You Can Kick-Start Your Hand Hygiene Program

December 4, 2016

Session Objectives

• Identify two key partners to successful, sustainable handwashing programs.

• Design a measurement system for hand hygiene observations that provides randomized sampling in your setting.

• Practice two strategies that can be part of a successful hand hygiene program.
Tell us about you…..

- Name
- Role
- Setting
- Measurement System
  - Observational
  - Electronic
  - Patient Survey

History of Infection Prevention
Dec 10, 2012 6:20pm
Heart Surgeon Gives Patients Infection When Glove Rips
MRSA outbreak contained through DNA sequencing

12/19/2012
Sara Breedlove

The hospital infection control team also identified a new case of MRSA carriage in the special care baby unit, more than two months after the last MRSA-positive patient had left the unit and the ward had been deep-cleaned.

They used rapid DNA sequencing to show that the new case of MRSA was related to the earlier outbreak. More than 154 health care workers were screened for MRSA and one member of staff was found to be carrying the same strain of MRSA linked to the outbreaks.

Hepatitis C

What is it?
- Hepatitis C is an infection of the liver caused by the hepatitis C virus.
- Symptoms are usually mild and can include fatigue, nausea, and jaundice.
- Chronic infection can lead to liver damage and, in some cases, liver failure.

130-150 MILLION

- Number of people globally who suffer from hepatitis C
- About 500,000 new infections per year

Other types of hepatitis:
- Hepatitis A: caused by the hepatitis A virus, transmitted through food or water
- Hepatitis B: caused by the hepatitis B virus, transmitted through blood or sex
- Hepatitis D: caused by the hepatitis D virus, transmitted through blood
- Hepatitis E: caused by the hepatitis E virus, transmitted through food or water

Symptoms of hepatitis C in infants may include:
- Jaundice
- Failure to gain weight
- Stomach upset
- Abnormal liver function tests

Symptoms of severe liver damage may include:
- Jaundice
- Enlarged or tender liver
- Ascites (fluid in the abdomen)
- Swelling in the legs
- Nasal bleeding
- Bruising
- Trouble breathing

What is known so far

Early June: Doctors reported an increased frequency of newly diagnosed hepatitis C virus infections in the ward. An initial investigation of seven cases within four weeks prompted full investigations.
- The hospital’s infection control team was alerted and reviewed the hospital processes and all possible routes of infection.
- It was determined that 17 patients who were hospitalized from April to June have been diagnosed with hepatitis C. All had some form of renal failure and a majority had a past history of end-stage renal failure and/or renal transplant donors. Nearly half had recent high-dose immunosuppression therapy.
- The youngest patient is 24 years old and the oldest is 70 years old. Most are in their 50s and 60s.
- Genetic analysis suggests that the hepatitis C virus isolated from these different patients is related, meaning they originated from one source.

Eight of the 22 have since died

- Very ill patients with one or more additional disorders and severe renal failure, although hepatitis C has not been ruled out as a contributing factor
- Deaths with no link to hepatitis C
- Death pending review

0.3% of the general population of Singapore

- The prevalence of hepatitis C in the general population of Singapore

3%

- The prevalence of hepatitis C in renal transplant patients is 3 times that of the general population.
• Handwashing

Why is hygiene in healthcare different?

Images courtesy of 3M
Jewelry

- Rings should be simple and loose fitting allowing for movement during handwashing
- Costume jewelry should be minimized for those providing patient care
Developing the Team

- The “Mary Lu Effect”
- Focus on room entry and exit
- Follow up conversations to determine barriers
- Culture - prompting for missed opportunities

Our Commitment:
We will deliver high quality care because lives depend on it, service as though the patient were a loved one, and relentless improvement because our future depends on it.
Here are the 5 Moments:

1. Before Touching a Patient
2. Before Clean/ Aseptic Procedure
3. After Body Fluid Exposure Risk
4. After Touching a Patient
5. After Touching Patient Surroundings

