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Creative Hand Hygiene Programs to Motivate Staff and Visitors

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Objectives

• Describe two social learning theories that can be used to influence hand hygiene practices
• Describe a creative educational campaign that can be used for hand hygiene awareness during the influenza season
• Describe three seasonal hand hygiene educational campaigns
Social Learning Theory

- Social learning theory focuses on the learning that occurs within a social context.

- It considers that people learn from one another, including such concepts as observational learning, imitation, and modeling.
General principles of social learning theory follows:

1. Learn by observing the behavior of others and the outcomes of those behaviors.
2. Learn through observation alone. However, learning may or may not result in a behavior change.
3. Cognition plays a role in learning. Awareness and expectations of future reinforcements or punishments can have a major effect on the behaviors that people exhibit.
Learning Techniques

– Role Modeling
– Self-Efficacy
– Reinforcement
– Contracting
– Reciprocity
Dr. Albert Bandura  
Stanford University  
Role Modeling

- People learn behaviors, emotional reactions, and attitudes from role models whom they wish to emulate.

- Bandura states: "Most human behavior is learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action."
How the environment reinforces and punishes modeling:

- People and the environment often reinforce modeling the behavior of others.
- Bandura suggested that the environment also reinforces modeling.
  1. The observer is reinforced by the role model.
  2. The observer is reinforced by a third person.
  3. The imitated behavior itself leads to reinforcing consequences.
  4. Consequences of the model’s behavior affect the observers behavior vicariously. This is known as vicarious reinforcement. This is where the model is reinforced for a response and then the observer shows an increase in that same response.
Bobo the Doll Experiment

- Preschool children watched a film in which an adult pummeled, kicked, threw, and hammered a 3.5 feet tall, inflatable Bobo the Clown doll.
  - 1/3 saw a film that ended with the adult aggressor being rewarded
  - 1/3 saw a film that ended with the adult aggressor being punished
  - 1/3 saw a no-consequence version of the film

Results:
- Rewarded or inconsequential aggression were more likely to beat up the Bobo doll
- Results showed that whether or not the children acted aggressively depended on their observations of another person's experiences with reward and punishment, and not on their own, personal experiences.
Healthcare and Hand Hygiene

• Role modeling hand hygiene
• Champions to assist with enforcement efforts (eg Chief of Staff, Nurse Manager)
• “Call out” by staff – empowerment of patients and staff to address non-compliance, supported by administration.
• Engaging staff to model good hand hygiene
Self-Efficacy
Albert Bandura, PhD

• People's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives.

• Self-efficacy beliefs determine how people feel, think, motivate themselves and behave.
Self-Efficacy

- Performance Accomplishments (i.e., past experience)
- Vicarious Experience (i.e., modelling by others)
- Social Persuasion (i.e., coaching and evaluative feedback)
- Physiological and Emotional States

Sources of Self-efficacy Information

Behaviour / Performance
People with Self-Efficacy

- Foster intrinsic interest and deep engrossment in activities.
- Challenging goals and maintain strong commitment to them.
- Heighten and sustain their efforts in the face of failure.
- Quickly recover their sense of efficacy after failures or setbacks.
- Attribute failure to insufficient effort or deficient knowledge and skills which are acquirable.
- Approach threatening situations with assurance that they can exercise control over them.
- Efficacious outlook produces personal accomplishments, reduces stress and lowers vulnerability to depression.
Examples of the Use of Role Modeling and Self-Efficacy

• Infection Control Liaison Program
• Hand Hygiene Campaigns
• Cleaning keyboards, telephones, work areas
• Direct Observational Studies
  – operating room procedures
  – post-op dressing changes
  – patient tracers with nurse managers
  – environmental rounds
Infection Control Liaisons

- Unit and Department-based liaisons
  - Role Models
  - Responsibilities enhance self-efficacy
  - Participate in educational activities
  - Hand hygiene observations
  - Precaution Carts and direct care observations
  - Communicate information to staff
  - Assist in implementing practice change at bedside
  - “Call-out” breaks in techniques
  - Attend monthly meetings
  - Contribute to an annual “Bug Beat Fair”
  - Participate in Performance Improvement Studies
  - Clinical ladder for professional advancement
Infection Control Liaison Activities

that increase self-efficacy and role modeling
Liaison Education Material Support

- Infectious Disease Newsletter – Quest Lab
- Email communications
- Monthly IC Liaison meetings
- Annual Bug Beat Fair
- Bug Bytes
  - Monthly abstracts in a powerpoint slide presentation for liaisons to share with staff
  - 6-8 succinct abstract description and source
Unit-Based Bulletin Board
Bug Bytes – Online Education
Monthly Distribution

