Perception that hand hygiene not needed
- Hands full
- Hand hygiene performed improperly (inadequate time or technique)
- Emergency situation
- Distractions/forgetting

## SYSTEMIC AND CULTURAL

- Lack of safety culture
- Lack of accountability
- Lack of adequate education
- Ineffective sink and dispenser placement
- Data collection and reporting not accurate or timely

# PITFALLS OF THE LITERATURE

“In the meantime, we can only hope that more and more organizations and practitioners will not let evidence-based medicine act as an erroneous ‘intellectual hegemony’ that substitutes for sound judgment and that, instead of waiting for irrefutable analytic scientific evidence, **a rising community of the conscientious will insist that we all consistently and thoroughly wash our hands.**” (Backman et al., 2008)



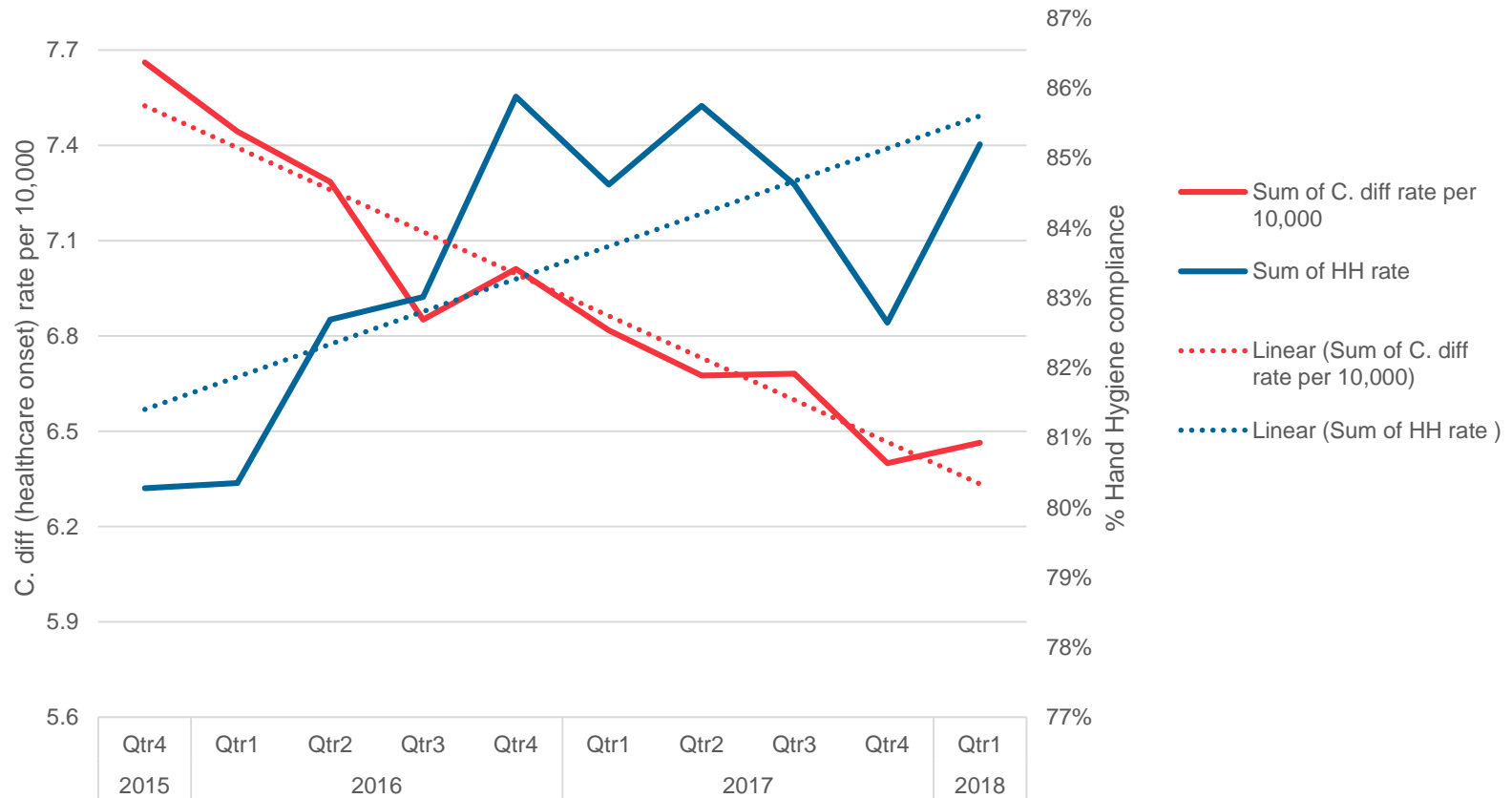
# PITFALLS OF THE LITERATURE

- **Translation:**
  - The benefits of hand hygiene are beyond dispute.
  - An organization-specific approach to improving compliance will be most effective.
  - Individuals, hospitals, and health systems have the tools at their disposal to move toward a culture, environment, and expectation of 100% compliance.



# C. DIFFICILE AND HAND HYGIENE COMPLIANCE

C. difficile and Hand Hygiene Compliance



