The Power is in your hands to prevent the spread of infectious disease!

Together we can make a Difference!

Together a Community can prevent a Pandemic by a coordinated primary infection prevention campaign.

It simply takes a motivated Community.

- If we were truly serious about reducing infectious disease in our communities, we would initiate a community wide collaborative Campaign that raises the public awareness standard about simple primary prevention techniques:
- **The 4 Principles of Hand Awareness.**

- You would take the Culture of Safety model for hospitals that are used in United Kingdom in their "Clean**your**hands" Campaign and the U.S. then apply these principles throughout the community and promote genuine communication between its businesses and citizens to reduce the chance for spread of infectious disease.

- Last year the WHO initiated a Clean Care is Safer Care program that is being piloted around the world in 6 sites.
  There is no coordinated model being used in the U.S. today.
- **We are still functioning in silos.**

- To be successful it is necessary to break down artificial barriers that exist between “silos”: business, government, food service, schools, health care and religious institutions to accomplish a community protective Campaign.

Amazing statistics from the CDC

- **52,000,000** Upper Respiratory Infections occur each year,
- **164,000,000** days lost from school due to illness,
- **22,000,000** days lost from school due to the common cold
- **36,000** people die from the Flu and flu-like illness annually
- **800 million** patient visits annually

Amazing statistics from the CDC

90,000 patients die each year from Hospital Acquired Infections (HAI)

- **2,200,000** HAI occur each year, at a cost of $6.7 billion
- **5,000** people die from food borne illness annually,
- **76,000,000** cases of food borne illness annually
- More than **300,000** hospitalizations due to food borne illness
- **33,000,000** hospital admissions annually

What are the 10 most deadly weapons?

Our Fingers and Thumbs!

HCWs Nares organism found in several patients mediastinal site infections on the same floor, 1989.

Reduction of Surgical site Infections in Cardiothoracic Surgery by Elimination of Nasal Carriage of Staphylococcus Aureus, Jan, AJ et al, Infection Control and Hospital Epidemiology, November 1996.

Other Evidence that the "colonized" HCWs are the source for Staph aureus outbreaks.

- Boyce JM, Opal SM, Potter-Bynoe G, Medeiros AA. Spread of MRSA in a hospital after exposure to a HCW with chronic sinusitis. Clin Infect Dis 1993;17:496-504.
- Boyce JM. Preventing Staphylococcal Infections by Eradicating Nasal Carriage of Staphylococcus aureus: Proceeding with Caution. Infect Control and Hosp Epidemiol 1996;17:775-779.
- CoovadiaYM, Bhana RH. Johnson AP, Haffejee I, Marples RR. A laboratory confirmed outbreak of rifampin-methicillin resistant Staphylococcus aureus (RMSA) in a newborn nursery.. J Hosp Infect 1989;14:303-312.
- Gaynes R, Maroska R, Mowry-Hanley et al. Mediastinitis following coronary artery bypass surgery: a 3 year review. J Infect Dis 1991;163:117-121.
- Meier PA, Carter CD, Wallace SE, Pfaller MA, Herwalt LA. Eradication of MRSA from the burn unit at a tertiary medical center. Infect Control Hospital Epidemiol 1996;17:798-802.

The 4 Principles of Hand Awareness

1. **Wash your hands when they are dirty and before eating.**
2. **Do not cough into your hands.**
3. **Do not sneeze into your hands.**
4. **Above all, do not put your fingers into your eyes, nose or mouth.**

*Endorsed by the AMA and the AAFP (2001)

*referred to as individual ideas for flu prevention by CDC, but not packaged as an integrated concept.

