

Infection control in the outpatient setting

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Microbial antibiotic resistance, emergence of infectious diseases against which there are no treatments or vaccines, and the persisting possibility of intentional release of infectious agents have made the prevention of infectious disease transmission a top public health concern.

It is easy to overlook the potential for spreading infectious diseases in the outpatient setting. Relying on healthcare workers to practice good hygiene is unlikely to be enough. This public health battle must employ a comprehensive plan for clinic design, involving staff in setting and enforcing policies, and repeatedly emphasizing the importance of good hygiene.

■ REASONS FOR CONCERN

Outpatient clinical settings are a prime location for the spread of infectious diseases, to staff and patients. In the past, when measles was common, physician offices were the source of infection in a significant proportion of all cases. Last year, hospitals were a principal focus for the spread of serious acute respiratory syndrome (SARS). This year's influenza season was complicated by doubts about vaccine effectiveness and the possibility of a more virulent strain, making prevention

of disease transmission a primary concern.

As the Centers for Disease Control and Prevention (CDC) and state and local health departments struggle to contain these and other infectious diseases, physicians should insure that their facilities and systems are designed to prevent disease spread and, in so doing, set an example for the community. Physicians and office managers can take 4 basic steps:

- Institute and enforce policies on respiratory hygiene
- Institute and enforce policies on hand hygiene
- Immunize all office staff
- Establish triage policies that separate potentially contagious patients from the rest.

■ RESPIRATORY HYGIENE

The concept of respiratory hygiene is not new, but it has not been a visible part of American culture. This is changing. The CDC has published recommendations on respiratory hygiene and cough etiquette for healthcare settings (**Table**).¹ As the public becomes aware of the dangers of respiratory diseases, these recommendations may become the norm of common courtesy.

■ HAND HYGIENE

Hand hygiene has also recently received more attention, and a variety of new products can assist healthcare professionals with this task. The CDC

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TABLE

Respiratory hygiene in healthcare settings

Visual alerts

Signs at outpatient entrances asking patients and companions to inform office staff if they have symptoms of a respiratory infection.

Signs describing expectations regarding respiratory hygiene.

Respiratory hygiene expectations

Covering mouth and nose when coughing or sneezing.

Using tissues to contain respiratory secretions and disposing them in a receptacle.

Performing hand hygiene after contact with respiratory secretions.

Respiratory hygiene measures

Offering procedure masks (with ear loops) or surgical masks (with ties) to those who are coughing.

Requesting those with respiratory symptoms to sit in a separate location.

Providing tissues and no-touch receptacles for tissue disposal.

Providing dispensers of alcohol-based hand rub, or sinks with soap and disposable towels for hand washing.

Advising healthcare personnel to wear a surgical or procedure mask when examining a patient with symptoms of a respiratory infection.

recommends physicians should use an alcohol-based hand rub or an antimicrobial soap for routinely decontaminating hands.² If hands are visibly dirty or soiled they should be washed with soap (either antimicrobial or non-antimicrobial) and water. Situations in which hands should be decontaminated:

- Before direct patient contact
- After contact with a patient's skin
- After gloved contact with body fluids, mucous membranes, and dressings
 - After contact with contaminated medical equipment
 - Before and after gloving for procedures.

Alcohol-based products are preferred for decontamination; antimicrobial soaps are acceptable, but neither works well against bacterial spores. In the rare instance when exposure to anthrax spores is suspected from a suspicious powder, hand washing with soap and water is recommended. Consult CDC guidelines for hand hygiene for a description of antiseptic agents and their activity against different infectious agents.²

■ IMMUNIZATION

Immunization of physicians and others on the healthcare team is important for the protection of staff and patients. The CDC strongly recommends³ that all healthcare workers, except with contraindications, receive the following:

- *Influenza vaccine* annually
- *Measles, mumps, and rubella vaccine* or proof of immunity, including birth before 1957, lab evidence of immunity, or proof of immunization with 2 doses of live measles separated by at least 28 days, 1 dose of live rubella, and 1 dose of live mumps vaccine, all on or after the first birthday
- *Varicella vaccine*, or proof of immunity including a reliable history of varicella infection, laboratory evidence of immunity, or proof of immunization. Adequate immunization is 1 dose of varicella vaccine, if administered before age 13, or 2 doses at least a month apart if administered after age 13.

In addition, CDC recommends hepatitis B vaccine for all healthcare workers who have contact with or exposure to blood and body fluids. Two months after the completion of a 3-dose series, those with risks of injury from needle sticks or sharp instruments should be tested for antibody to hepatitis B surface antigen. If they have not developed any antibody, they should be checked

for hepatitis B surface antigen; if results are negative, they should receive a second 3-dose series.

Guidelines should also be in place for management of healthcare workers exposed to certain infectious diseases at work, including tuberculosis, blood-borne pathogens, varicella, and others.

■ TRIAGE POLICIES

Physicians and clinic managers should consider implementing triage policies to separate infectious patients from others when they arrive at the facility. If respiratory hygiene measures are followed, asking those with common respiratory infections sit in common waiting areas and using common exam rooms is acceptable practice.

Patients with rash and fever present a different problem. Diseases with this presentation include measles, rubella, and varicella—all highly contagious and with potentially serious effects, especially in the immune compromised. Smallpox and monkeypox can also present with these symptoms, although the likelihood is remote. Consider triaging rash and fever patients immediately to a “rash room” and keeping them confined there until the clinical diagnosis is clarified. The best practice is to have a separate entrance and exit location for such patients.

Should one of the more serious diseases remain a possibility after evaluation, further measures might be necessary including avoidance of use of the rash room until disinfected and consultation with the local health department about recommendations for post exposure measures for staff and patients.

REFERENCES

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3. CDC. Immunization of healthcare workers: recommendations of the advisory committee on immunization practices and the hospital infection control practices advisory committee. *MMWR Recomm Rep* 1997; 46 (RR-18). Available at www.cdc.gov/mmwr/PDF/RR/RR4618.pdf. Accessed on May 12, 2004.

Androgen Therapy for Women: The Evidence

Clinicians need authoritative information to provide optimal hormone therapy for patients with menopausal symptoms. To meet this need, the *Mayo Clinic Proceedings* has compiled a supplement to review the evidence on appropriate use of androgens and to clarify potential benefits and risks.

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By Micheline C. Chu, MD, and Rogerio A. Lobo, MD
Columbia University College of Physicians and Surgeons
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By Morris Notelovitz, MD, PhD, MB BCH, FRCOG
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- **Potential Anabolic Effects of Androgens on Bone**
By Ann E. Kearns, MD, PhD, and Sundeep Khosla, MD
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