# GETTING TO “ALWAYS”

Current State

100% Compliance



## Guiding principles:

- Identify the specific causes of hand hygiene noncompliance (by health care worker type, department, unit, etc.)
- Tailor interventions to address specific causes
- Ensure readiness for deployment of interventions



# SPECTRUM OF INTERVENTIONS

Current State

100% Compliance



## Basic Interventions

- In-service education for awareness Campaign
- Internal observations to establish baseline data
- Expand internal observations to include external observations, such as by OHA
- Signage for staff, patients and visitors
- Supply of HH products inventory
- Establishment of HH policy
- Inventory of HH supplies and sink placement
- Feedback to middle management by leadership on compliance rates

## Intermediate Interventions

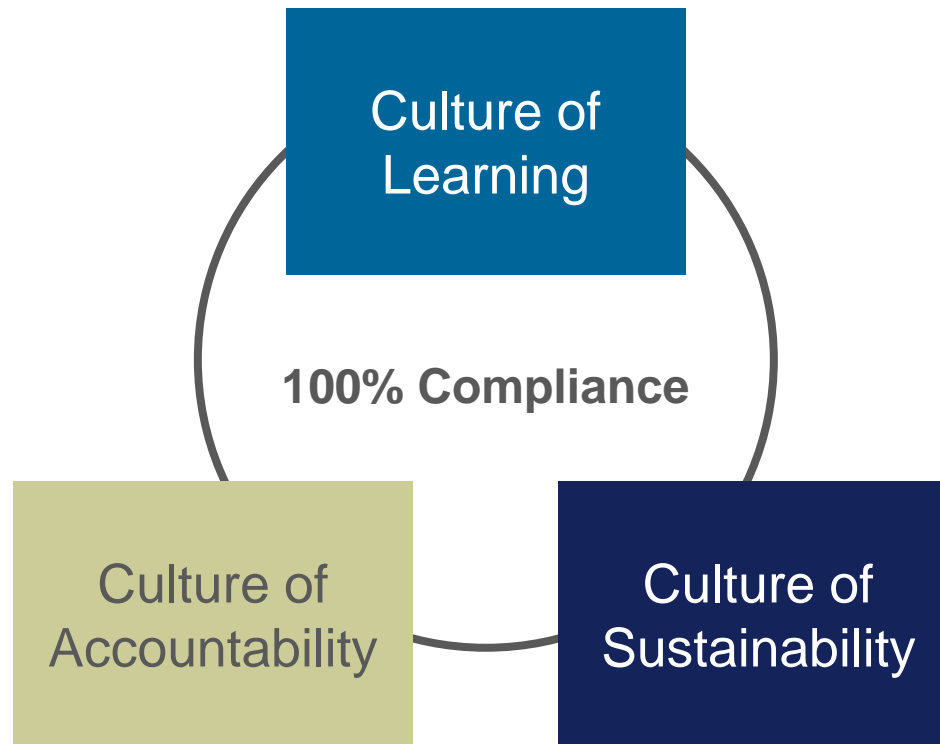
- Feedback of compliance rates by unit and HCW type
- Gap analysis for non-compliance determinants
- Rotate internal observers to units other than where they work
- Revision of institutional HH policy to be departmentally specific
- Increase supply of HH products and to place dispensers outside of rooms in halls
- Mobilize results by unit to units and HCW's on each unit
- Staff engagement