Asking About Barriers

- I noticed you missed an opportunity for hand hygiene when (situation). To better assist staff in performing hand hygiene, part of the observation process is to identify barriers. Can you tell me what the barrier was to performing hand hygiene? Thank you.
The Prompt: Changes / PDSAs

<table>
<thead>
<tr>
<th>Clinical Rotation #1</th>
<th>Clinical Rotation #2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Prompts:</td>
<td></td>
</tr>
<tr>
<td>1. Nonverbal</td>
<td>Groups exchange prompting strategies.</td>
</tr>
<tr>
<td>2. Verbal</td>
<td>Verbal group change to a combined prompt.</td>
</tr>
<tr>
<td></td>
<td>All Students used Combined Prompt</td>
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<td></td>
<td>Signs to increase awareness.</td>
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<td></td>
<td>Streamline Data Collection form.</td>
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<td></td>
<td>1. Regular managers update.</td>
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<tr>
<td></td>
<td>2. Flexability of verbal part of prompt.</td>
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</tbody>
</table>

- Gundersen Lutheran Medical Center, Inc. | Gundersen Clinic, Ltd.
What keeps Infectious Disease Doctors awake at night?

- Influenza
- “Nightmare Bacteria”
  - Spread of very hard to treat, resistant bacteria in past 5-10 years
  - “MDRO”: Multi Drug Resistant Organism
  - MRSA (Methicillin Resistant Staph Aureus)
  - Clostridium difficile
  - VRE (Vancomycin Resistant Enterococci)
- Increasingly Resistant Gram Negative Bacteria
  - ESBL (Extended Spectrum Beta Lactamase)
- The end of the antibiotic era as we know it?

We’re in Western Wisconsin... does this affect us?

- 47 year-old woman from La Crosse
- Moved to Egypt, underwent esophageal surgery 2013 with significant complications
- Traveled to NY City November 2013 for further care
- To La Crosse February 2014
- Presented to TEC with chronic open draining chest wound
### Wound culture February 23, 2014

- Alarmingly resistant Gram Negative Bacteria
- Only 1 antibiotic active against this bacteria!

<table>
<thead>
<tr>
<th>Antibiotic</th>
<th>Sensitivity</th>
<th>Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amp/Sulbactam *</td>
<td>Method</td>
<td>Resistant</td>
</tr>
<tr>
<td>Ampicillin *</td>
<td>Method</td>
<td>Resistant</td>
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<tr>
<td>Cefazolin *</td>
<td>Method</td>
<td>Resistant</td>
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<tr>
<td>Cefepime</td>
<td>Method</td>
<td>Resistant</td>
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<tr>
<td>Cefotaxin</td>
<td>Method</td>
<td>Resistant</td>
</tr>
<tr>
<td>Ceftriaxone *</td>
<td>Method</td>
<td>Resistant</td>
</tr>
<tr>
<td>Ciprofloxacin *</td>
<td>Method</td>
<td>Resistant</td>
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<tr>
<td>Ertapenem</td>
<td>Method</td>
<td>Sensitive</td>
</tr>
<tr>
<td>Gentamicin *</td>
<td>Method</td>
<td>Resistant</td>
</tr>
<tr>
<td>Pip/Tazoebactum</td>
<td>Method</td>
<td>Resistant</td>
</tr>
<tr>
<td>TMP/Smilla *</td>
<td>Method</td>
<td>Resistant</td>
</tr>
</tbody>
</table>

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**Rally the Team**

“Germs” on a hand after touching an infected surface

After hand hygiene with alcohol gel

**Alcohol gel works!**

Donskey CJ. NEJM 2009: 360;3
How do you get the ball in the end zone?