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1
WASH YOUR HANDS WHEN THEY ARE DIRTY AND BEFORE EATING!
HAND


2
DO NOT COUGH INTO HANDS!
INSTEAD TRY COUGHING HERE!
HAND


3
DO NOT SNEEZE INTO HANDS!
ACHOO!
INSTEAD SNEEZE HERE!
HAND

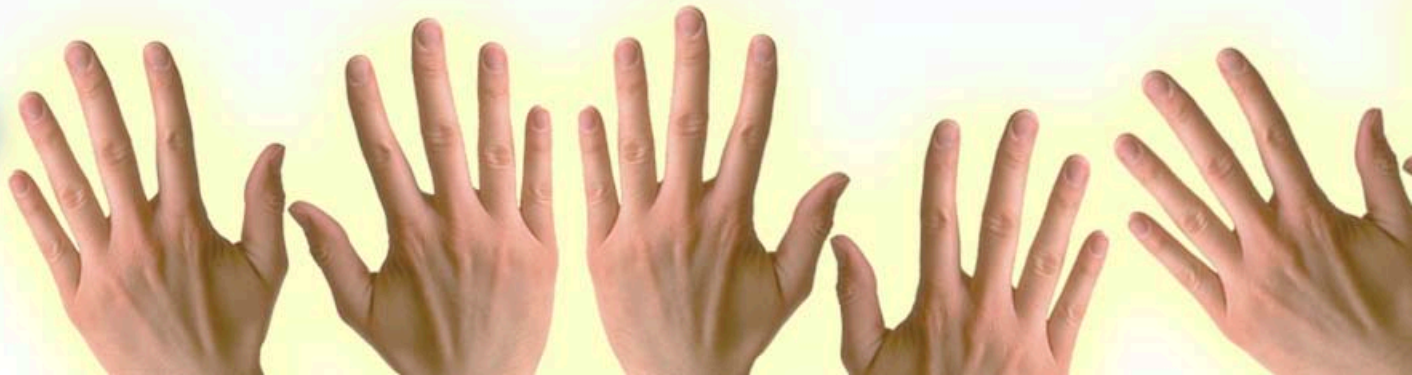

4
ABOVE ALL, DO NOT PUT YOUR FINGERS IN YOUR EYES, NOSE OR MOUTH!
HENRY THE HAND

How new is Hand Awareness?

- John Snow MD(1854) Broad Street pump handle and Cholera epidemic
- Ignaz Semmelweis MD (1847) perinatal mortality reduced by using a dilute chlorine solution rinse between the morgue and L&D suite.
- Although it took 20 years, respectively for acceptance of their discoveries.
- **Let's not repeat the same mistake.**

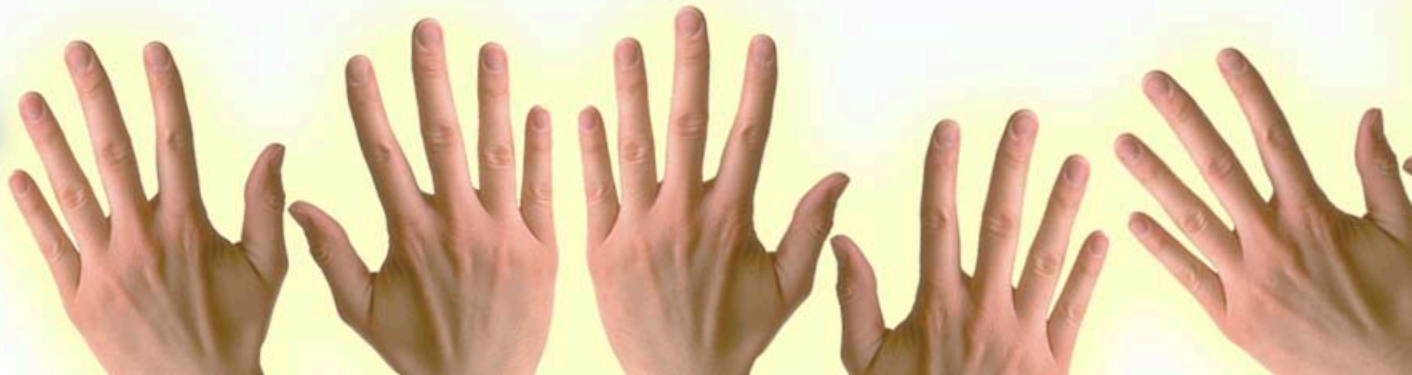
Hand Awareness

- **Knowing where your hands are and what they are doing AT ALL TIMES**.
- Scientifically stated it is the integration of **Hand Hygiene, Respiratory Etiquette and cross-contamination awareness** in a **best practice** model.



Hand Awareness

- People who are “Hand Aware” are less likely to contaminate themselves, another person, food product or surface.
- Why would anyone purposely give themselves E.Coli 0157:H7, MRSA,VRE, Shigella,etc.?



Respiratory Etiquette

- Principle 2 and 3.
- Do not Cough or sneeze into your hand. Use a sleeve, kleenex, crook of your elbow, etc., anything except a bare hand. Very few people are running to the sink to wash their hands after coughing or sneezing.
- Pertussis, viral illness, pneumococcus, meningococcus, and many similar diseases would be prevented by diligent practicing of the 4 Principles of Hand Awareness.