## Advanced Interventions

- Huddles and stand downs for HH awareness and identification of breakthrough for higher rates of compliance
- Coaching
- Rewards
- Staff reminders to do HH with signals or cues
- HH compliance as a part of the annual evaluation
- Leadership further engagement for resetting of goals and thresholds
- Posting of rates in public locations of hospital
- HH rates as part of Quality Report Card, Dashboard, etc.
- Publishing of reports in institutional broadcasting and publications



# FOCUSING ON A CULTURE OF HAND HYGIENE COMPLIANCE



**Objective:** Foster a culture that relays that performing substandard hand hygiene or the absence of performing hand hygiene is equivalent to unsafe practice.



# POTENTIAL ACTIONS

## Culture of Learning

- Review and revisit competency
- Review of unit-based nosocomial infections
- Network with peers regarding effective practices
- Provide training on approaching others in real time when substandard or no hand hygiene is observed
- Include HH and expectations and compliance rules for all training programs; medical students, residents, fellows and nursing programs, radiology students, etc.





# DISCUSSION QUESTION

## Culture of Learning

- What are your concerns with respect to a culture of learning around hand hygiene compliance at your hospital?



# POTENTIAL ACTIONS

## Culture of Accountability

- Ensure that hand hygiene is a component of the performance evaluation
- Assign peer reviews with documentation
- Develop individual employee performance improvement template that can be adapted to individual employee needs
- Communicate expectations with interdisciplinary providers
- Post signage for unit visitors that detail hand hygiene expectations
- Require an individual commitment process
- Disseminate hand hygiene data in a meaningful manner
- Role model the desired behaviors during rounding and at all times
- Increase managerial visibility
- Perform analysis of all departments for evidence of CURRENT policy for "wash in/wash out" and any unique features of the HH process by department (e.g., nutrition services and housekeeping tasks related to HH, stocking of supplies in NICU for PCAs)
- Signed attestation (for ALL staff) committing to HH as evidenced by consistent, appropriate "wash in/wash out" performance



# DISCUSSION QUESTION

## Culture of Accountability

- What are your concerns with respect to a culture of accountability around hand hygiene compliance at your hospital?



# POTENTIAL ACTIONS

## Culture of Sustainability

- Ensure that hand hygiene is a component of every bundle
- Calculate ROI impact of substandard performance (length of stay, cost)