Make it memorable

Methods

• Leadership buy in and support
• System-wide staff engagement
  – Videos
  – Recognition
  – Tool kit on Gundersen’s intranet
• Data collection education with varied observation techniques
• Transparency of data
• Patient, visitor and community participation
Designing Your Measurement Strategy

- Who
- What
- When
- How

Playbook Key

O - Offense
D - Defense
S - Special Teams
T - Drills
G - Organizational
M - Motivation

This key is to assist in locating the playbook or document for your needs. Each letter represents an item. Among each item there are several colors. They represent a component under that item.

For example using the offensive playbook:
- O - Special Offense
- O - Option Offense
- O - Wing-T Offense
- O - Pro Offense
- O - Flexbone Offense

The same will apply for the other categories.

I hope this is helpful to all.
# What and How

**Gundersen Lutheran - When to Do Hand Hygiene Review Inpatient - Check Sheet**

**Dept:** __________
**Date of Observation:** __________ / __________ / 2016

**Observer:**

**Methodology:** The intent of this measure is to observe if hand hygiene is being performed when it is supposed to be (5 Moments). Do 30 observations in the designated week. 6 per day if possible. Vary the times and persons being observed. Observe all staff. Use a new check sheet for each day. Transfer information to the on-line data collection tool.

**Hand Hygiene:** Please check all of those you observe the person doing or not doing and should have.

<table>
<thead>
<tr>
<th>Role</th>
<th>Before Pt. Contact</th>
<th>After Pt. Contact</th>
<th>After Touching Pt. Surroundings</th>
<th>Before Aseptic Tasks</th>
<th>Body Fluid Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>RN</td>
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<td>OA</td>
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<tr>
<td>Tech (Radiol, Critical Care, IV Therapy, DMAT)</td>
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<tr>
<td>MD</td>
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<td>PA / NP</td>
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<tr>
<td>Nutrition</td>
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<tr>
<td>Dietary</td>
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<tr>
<td>LA</td>
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</table>
General Guidelines for Observations

- It is two separate observations when putting on gloves and after taking them off
- Entry and exit are separate observations
- Soap or gel counts
- Do not guess, if unsure - skip observation
- Do not exceed 2 observations of the same employee in a single observation session

Do not count the following situations as “not done”:

- Emergent/urgent situations
- When staff carry something into a room and perform hand hygiene immediately after putting items down
- When staff exits a room and performs hand hygiene and then re-enters another patient care area continuously and does not touch anything (environment or self) and does not perform HH when entering 2nd room
- When staff touches the patient while helping them ambulate at room entry or exit
What about technique?

• This is not an area we focus on directly.
• We do demonstrations
  – It is part of our orientation
  – We include it in department specific presentations
  – We try to provide managers with new tools (Jimmy Kimmel video)

“Name that Moment”

• Hand hygiene at this moment will prevent taking germs to co-workers or other patients.
Jennifer has just come from the collaboration space and is checking on her patient.
“Name that Moment”

Alex has just moved the patient’s tray table closer to the patient, who is up in the chair.

How Many Observations?

• 30 moments per month
  – Inpatient or 24/7:
    • 15 day shift observations
    • 15 night shift observations
  – Outpatient: 6 moments per day over five days

• Keep your check sheets
  • If you are unable to do the scheduled week, do the week before as long as it doesn’t go across the end of the month.
Who

- Mix it up
- Front line staff benefits
- Patients
Ensure Your Measurement Plan Works

Hand Hygiene observations should be completed in all inpatient and outpatient areas next week. Inpatient UPEOs or their designee are doing hand hygiene observations. Please let us know if you have any questions.