Respiratory Etiquette

Hand Hygiene

- Principle 1 and 4.
- Handwashing is publicly discussed.
- Mucus membrane contact has **NOT** been publicly discussed as it should be to prevent inoculation and colonization.

Hand Hygiene

The Hand is quicker than the eye!

Unfortunately the single act of handwashing or sanitizing alone **does not prevent** cross contamination.

The Hand is quicker than the eye!

People “unknowingly” **touch a contaminated surface**, then **transmit** the organism to another surface, themselves or a patient due to personal habits.

How soon after starting to work in the hospital do staff nares become “colonized” with MRSA?

- 2 weeks? 6 weeks? Who is checking?
- Does your pre-employment interview ask if you comply with the 4 Principles of Hand Awareness?
- Are you a nose picker, nail biter, licker, eye rubber, etc.?
- 20-30% of HCWs are colonized with MRSA at any one time - Boyce,1996

When did the CDC and Prevention first address the issues of mucus membrane colonization, self inoculation and cross contamination?

1983

Guideline for Infection Control in Hospital Personnel

Walter Williams MD.MPH, Hospital Infections Program, National Center for Infectious Diseases, CDC and Prevention; July 17,1983:1-43

- **Staph aureus**: If certain personnel are linked epidemiologically to an increased number of infections, these personnel can be cultured and, if positive, removed from patient contact until carriage is eradicated.

Guideline for Infection Control in Hospital Personnel

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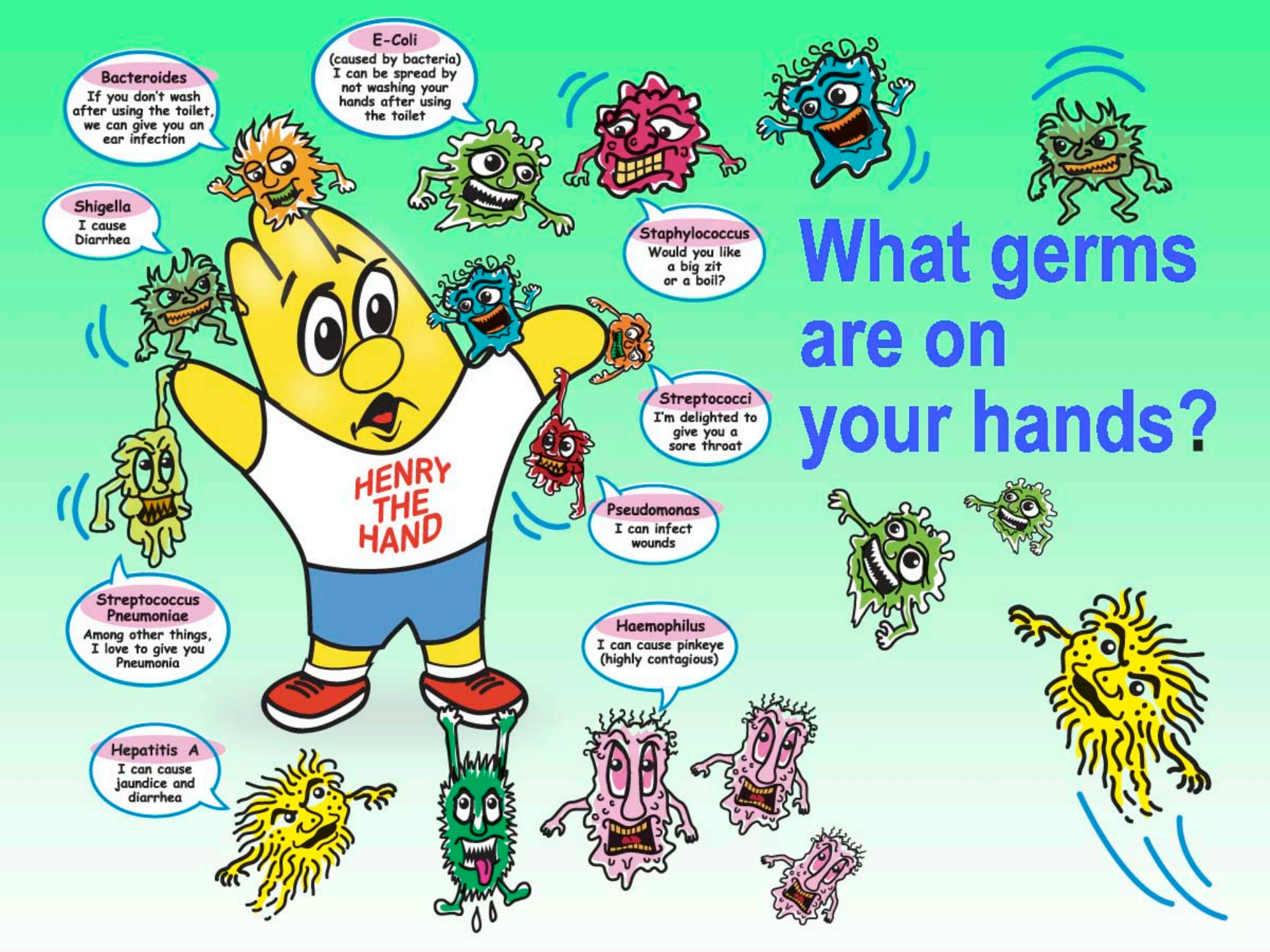
- **Viral respiratory infections**: ..masks probably will not completely protect personnel from patients with respiratory illnesses because large particles and aerosols may still reach the eyes, and self-inoculation from contaminated hands can still occur by touching the eyes.