8-10 powerpoint slides with abstracts of current infection control, infectious disease and prevention research
Healthcare professionals treating patients who are having recurrent staph infections might want to consider this possible link in the chain of infection: the family pet. The March 13 *New England Journal of Medicine* reports on the case of a German woman who had recurrent infections from a strain of drug-resistant MRSA, which finally was cured after the family's cat was tested and treated. The otherwise healthy woman had recurrent multiple deep abscesses, according to the report. Nasal and other swabs showed her husband and two children carried the MRSA germ on their skin, but had no signs of infection. While they were treated and tested free of the MRSA germ, the woman was still infected. Attention then turned to the family's three apparently healthy cats and screening showed one of the animals tested positive for MRSA. Four weeks after the cat was treated with antibiotics, the woman was also free of MRSA, the study said.

Source: March 13, 2008 *New England Journal of Medicine*
Researchers Identify What Makes MRSA Lethal

- *Staphylococcus aureus* is a type of bacteria commonly found on the skin that is relatively harmless unless it gets into the bloodstream, where it can cause blood poisoning and create abscesses in organs such as the heart and brain.
- MRSA, or Methicillin Resistant *Staphylococcus aureus*, can be particularly dangerous because it is resistant to treatment with most antibiotics.
- Researchers at the University of Bath, in collaboration with the Universities of York and Gothenburg, investigated how the bug moves from the bloodstream to invade organs in the body.
- They studied Fibronectin Binding Protein (FnBP), a protein on the surface of the bacterium that enables it to bind to human cells and infect them.
- The Wellcome Trust-funded study, published in the open access journal *PLoS Pathogens*, proved for the first time this protein is central to the bacteria's ability to invade the organs.
- The next step of their research will be to try and stop the bacteria invading human cells by using antibodies to block FnBP binding.
- **Source:** *PLoS Pathogens* 2010; 6 (6): e1000964 DOI: 10.1371/journal.ppat.1000964
Staff Participation in Hand Hygiene Posters
Participation in the Annual Bug Beat Fair
Reinforcement Theory

Reinforcement theory: that reinforcers can influence behavior.

The definition has two main components:

• Contingency, where the occurrence of the reinforcer depends on the occurrence of the learner's response
• Rate of Responding, where the reinforcer serves to increase the learner's rate of responding
B.F. Skinner, PhD

- B.F. Skinner used reinforcement theory to downplay the role of punishment in changing behavior.
- Behavior could be altered by simply using positive and negative types of reinforcement.
- It should be noted that negative reinforcement is not equated with punishment.
- When either positive or negative reinforcement is used, a desired behavior increases.
- When punishment is used, a behavior will decrease.
Types of Reinforcers

• **Positive reinforcer:** Presenting a reward after a desired behavior.

• **Negative reinforcer:** Negative reinforcement involves steps designed to lead one to appropriate action in order to escape or avoid an unwanted consequence.

• **Punishment:** Corrective action for non-compliance with infection control behaviors, such as hand hygiene, leading to adverse outcome.

• ex. stop admitting or surgical privileges, warnings toward dismissal, lower pay raises
Schedules of Reinforcement

- **Fixed interval**
- Reinforces at a specific time
- **Fixed ratio**
- Reinforces after a specific number of responses
- **Variable interval**
- Reinforces at various time intervals randomly.
- **Variable ratio**
  reinforcer is not predictable.
Applications in Healthcare

- **Contracting**  A hand hygiene “contract” between the staff and infection control.

- **Tokens - Reciprocity**  Staff are given some type of token for appropriate behaviors, such as hand hygiene theme items, raffles, food, candy.

