

CONTAGIOUS COMMENTS

Department of Epidemiology

Are We Serving Two Masters? Children, JCAHO/OSHA

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As summer approaches, The Children's Hospital (TCH) team will become increasingly aware of our scheduled visit from Joint Commission on Accreditation of Healthcare Organizations (JCAHO). Many of us feel like these periodic reviews are an imposition on our everyday endeavors to provide top quality healthcare for children. It feels as if we are serving two masters and having to set one aside to satisfy the other. This edition of Contagious Comments is dedicated to perpetual readiness and consistent practice of infection control every day, in all settings, for all patients. We do not serve two masters, but one: the children and the meticulous provision of safe healthcare for them. Every day we are on display for how we really are in the care of our young patients.

There are several well-researched, evidence-based guidelines that we follow in establishing TCH infection control policies and that JCAHO uses as the basis for the infection control chapter of their reviews. These include the Centers for Disease Control (CDC) [Guidelines for Isolation Precautions in Hospitals](#), Hand Hygiene in Health-Care Settings, Environmental Infection Control in Health-Care Facilities, Infection Control in Health Care Personnel as well as Occupational Safety and Health Administration (OSHA) Bloodborne Pathogen and Occupational Exposure to TB standards.

We invite all providers associated with TCH to take this opportunity to review with us best practice in infection control for your work here and in your own offices and clinics. Healthcare-acquired infections are often preventable and have been cited in the literature as increasing the morbidity and the cost of healthcare in a dramatic fashion. Be assured the Epidemiology/Infection Control Department at TCH is at your service with practice recommendations to help prevent these complications to your patients' care.

The Heart of Infection Control: Standard Precautions

In 1996, CDC began using the terminology we use today, *Standard and Transmission-Based Precautions*, "to decrease the risk of transmission of microorganisms in hospitals." Standard Precautions are the basics that we use every day for every patient and mirror some good hygiene practices that we use at home and in the world. Key elements of Standard Precautions include hand hygiene, use of personal protective equipment if contamination with blood or body fluid might occur, safe handling of sharps, disinfection of patient care equipment, and environmental cleanliness. Transmission-Based Precautions or *isolation* precautions are used for particular illnesses or organisms based on how each is transmitted from one person to another.

Though no national guidelines exist for outpatient settings, certainly we can apply the "spirit of the law" in a logical manner for a variety of healthcare settings. Chief among these overriding principles are hand hygiene, decreasing exposure to communicable disease by isolation of contagious children, consistent safe handling and disposal of sharps, appropriate use of personal protective equipment, effective sterilization, disinfection, and antisepsis, judicious use of antibiotics, and prevention of vaccine-preventable diseases.

Hand Hygiene

In the 19th century, people like Ignaz Semmelweis in Vienna and Oliver Wendell Holmes in the United States demonstrated an impressive reduction in mortality rates by the cleansing of caregiver hands before patient care. Today, the single most important and cost-effective way to prevent transmission of infection is still hand washing!

The 2002 CDC hand hygiene guideline promotes the use of alcohol hand rinses as a means to increase healthcare worker compliance with cleaning hands. If hands are not visibly soiled, the use of alcohol hand rinse product may be substituted for soap and water. **Hands should be washed as follows:**

- Before and after each contact with patients, body fluids, and contaminated or soiled materials;
- Between dirty and clean procedures on the same patients;
- After removing gloves;
- Before and after performing invasive procedures;
- After using the rest room; and
- Whenever hands are visibly soiled.

Liquid soap in pump dispensers is preferable to bar soap. Disposable paper towels are recommended for hand drying. (Use the paper towel to touch the faucet handles when turning off the water). Skin integrity impacts the amount of bacteria that may be harbored on hands; consequently hand lotions that are not petroleum-based should also be available to healthcare workers.

Part of hand hygiene recommendations includes the restriction of artificial nails. These nail covers and extensions as well as chipped fingernail polish have been shown to harbor bacteria that may not be removed by normal hand washing. Artificial nails have been linked to outbreaks in hospitals and are specifically restricted in the hand hygiene guidelines, the JCAHO 2005 National Patient Safety Goals as well as TCH Infection Control Policy "Handwashing, Hand Hygiene Products and Artificial Nails."

Use of Personal Protective Equipment

As part of Standard Precautions, the hospital must provide personal protective equipment (PPE) for all staff that is at risk of blood or body fluid contamination of skin, mucous membranes, or clothing. This PPE is to be donned at the point of care (the bedside, treatment room, equipment processing area), carefully removed (so as not to contaminate self), and discarded at the point of care. PPE includes gloves, cover gowns, masks, and eye protection. It is the responsibility of every healthcare worker to anticipate these exposure circumstances and to don the PPE appropriately.

Transmission-based Precautions: Isolation

In any healthcare setting, if there is a sign on the patient's door, it is probably for the protection of the patient or the protection of the person intending to enter the room. Every day, we must attend to the signage that is there for these purposes. At TCH, our isolation signs are color-coded and contain the information you need to safely enter the room. These instructions are based on scientific evidence as well as the considerable experience of your respected colleagues about how to prevent transmission of disease at TCH. **All of our isolation precautions at TCH require gown and gloves for contact with the patient or the environment.**

Contact Precautions are used to contain multi-drug resistant organisms from proliferating in our midst as well as for enteric pathogens known to contaminate the environment surrounding the patient with diarrhea. Gown and gloves are the required garb.