What germs are on your hands?
HENRY THE HAND
Bacteroides
If you don't wash after using the toilet, we can give you an ear infection
E-Coli
(caused by bacteria) I can be spread by not washing your hands after using the toilet
Shigella
I cause Diarrhea
Staphylococcus
Would you like a big zit or a boil?
Streptococci
I'm delighted to give you a sore throat
Pseudomonas
I can infect wounds
Streptococcus Pneumoniae
Among other things, I love to give you Pneumonia
Haemophilus
I can cause pinkeye (highly contagious)
Hepatitis A
I can cause jaundice and diarrhea

Any other surprises?

MRSA is not walking out of the hospital.

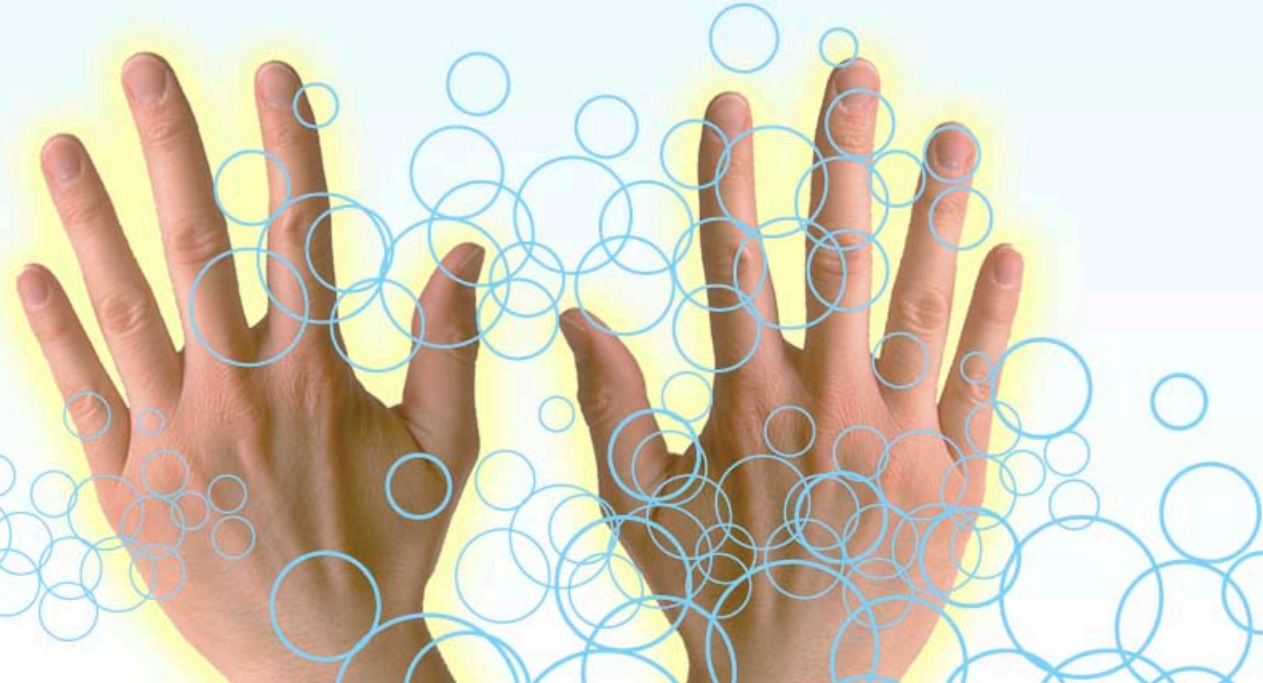
- Staff, patients, visitors, vendors and others are carrying disease out on their hands, in the nares, clothing, equipment, etc.
- How many of us **“decontaminate” before leaving or entering the hospital?**
- Why not?
- We should do this at school, work and religious institutions, if we are truly concerned about preventing the spread of disease.