Clean Hands

Saves Lives
Exercise

• Develop a measurement plan

Review the Game Tapes

Hand Hygiene Done When It's Supposed to Be

<table>
<thead>
<tr>
<th>% correct</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td></td>
<td></td>
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<tr>
<td>90</td>
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<td>80</td>
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<td>70</td>
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<td>60</td>
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<td>30</td>
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<td>20</td>
<td></td>
<td></td>
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<tr>
<td>10</td>
<td></td>
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</tr>
</tbody>
</table>

Legend:
- Office of Critical Care Teln
- OR Mgr
- Scheduling
- LA
- OR Tech
- RN
- Staff RN
- LPN/LVN
- MD
- Other
- ANP
- RN
- Respiratory
- Pharmacist
- Nurse
- Tech
Roles with Missed Opportunities in the Inpatient Setting during 2016

% missed opportunities

<table>
<thead>
<tr>
<th>Role</th>
<th>% of Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNAs or AAs</td>
<td>37</td>
</tr>
<tr>
<td>EAs</td>
<td>32</td>
</tr>
<tr>
<td>MD</td>
<td>31</td>
</tr>
<tr>
<td>Critical Care Tech</td>
<td>26</td>
</tr>
<tr>
<td>Residents/Interns</td>
<td>18</td>
</tr>
<tr>
<td>Technicians</td>
<td>17</td>
</tr>
<tr>
<td>Dietary</td>
<td>17</td>
</tr>
<tr>
<td>Lab</td>
<td>15</td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
</tr>
<tr>
<td>RNs</td>
<td>13</td>
</tr>
<tr>
<td>PA/NP</td>
<td>12</td>
</tr>
<tr>
<td>Respiratory</td>
<td>9</td>
</tr>
<tr>
<td>Therapist</td>
<td>3</td>
</tr>
</tbody>
</table>

Other: Students-Medical, Nursing, PA, etc., HUC, Pharmacists, Utilization Review, Registered Dieticians, X-ray, Security, Social Worker, Volunteer
What does it take to keep winning throughout the season?

Resources

Hand Hygiene Video
Hand Hygiene Posters to print and display

Evidence Based Practice
Hand Hygiene Policy
Hand Dermatitis - what you should know
Nails and Hygiene
WHO Guidelines for hand hygiene in Healthcare
Hand Hygiene in Healthcare Settings
CDC guidelines (2002) prioritize health-care workers (HCWs) with

Hand Hygiene Toolkit
Goal: To promote patient safety through the practice of hand hygiene to prevent spreading germs.
Objectives:
1. Wash in hours of patient
2. Wash when going IN and OUT of patient room
3. Wash according to 5 Moments

Schedule:
• 2015 Observations Calendar

Strategies:
1) Training Change
   • Change – Collection Tools, Training, Calendar for observations, Interpreting Results
   • Process improvement tools
   • Resources to respond to specific barriers
Traveling Trophies

Hand Hygiene Trophy Winners Q2, 2016

**Most Improved**
- Orthopaedic Unit

**Top performer**
- Mother / Baby
- Occupational Health
All employee recognition

WE HAVE TO HAND IT TO YOU...
Hand hygiene is up. Infection rates are down!
Just one of the many ways you practice
LOVE + MEDICINE

Celebrate your success with chocolate!
~From a grateful Hand Hygiene Team

VICTORY
Introducing......

https://www.youtube.com/watch?v=ssktVpcv9W!

Enhancing Special Teams
Hand Hygiene

One of the best defenses against germs is frequent, thorough handwashing and use of hand sanitizer (gel). It is also one of the easiest, most cost-effective ways to combat the spread of germs and infections.

Is hand hygiene impacting our hospital infection rates?

- Hospital Hand Hygiene Performance
- HAIs: MRSA, VRE, CDIFF

2014: Hand Hygiene was made a leadership target and April 2014 was the official kick-off of our Hand Hygiene Program.

Improvement #1: 52% decrease in infections.

Improvement #2: 54% decrease in infections.

Sustained improvement of 12.5%.
Wellness Fest

PATIENT POPULATION SPECIFIC EXAMPLES
Renal Dialysis

Please wash your fistula prior to dialysis...