# DISCUSSION QUESTION

## Culture of Sustainability

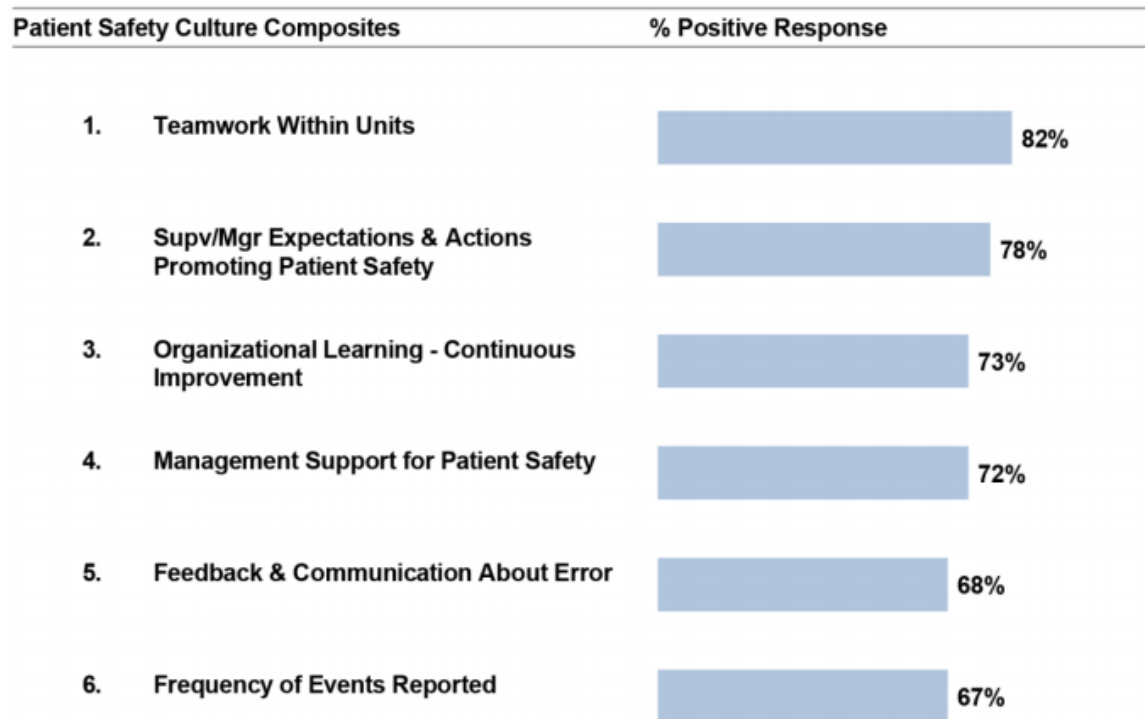
- What are your concerns with respect to a culture of sustainability around hand hygiene compliance at your hospital?



# AHRQ HOSPITAL SURVEY ON PATIENT SAFETY CULTURE

(Famolaro et al., 2016)

Chart 5-1. Composite-Level Average Percent Positive Response – 2016 Database Hospitals