Which Behaviors?

- **Nose picking and rubbing**
- **Eye rubbing**
- **Nail biting, finger licking, etc.**
- **Curtailing these habits, “Is a simple solution to a complex problem” of nosocomial infections.**

“Decontaminating” upon entering a public/private facility.

- Wash, wipe or sanitize your hands **upon entering** if you do not want to carry any disease into that facility.



“Decontaminating” upon leaving a public facility.

- Wash, wipe or sanitize your hands **upon leaving** the facility if you do not want to carry any disease out of the facility.

“Decontaminating” upon entering a private facility.

- Wash your hands **upon entering your home** to minimize the chance of bringing in disease.

So How do you change peoples habits?

CDC, SHEA and many notable scientists put together a review in the MMWR in 2002.

First, you draw the HCWs attention to **“what is your (their) habit?”**

So How do you change ones habits?

Next, reinforce the **knowledge** that their **Hands ARE** the major vector for transmission of respiratory, GI and nosocomial disease.

So How do you change ones habits?

Then you help them change it by a few simple techniques which help them **stop the health risk behavior: i.e. touching** their eyes, nose or mouth (**mucus membranes**).

Guideline for Hand Hygiene in Health-Care Settings,

MMWR, 2002,51(RR16);1-44

Factors necessary for change include:

1. dissatisfaction with current situation
2. perception of alternatives, and
3. recognition, both at the individual and institutional level, of the ability and potential to change.

The first two necessitate a system change and the latter requires education.

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Most importantly, an improvement in Infection Control practices requires:

1. **Questioning** basic beliefs,
2. Continuous assessment of the group (or individual) stage of behavioral change,
3. **Interventions** with an appropriate process of change, and
4. **Supporting** individual and group **creativity.**

Because of the process of change, **single interventions often fail**. Thus, a multimodal, multidisciplinary strategy is likely necessary.

MMWR 2002, 51;1-44(cont)

Champion Handwasher Hospital Campaign

It requires **team work** and **true** collaboration to improve the outcome.

It is **human behavior "habits" and administrative barriers** that need to be overcome **to achieve a "culture of safety".**

We need to promote **"genuine" communication across levels of authority** to be successful.

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Missing Link in Infection Prevention

Dixon defines the **missing link in infection prevention as our being "less comfortable with techniques used to influence human behavior,** *manage programs or evaluate program effectiveness. The research techniques for addressing this final link in IC have traditionally been in the province of social psychologists, psychologists and management consultants, & biomedical* **investigators have felt uncomfortable with, or skeptical of, such techniques."**

"IC…must become involved in the management of programs and people, seeking to learn why control programs succeed or fail. In doing so, they **must begin to consider the most complex of biologic phenomena…human behavior."**

Source: Richard Dixon in Am Journal of Medicine 1981; 70:976-78
-Denise Murphy RN, BSN, MPH, CIC

Health Belief Model describes specific variables that influence an individual's self-protective health behaviors and is based on

- Perception of the **risk or susceptibility to the illness**
- **Perception of the severity or degree of consequences of the illness**
- Perception of barriers or cost of undertaking a particular health behavior (or not)
- **Cues** to action that trigger the health behavior
- Self efficacy

Source: O'Boyle et al(1994): Variables influencing workers' compliance with universal precautions in the ED. AJIC 22(3) 138-48

-Denise Murphy RN, BSN, MPH, CIC

Let’s Get Started

Let’s admit to ourselves that **humans are responsible** for transmitting disease and contaminating surfaces in the community setting.

Lets agree that we each have personal habits that **may** be contributing to the spread of infectious disease.