Holding your needle site post dialysis

- Offering a Glove
  - Your care provider will give you a glove to use when you hold your needle sites post dialysis

- Wearing a glove provides a barrier between your hand and your fistula to decrease the chance of cross-contamination and infection.

If you do not normally hold your needle site, at times beads could slip and we may ask you to hold your site for a short time to hold the site stable in place. Starting 8/17/15 we will have many patients with a fistula and we will give you a blue glove when removing your needles for your protection.
Patient Education Board

Staff Newsletter Reminders

INFECTION CONTROL CORNER

Practice Changes:
- Dialyzer and line packages MUST no longer be opened ahead of time. Instead, they should be opened immediately prior to taking to patient station for machine set up.

Gel Foam for AVF hemostasis
- Surgifoam Sterile Compressed Sponges is supplied in an individual sterile envelope enclosed in an outer envelope.
- Sterility of the product is assured unless the outer envelope has been damaged or opened.
- All opened envelopes of unused Surgifoam should be discarded.

Wearing of PPE - Gloves/face shield/Fluid Resistant Jacket
- Gloves must be worn EACH time you touch the machine - YES, EACH time - with each alarm, etc.
- All PPE MUST BE CLEAN for Setting up/Alarms/Lab on second shift as the machine is considered dirty even after being cleaned.
- Chair-side computer keyboards/screens can easily become contaminated because of their proximity to the patient station. Hand hygiene is imperative after contact with the chair-side computer and before contact with the patient, regardless of whether contact with the computer occurred through gloved or ungloved hands.
- New gloves MUST BE USED each time for access site care, vascular access cannulation, administration of parenteral medications or to perform invasive procedures.

Hand Hygiene (VTag 113)
- Hand hygiene includes either washing hands with soap and water, or using a waterless alcohol-based antiseptic hand rub with ≥60% alcohol content:
  - Hands should be washed with soap and water if visibly soiled.
  - If not visibly soiled, hand hygiene with alcohol-based hand rub may be used.
  - The CDC recommends that hand washing in corporate rubber gloves be performed "rigorously" for 15 seconds, and that the use of alcohol-based rubs incorporate covering all surfaces of hands and fingers, until hands are dry.
  - According to the CDC, even with glove use, hand hygiene is necessary after glove removal because hands can become contaminated through small defects in gloves and from the outer surface of gloves during glove removal.
In-patient Behavioral Health
**Hand Hygiene**

**Inpatient Behavioral Health**

Quality Improvement tools used:
- A3s
- PDSAs

Hand Hygiene Barriers:
- Safety Concerns: Gel not readily available
- Lack of education on requirements
- Difficult Workflows
New Workflow Developed:

- Go-and-sees

- Webinar on hand hygiene in IBH settings

- Discussions with Inpt BH Safety Committee

Other Helpers

RN: Readjusted monitoring cords & Documented on computer

- ATP Surface Testing
Outpatient Sleep Center

Hand Hygiene Done When It's Supposed to be in the Sleep Center

Goal = 90

Observations done by people from outside of the department. Aug. & Sep. '14
Definition when hand hygiene should be done based on work flows. Nov. - Dec. '14

<table>
<thead>
<tr>
<th>Month</th>
<th># of moments observed per month</th>
</tr>
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<tbody>
<tr>
<td>Jan 14</td>
<td>37</td>
</tr>
<tr>
<td>Feb 14</td>
<td>23</td>
</tr>
<tr>
<td>Mar 14</td>
<td>50</td>
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<tr>
<td>Apr 14</td>
<td>30</td>
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<td>May 14</td>
<td>24</td>
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<td>Jun 14</td>
<td>24</td>
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<td>Jul 14</td>
<td>24</td>
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<tr>
<td>Aug 14</td>
<td>18</td>
</tr>
<tr>
<td>Sep 14</td>
<td>23</td>
</tr>
<tr>
<td>Oct 14</td>
<td>47</td>
</tr>
<tr>
<td>Nov 14</td>
<td>44</td>
</tr>
<tr>
<td>Dec 14</td>
<td>34</td>
</tr>
</tbody>
</table>