- **Incentive System**  Staff participate in infection control liaison program for career ladder advancement

- **Encouragement System** – during observational hand hygiene program, verbal encouragement is given to staff and physicians
Examples of Creative Hand Hygiene Programs
Benefits

• Marketing infection control staff
• Role modeling from staff
• Self-efficacy – public display of staff
• Reciprocity – raffles for staff
• Contracting – to enter raffle staff completed contract to perform better hand hygiene
  “I promise to practice better hand hygiene”
• Motivational and visual reminders of need to sanitize hands
November 2003
Got Soap?

• Engaged staff in a Got Soap? campaign:
  – OR Nurses
  – Surgeons
  – Administration

• Interactive cafeteria displays:
  – Before/After Hand cultures
  – Glo-germ box
  – Raffles and prizes
  – Puzzles
  – Children’s coloring contest – best Hand Hygiene poster
Unique Raffle Items

Talking toilet  www.glogerm.com
“Don’t Catch the Flu Bear Blues”
December, 2004

– Baskets filled with masked teddy bears
– Small bottles of alcohol hand rub and candy
– Distributed throughout the hospital to patient care areas and reception desks
Bear Flu Baskets

- 15 baskets were distributed the week before the holidays in the spirit of a gift basket to the liaisons.

- Liaison were gifted the basket and teddy bear after the campaign was completed in February.

- Staff was delighted to receive the individual bottles of hand rub (and candy) as well as the patients who received bottles in patient access.
Project Cost

- The project cost was approximately $700.00
  - Baskets: $5.00 x 15
  - Teddy Bears: $5.00 x 15
  - Sanitizer: $356.00 (400 bottles)
  - Hershey kisses: $150.00
  - Total: $656.00

Four cases of hand rub were donated from the Pharmacy Department to contribute to reducing influenza transmission from the reduction in vaccine supplies.

Results: Only 9 staff of 1100 with flu that season
Bug Beat Fair - June 2005
(started out small)

Glo-Germ

June “Bug Beat” Fair

Contact Plates
Partners in Hand Hygiene
Patient Involvement  Nov 2005

NEBH & You
Creating a partnership between patients and staff to promote good hand hygiene practices.

Partners in Hand Hygiene
Educational displays in the Cafeteria
November 28th and 29th
11:30am - 2pm

“Did you wash your hands or use Cal Stat?”

Raffles and prizes, including the “adopt a bug” campaign.
Participating staff will receive a small stuffed “bug” with a bottle of Cal Stat.
Patients will receive an educational brochure and “bug gift” in Patient Access.
Letter to Medical Staff regarding patient empowerment program (role-modeling)

Scripts for staff to respond to patient inquiries (self-efficacy)

Gifts for staff, patients and visitors prior to the program implementation. (reciprocity)

Patient empowerment (self-efficacy)
Hand Sanitizer Bugs

- Sanitizer bottles affixed with poseable “bugs”

- Highlights dispensers, catches the eye, visitors and staff enjoy them
Facts about hand hygiene...

Hand hygiene is the single most important procedure performed at NEBH to prevent the spread of infection to you, the patient.

Germs that cause infections can be spread in a number of ways. The most common is through hands. Hand hygiene removes germs from the hands and helps protect YOU from infections.

Don't be shy!
Your healthcare workers are interested in your care and encourage you to ask them about hand hygiene!

A former Hand Hygiene Campaign designed to educate healthcare workers on the CDC Guideline for Hand Hygiene and implement the use of alcohol-based handrub product included creative posters around the theme of “Got Soap” with soap mustached nurses and doctors.

In Collaboration With:
Penn
STERIS

New England Baptist Hospital

NEBH & You

Partners in Hand Hygiene
Who?
New England Baptist Hospital is a leader in providing excellent care to patients, and now we would like YOU to join our team as a partner in your care. So ask: “Did you wash your hands or use Cal Stat?”

Why?
Hand hygiene is the single most important procedure that is performed in the hospital for preventing the spread of infection to you, the patient. It is important because nationwide, 2.5 million patients annually develop infections. Also, the Center for Disease Control in Atlanta reported 30,000 deaths directly caused by infections and an additional 70,000 patients had infections that contributed to their death. Hand hygiene is so important that several governmental and professional agencies list hand hygiene in their guidelines.

How?
Become a partner with your doctor, nurse, and all the healthcare workers that enter your room by asking them the question...

“Did you wash your hands or use Cal Stat?”