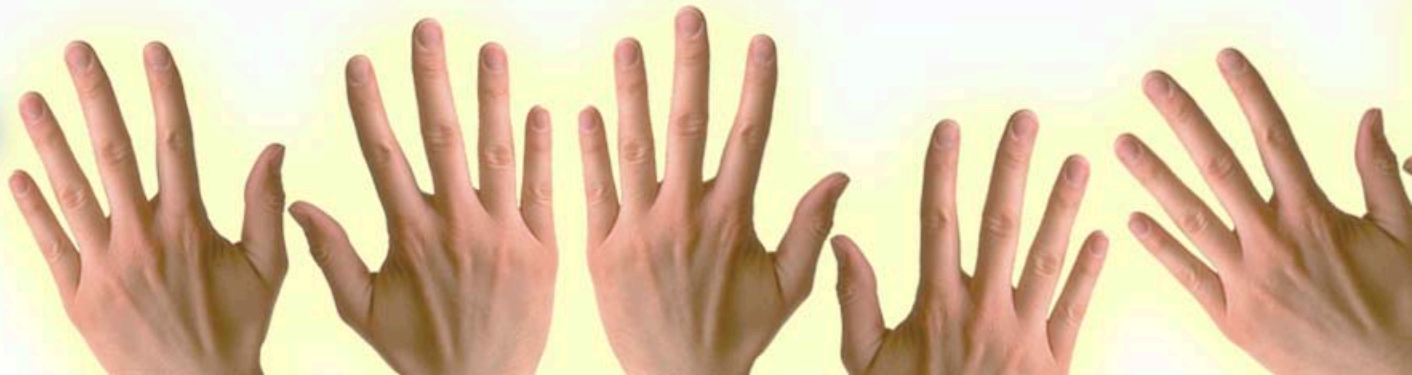
Let’s agree to **not take offense** when a staff member of lesser skill or education comments to us about our Hand Awareness technique.

Let’s agree that we are **ALL sensitive** about our personal habits, however we **agree** that we want to **protect** our family and friends, so we will accept more accountability.

Lets agree that this process makes each and everyone of us a little **nervous**.

Imagine if we **ALL** participated in a community wide Campaign through our Schools, Work and Religious institutions!

- We would Dramatically reduce the incidence of and the transmission of infectious disease.
- Imagine NEVER being sick again from a respiratory or gastro-intestinal disease!



Identify the Champion Handwasher Officer

- The purpose is to have one individual who is responsible for coordinating the efforts ensuring that this Campaign **succeeds to benefit the patients** in your hospital system.
- They are the contact point to report compliance to the staff, public, HTH Foundation and JCAHO when asked.
- Also to follow up on **periodic "reinforcement activities**" in the hospital to maintain a high level of compliance.

Culture of Safety

It is critical that this Campaign begin the **“genuine”** communication and accountability in the community that will help lead to a culture of safety, that is necessary to prevent the spread of infectious disease.

A key component to the Hand Awareness Campaign is there is no social, economic or educational edge any person has over another, in spite of their level of training or authority in the health care system.

It is strictly **personal AWARENESS and accountability!**

OK

- It sounds plausible.
- How do we get started?

Goals

- Each participant understands, practices and promotes the 4 Principles of Hand Awareness to their patients, colleagues and family.
- Each participant will have a couple of simple non-threatening phrases to use when they notice another child/adult breaches the 4 Principles of Hand Awareness.

Select a few phrases (slogans) to be used that tells a fellow citizen they did not wash or sanitize correctly, or breached their mucus membrane.

A statement(s) that we will not take offense to, and instead, reward our peers and non peers for their correct observation.

Sample Phrases

- Are you a Germinator?
- Don’t touch the “T zone”?
- I do not think you washed before touching that patient.
- Hey Bozo watch those digits!
- You just broke one of the 4 Principles.

Champion Handwasher Tool Kit

Reinforcement Tools for the Campaign, enlisting multimedia strategies (social marketing), that help break through traditional human defenses:

- Animation
- Music
- Visual prompts
- Participatory demonstrations

Champion Handwasher School Kit

Who is “Dr.Will”

Solo practice Family Medicine, 1986.

Trihealth Hospital System Patient Safety Committee, 2004.

Bethesda North Hospital Med. Executive Committee, 2000.

Influenza Sentinel Network, one of 100 sites, member

Hand Awareness: Non Pharmaceutical approach to prevent human illness and transmission of emerging pathogens presentations, NEHA,2006, National Association of Health Education Center, (NAHEC) 2006, USDA Food Safety Conference, 2006 and AMA-CMA Conference, 2006.

Henry the Hand Foundation, founder 1999.

Henry the Hand Champion Handwasher, creator,199

Clean Hands Coalition, founding member, 2003.

Sample of a video that you can do to “surprise” staff and make the Campaign “fun”!