% correct

73 96 105 100 96 94
Keys to Success

– Executive leadership buy in and guidance
  • Discuss barriers to success

Keys to Success

– Buy in from all levels of the organization
  • Unit/department leadership rounding with staff to discuss barriers
  • Culture change—encouragement of others, and accountability for one’s practice
Keys to Success

• Clear expectations for all staff

Keys to Success

– Tool Kit available with resources for staff:
  • Data collection
  • Training
  • Commercials
  • Literature and Evidenced Based Practices
Keys to Success

– Making it fun and keeping it in the forefront for sustainability
  • Showcasing departments who are succeeding!

Keep the Momentum Going

• Dedicated group including upper level leadership and unit leaders in the inpatient and outpatient settings
• Quarterly meetings with Executive Leadership
• Manager updates at least quarterly
• Orientation for all new staff and residents
• Departmental presentations throughout the organization.
  Ie. Fac. Ops, Volunteers. etc.
(latest video)
The Triple Aim

- Improving the patient experience of care (including quality and satisfaction)
- Improving the health of populations
- Reducing the per capita cost of health care.

Any Questions?
References

Major article
Do hospital visitors wash their hands? Assessing the use of alcohol-based hand sanitizer in a hospital lobby

David J. Birnbach MD, MPH a,b,⁎, Igal Nevo MD a, Susan Barnes MD b, Maureen Fitzpatrick MSN, ARNP-BC a, Lisa F. Rosen MA b, Ruth Everett-Thomas RN, MSN a, Jill S. Sanko MSN, ARNP a, Kristopher L. Arheart EdD b

Handouts

• Table 1 from AJIC HH bundle
• 2017 Calendar
• Measurement Exercise Tool
Table 1
The key components of a hand hygiene bundle

<table>
<thead>
<tr>
<th>Component Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand hygiene monitoring and feedback on infection rates</td>
<td>The fundamental purpose of hand hygiene is to reduce infections. Therefore, quantitative and qualitative data and feedback are critical to help identify areas for improvement.</td>
</tr>
<tr>
<td>Hand hygiene leadership and support</td>
<td>An effective hand hygiene bundle is supported by strong leadership and support in the organization.</td>
</tr>
<tr>
<td>Hand hygiene surveillance and response team</td>
<td>Hand hygiene surveillance and response teams are critical to identify and respond to hand hygiene opportunities.</td>
</tr>
<tr>
<td>Provider education and training for all personnel, leaders, and visitors</td>
<td>Education is a key component of hand hygiene. Providers, leaders, and visitors need to understand the importance of proper hand hygiene.</td>
</tr>
<tr>
<td>从前手卫生资源是可获得的全科医生在手和手尿液时</td>
<td>Resources are also available at the point of care.</td>
</tr>
<tr>
<td>完整的手卫生行为和可追踪性</td>
<td>When all components of the hand hygiene bundle are in place, appropriate hand hygiene behavior is observed.</td>
</tr>
<tr>
<td>Provider hand hygiene compliance</td>
<td>Compliance with hand hygiene guidelines is critical to reduce infections.</td>
</tr>
<tr>
<td>Provider hand hygiene adherence</td>
<td>When all components of the hand hygiene bundle are in place, adherence to hand hygiene guidelines is observed.</td>
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Note: All policies and guidelines should be reviewed and updated regularly.
# Measurement Plan

<table>
<thead>
<tr>
<th>Who</th>
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<tbody>
<tr>
<td>What</td>
<td></td>
<td></td>
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<tr>
<td>(Define your moments)</td>
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<td></td>
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<tr>
<td>When</td>
<td></td>
<td></td>
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<tr>
<td>(Randomize your schedule)</td>
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</tr>
<tr>
<td>How</td>
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