Droplet Precautions are widely used at TCH for respiratory signs and symptoms and for known illnesses like pertussis, influenza, and RSV. Besides a gown and gloves, a surgical/procedure mask is required to be at the patient bedside.

Airborne Precautions are perhaps our most stringent precautions and require a fit-tested N95 respiratory mask in addition to the gown and gloves. The Airborne Precautions rooms are negative pressure in relationship to the hallway and are vented to the outdoors. We use these rooms for suspected tuberculosis, measles, chicken pox, and would use them for smallpox and SARS if we should have any cases.

The PPE used for isolation precautions must be donned at the point of care and removed at the point of care. Remember: No PPE at the nurses' stations! The key to these precautions is *CONSISTENCY*.

In all of these scenarios, patient care equipment should be dedicated to the isolation room. If you must carry any equipment out with you, it must be disinfected before leaving. A spray with the alcohol hand rinse will disinfect your stethoscope if there are no disinfectant wipes handy.

The patients may not leave the isolation room (usually for the duration of their stay with us or until an alternative non-infectious diagnosis is made) except for necessary medical procedures. In those cases, the isolation precautions must be maintained during transport.

Parents need not wear the PPE unless they could be contaminated or infected. In most circumstances, they have already been exposed and are restricted from going patient to patients that are not their children. They are asked to observe good hand hygiene when leaving the room.

Care of Reusable Patient Equipment: Sterilization and Disinfection

All unused patient equipment and supplies must be stored to minimize the risk of its contamination or damage. A general rule of thumb is that no patient supplies may be stored under sinks. Equipment that is sold for *single use only* must not be reprocessed and reused. If equipment is meant to be cleaned and reused, certain steps must be considered.

- Holding and transport of the used equipment must be done in a safe manner so as not to contaminate the environment;
- Personnel responsible for the processing of used equipment must have adequate work space, training, and PPE for safely accomplishing this task;
- Products used in this task must be evaluated for the appropriateness of the product to its intended purpose. Each instrument must first be well cleaned before it can be disinfected. The cleaning or disinfection product must be used for the length of time and at the temperature listed on the package insert.
- Any equipment that needs to be disinfected to the level of "sterile" must have documentation of assurance that sterilization was achieved.

Eating and Drinking in Patient Care Areas

The OSHA Bloodborne Pathogens Standard specifically states that healthcare workers must not eat, drink, apply makeup, or adjust contact lenses in areas that may reasonably be contaminated with patient blood or body fluid. This would include at the bedside, wherever patient equipment that has been at the bedside is placed, or where lab specimens are labeled and bagged for transport. At TCH, we have asked all patient care units to identify their designated "clean" area for staff breaks and lunches and to strictly exclude food and beverages from being present elsewhere. This standard applies to all employees, physicians, house staff, students, and volunteers.

Bloodborne Pathogens & Sharps Safety

We expect all healthcare workers and medical staff to be knowledgeable about their Hepatitis B vaccination status and the process to follow if he or she has a bloodborne pathogen exposure (needlestick, splash to mucous membranes, blood/body fluid on non-intact skin). We now have rapid HIV testing of source blood here at TCH that will facilitate counseling about use/need for post-exposure prophylaxis for HIV exposure. If safety devices are available in place of non-safety equipment that is currently being used, we must change to the safer devices whenever possible. All healthcare employers must supply secure and appropriately placed sharps disposal containers that are labeled with the biohazard emblem. These should not be overfilled and should be kept out of the reach of children. The disposal of the sharps containers and other biohazardous waste must be accomplished to comply with state and local solid waste/biomedical waste regulations.

Employee Health and Working Sick

All TCH employees are screened for tuberculosis and have their vaccination records checked upon hire. All house staff and privileged physicians should make these assurances as well for the protection of patients, staff, and visitors. All healthcare personnel that may be at risk of exposure to blood or body fluids should be immunized against Hepatitis B for their own welfare and as is required by OSHA.

Those at risk of exposure to tuberculosis as delineated in the TCH Employee Health policy will be screened annually with the tuberculosis skin test. This annual screening assures us that our engineering controls are working to control the transmission of TB here. It also allows us to identify any recent converters early for their care and treatment.

Every care provider must be constantly aware of how his or her individual health status may impact one of our patients. A physician or employee working with a persistent cough may expose numerous vulnerable patients to pertussis or a respiratory virus. A person with an upper respiratory infection may broadly disperse any organisms residing in their nares onto patients or into the work environment. No healthcare provider should work with a fever, fever and rash, or severe acute respiratory symptoms. Those with minor upper respiratory symptoms may continue to practice if masked and observing good hand hygiene. Skin infections on the hands must be evaluated for risk of communication to the patient. Conjunctivitis must be evaluated for cause and risk of transmission.

Regulatory Agency Review

The general premise of the Infection Control chapter of the JCAHO standards is the use of an evidence-based, coordinated system to reduce the risk of healthcare-associated infections both to patients and workers. The OSHA rules are designed to provide reasonable protection for healthcare workers in a profession that is ripe with exposure risks. Every day we can demonstrate that we understand the spirit of these regulations, guidelines, and standards as the underpinnings of our practice. With meticulous and consistent attention to these basics, we are perpetually ready for all who enter our doors.

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