When & where?
Ask the question any time your doctor, nurse, or healthcare worker is about to make direct physical contact with you or touch things that are used in your care. This may be in your room or anywhere else in the hospital.
Budget for PHH

- Hand Hygiene Buttons 1000 = $290.00
- Finger Puppet Bugs 3000 = $620.75
- 4” Plush Beanie Bugs 300 = $248.75
- Raffle items - Talking Bugs = $73.40
- Bug Lollipops = $119.00
- Hand Sanitizer bottles 400 = $356.00

- Total = $1351.90
Let It S.N.O.W.

January 2006

• Cafeteria Displays
  • Raffles, Sanitizer, Theme gifts
• January 2006

“Let it S.N.O.W.”

Stop Nosocomial Organisms by Washing

Stop Nosocomial Organisms by Washing
Skin Care Fair

- Department of nursing presented a skin care fair
- Infection Control participated with the *Let it S.N.O.W.* educational program
- Presented hand hygiene and precautions techniques
Budget January 2006

• Let It S.N.O.W. and Snowmen = $202.55
  (included 20 snowmen for alcohol dispenser displays, 300 snowmen)

• Hand Sanitizer – 400 bottles = $356.00

• Total: = $558.55
April 2006
Do the H.O.P.

- Handwashing
- Offers
- Protection
- Cafeteria displays
- Raffles
- Bunnie and candy gifts
- Contracting and reciprocity
- Budget: $558.00
June, 2006 – Bug Beat Fair
F.I.E.S.T.A.
Fight Infection, Everyone Should Take Action

Please Join Us For
F.I.E.S.T.A.
Bug Beat Fair
June 8th
11:00am - 2:00pm
Courtyard Conference Room
Games, Educational Displays
and Raffle Prizes!

Also join us for cafeteria displays
June 7th, 11:30am - 1:30pm

Budget: $845.00
November 2006
Cruise on the L.U.A.U

- *Let Us Always Use* Good Hand Hygiene
- Cafeteria - Cruise Ship
- Alcohol hand rub to enter cafeteria from “Captain”
- Hawaiian music and food
- Raffle table and candy distributed on the way out
Cruise on L.U.A.U.

- Role Modeling – Infection Control Captain and Liaisons distributing hand sanitizer
- Staff photos for posters – role modeling and self-efficacy
- Budget: $850.00
- (posters, products, sanitizer)
November 2006
M.R.S.A. Fair
Make Resistance Stay Away

- Introduction to the MRSA/MSSA Screening Program
- Games and prizes, raffles, candy
- 16 Educational Displays:
  - Admitting
  - Micro Lab
  - EVS, Transport
  - Nursing Units
  - Prescreening
  - Operating Room
  - Recovery & Pre-surgical Unit
M.R.S.A. Fair
Make Resistance Stay Away

M.R.S.A. Fair
Make Resistance Stay Away

Friday November 10
11:30 a.m. - 2:30 p.m.
Courtyard Conference Room

Take a journey through the departments and learn how they prevent infection.

Patient Access
OR Scheduling
Radiology
Bond Center

Operating Room
PACU
Nursing Units

Microbiology Lab
Central Transport
Environmental Services

M. R. S. A.
February 2007

L.O.V.E. – Lose Organisms Very Easily
W.A.S.H. – Workers Assuring Safe Hands

LOVE = WASH*
* Lose Organisms Very Easily = Workers Assuring Safe Hands

Hand Hygiene Fair
February 7, 2006
11:30 a.m.-1:30 p.m.
in the Cafeteria

Free Gifts!

Budget: $590.00
Attendance: ~250 staff
April 2007

H.O.P. out of S.N.O.W. into Spring

- Handwashing
- Offers
- Protection
- Stop
- Nosocomial
- Organisms by
- Washing

- Attendance: ~250 staff
- Budget: ~$560.00

Because Everyone Assures Clean Hands

- Annual Bug Beat Fair
- Limbo Contest
- Other games
- Prizes, raffles, sanitizer
- Food – warm appetizers
  *residents, physicians and surgeons attended with hot food
- Budget: $1200.00
- Attendance: ~350
B.E.A.C.H. PARTY
Because Everyone Achieves Clean Hands
October is Infection Control Month

BOO!

Bug Off Organisms!
October 2007

B.O.O. – Bug Off Organisms
December 2007
“Happy Fingers”
and Flu Clinic

F.O.A.M.
Fight Organisms And Microbes

FOAM IN
FOAM OUT

Happy Fingers!