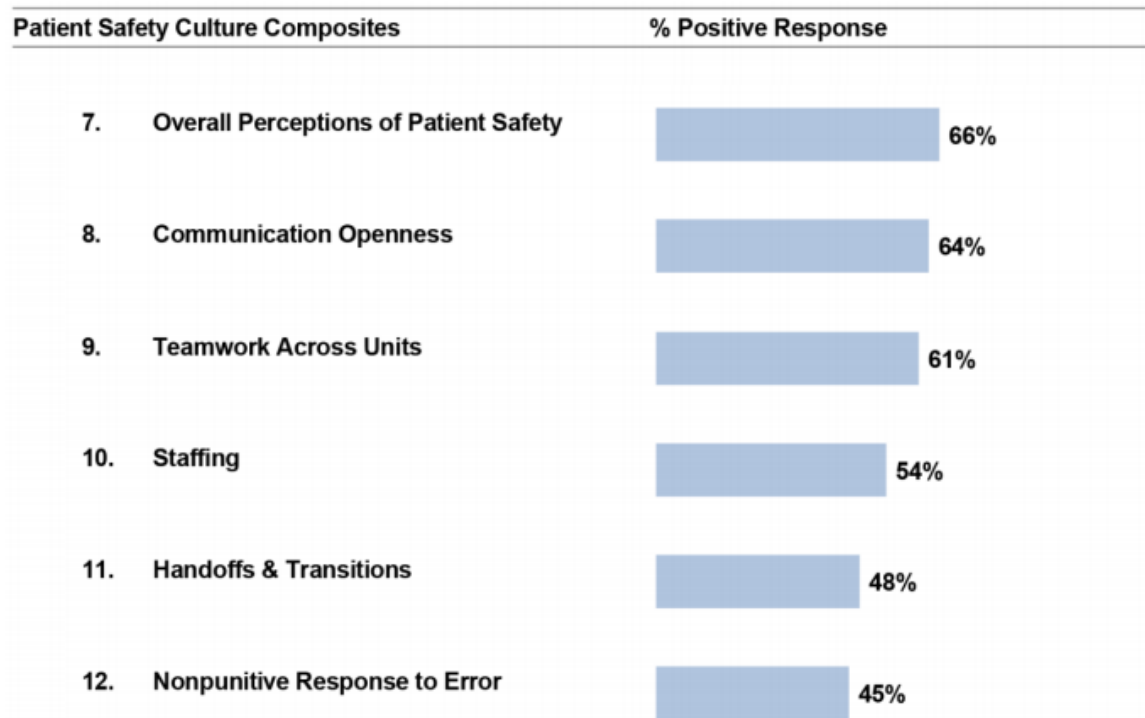
Areas in Which  
to Build on  
Success



# AHRQ HOSPITAL SURVEY ON PATIENT SAFETY CULTURE

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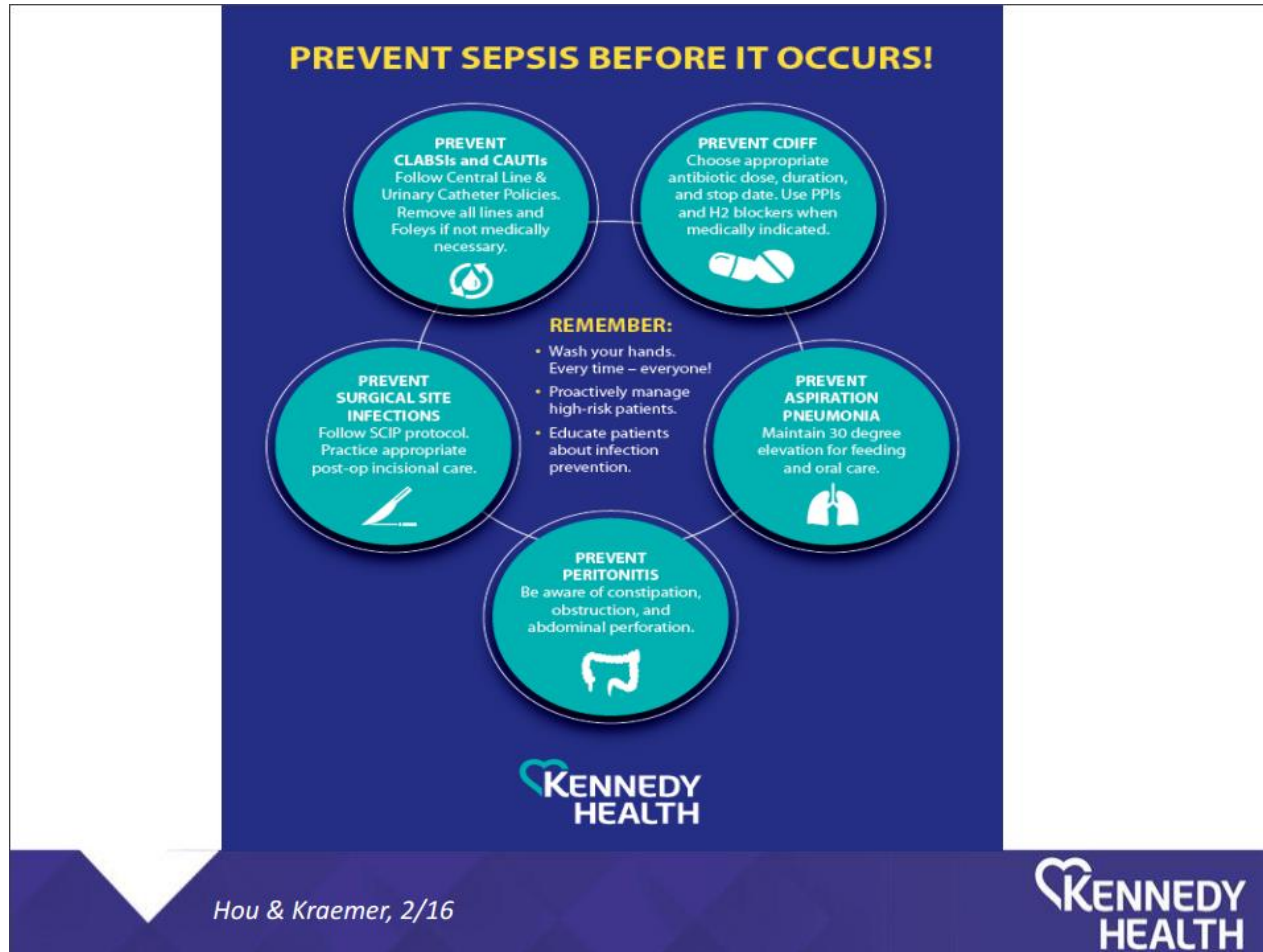
Chart 5-1. Composite-Level Average Percent Positive Response – 2016 Database Hospitals