New England Baptist Hospital

APIC ANYWHERE
ONLINE EDUCATION CENTER
Sanitize Your Hands

D.O.G. Gone it!
(Dirt & Organisms Gone)

February 27, 2008
11:30 a.m. – 1:30 p.m.
Cafeteria

Presented by the Infection Control Liaisons
U.S.S.A. – Use Soap and Sanitizer Always
F.O.A.M. - Fight Organisms And Microbes

I'm CLOSTRIDIUM DIFFICILE. I cause colitis.

Call me Beta STREPTOCOCCI Group A. I can give you a sore throat.

I am KLEBSIELLA. I can cause wound infections.

Hi! I am STAPHYLOCOCCUS. I cause skin infections and can get resistant (MRSA).

I'm known as INFLUENZA. I love to give you pneumonia.

I'm PSEUDOMONAS AERUGINOSA. I infect wounds and produce blue-green pus.

My name is NOROVIRUS. I cause diarrhea.

Boo! I am E. coli - short for ESCHERICHIA coli. I can cause diarrhea or urinary tract infections.

Don't spread these germs to others. Wash hands often. Wash after going to the bathroom. Wash before eating.

Washing your hands is the single most important thing you can do to stop the spread of infection.

New England Baptist Hospital
B.A.T.S
Bugs are Terminated

E.L.F.
Everyone Loves Foam

B.E.E. K.I.S.S.E.D.
Bugs Easily Eliminated
Kill Infection with Soap & Sanitizer and
Eliminate Disease
Ready to Eradicate Disease? Strike out Organisms by Cleaning - Keep us Safe
G.H.O.S.T. Good Hand hygiene Offers Safe Touch
L.U.A.U. ANNUAL BUG BEAT FAIR
June 29 2010
National Infection Control Week

Infection Control Liaisons Present

B.O.O.
BUG OFF ORGANISMS

Displays on MRSA, Clostridium Difficile and NDM-1

October 22, 2010
11:30am – 1:30pm
Cafeteria

New England Baptist Hospital
Hand Hygiene Data

Direct Observations
Data Collection

- IC Liaisons secretly collect at least 10 observations a month
- Forms are sent to Infection Control for analysis
- Data is presented quarterly to the Infection Control Committee, Patient Care Assessment, Nurse Managers Meetings, Orthopedic, Surgical and Medical Staff Meetings
2008 – 2009
RN Hand Hygiene Observations

RN Hand Hygiene Compliance FY08-09
2008-2009 Certified Nursing Assistants

Certified Nurse Assistant Hand Hygiene Compliance FY08-09
2008-2009 MD Compliance

Overall Direct Care Providers Hand Hygiene Compliance FY08-09

Bar chart showing the comparison of hand hygiene compliance before and after, with data for each quarter from the 2nd quarter to the 4th quarter.
Hand Hygiene Observations 2010

Overall Compliance - Includes MDs

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Overall Compliance - Minus MD and Anesthesia

1st: 80%
2nd: 92%
3rd: 82%
4th: 80%

Overall Compliance: 90%
Hand Hygiene Compliance
Physicians and Hospitalists

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<th>Period</th>
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Hand Hygiene Compliance Anesthesia

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Hand Hygiene Compliance
Registered Nurses

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2010
Hand Hygiene Compliance
Physicians and Hospitalists

77% 79%
75% 74%
83%

1st 2nd 3rd
Observations

• Hand hygiene among medical staff and medical support staff varies and needs reinforcement

• Liaisons will collect MD and support staff data for two months and record the names of non-complying staff, MDs

• Names will be shared with Chiefs of Services and Managers
In Summary – Objectives

- Social learning theories:
  - Role Modeling
  - Self-Efficacy
  - Reinforcement
  - Contracting
  - Reciprocity

- Influenza season – “Don’t Catch the Flu Bear Blues”

- Creative ideas for seasonal hand hygiene campaigns:
  - Partners in Hand Hygiene, Got Soap, Let It Snow, Do the Hop, Cruise on the LUAU, MRSA Fair, B.O.O., Happy Fingers, Sanitize - D.O.G. Gone It, FOAM in, FOAM out, BATS, ELF,
  - BEE KISSED
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