Areas in Which  
to Focus on  
Improvement



# HAND HYGIENE AS CARE BUNDLE COMPONENT



Full presentation by Kennedy Health, with more details on care bundles including hand hygiene, available at:

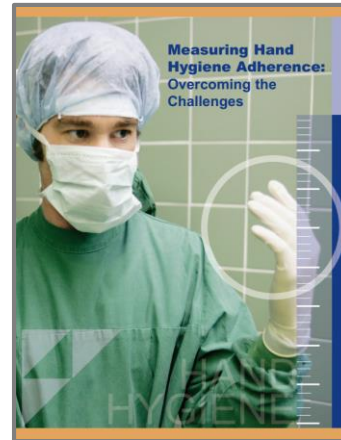
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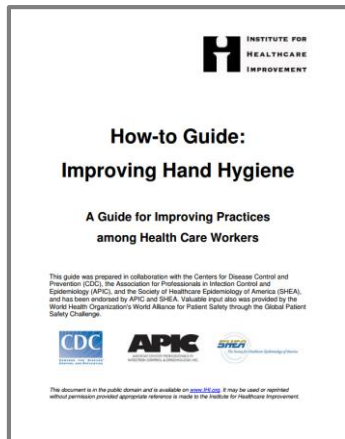
# ADDITIONAL RESOURCES



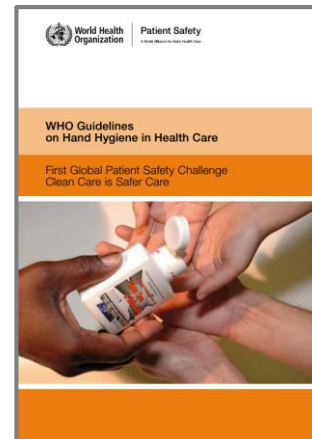
- CDC [Guidelines and Training Resources](#)



- Joint Commission [Monograph and Targeted Solutions Tool for Hand Hygiene](#)



- IHI [How-to Guide: Improving Hand Hygiene](#)



- WHO [SAVE LIVES: Clean Your Hands Campaign](#)



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James V. Guliano, MSN, RN-BC, FACHE  
Vice President, Quality Programs  
[James.Guliano@ohiohospitals.org](mailto:James.Guliano@ohiohospitals.org)

Ellen Hughes, RN  
Quality Coordinator  
[Ellen.Hughes@ohiohospitals.org](mailto:Ellen.Hughes@ohiohospitals.org)

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**Ohio Hospital Association**  
155 E. Broad St., Suite 301  
Columbus, OH 43215-3640

T 614-221-7614  
[ohiohospitals.org](http://ohiohospitals.org)



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