

From Ritual to Reason and Back Again: OSHA and the Evolution of Infection Control

William M. Valenti, MD

The Problem: OSHA's (Occupational Safety and Health Administration) recommendations aimed at protecting health care workers (HCWs) from acquiring blood-borne diseases in the workplace.

OSHA'S Solution: a recommendation to establish "standard operating procedures" and to classify all hospital jobs into three categories based on degree of exposure to blood, body fluids, or tissues.' Although this is only a recommendation, the agency plans to enforce it through existing laws that "require safe and healthful working conditions," according to a recent publication." Hospitals can be cited and fined up to \$10,000 if they fail to comply.

Comment: OSHA, in effect, is setting minimum standards for infection control practice. The concept of handling all blood and body fluids the same way ("as though they were infectious") is not a new idea. The concern about human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) is new, but the idea of elevating our infection control practices to a higher level is not. The HIV epidemic merely magnifies the problems inherent in our current infection control practice. Until the AIDS problem, most health care workers adopted a somewhat laissez-faire attitude about disease transmission in the workplace.

Consider the sluggish response of health care workers to hepatitis B vaccine after its introduction in 1982. Unfortunately, the plasma-derived vaccine was introduced at about the time the first cases of AIDS were described. Later, when it had been shown that the vaccine manufacturing process inactivated the HIV, the response to the vaccine remained sluggish because HCWs either did not perceive themselves to be at risk of hepatitis B or did not get the message about vaccine safety, or both. Later still, the introduction of recombinant hepatitis B vaccine did little to change health care workers' apparent lack of interest in vaccination.

*From the University of Rochester Medical Center, Rochester, New York.
Address reprint requests to William M. Valenti, MD, University of Rochester
Medical Center, Rochester, NY 14642.*

A common argument for this attitude is that hepatitis B is different than AIDS. The infection control professional's response to this argument will be that hepatitis B virus is more contagious than HIV. We all know that a needlestick from a patient with hepatitis B will transmit hepatitis virus 25%-30% of the time. The risk of transmitting HIV via needlestick appears to be less than 1%. However, differential transmissibility is not foremost in the minds of many health care workers. The average HCW will tell you that people do not die of hepatitis B at the rate they die of AIDS. We can point out that people do indeed die of hepatitis B; however, that response may not satisfy concerned HCWs who may also be under pressure from family and friends not to place themselves at unnecessary risk in the workplace.

One obvious conclusion from this attitude is that we tend to become cavalier about diseases that are manageable by vaccination or chemotherapy. It's the incurable ones on which we focus our anxiety and dread, at least in the current health care climate. Look at cytomegalovirus (CMV) as another example of how emotion overshadows science in infection control. The issue of nosocomial transmission of CMV has been well studied.³ The conclusion from our own mother-discipline of epidemiology tells us that there is no increased risk of CMV infection in HCWs having patient contact compared with persons without this contact.

Why then are some people willing to take risks with hepatitis B and not be vaccinated, yet the same unvaccinated HCW may express concern about working with patients with HIV or CMV? CMV causes congenital malformations in babies; everyone knows that. This helplessness and fear of the unknown, recently described by Friedland, stands in the way of their getting the message. The real message is that we all need to elevate our infection control practices to a higher level. We have enough science and common sense available to us at this point to tell us how to protect ourselves from acquiring infections in the workplace. Consider again the problem of the pregnant health care worker and restriction from caring for patients with CMV or HIV. Universal precau-

tions (UP)⁵ or body substance isolation (BSI)⁶ are better compromises in these situations and accommodate both the science of infection transmission and the common sense required to prevent it. Very simply, a program of restriction for pregnant HCWs is not the best way to prevent nosocomial HIV or CMV. Nor is it necessary to restrict patients with HIV/AIDS from health care as an infection control measure.

The problems of HIV/AIDS present a unique challenge for the infection control professional. The HIV epidemic will be the true test of our abilities as decision makers and problem solvers. We should also remember that we have the attention of our administrators and employees in a way that we have never had before. Now that we have their attention, how should we proceed? Not with paper dishes, environmental culturing, and restriction of pregnant health care workers, I hope. We were evolving away from those rituals before AIDS. Now that we are confronting a new epidemic, it is important not to regress or let history repeat itself.

The OSHA recommendations theoretically could provide some of the consistency we need in our infection control practice to deal effectively with HIV. The recommendations attempt to bring us all up to the same level of practice. At first glance, the OSHA recommendations appear inflexible; we all follow the same menu by categorizing jobs and developing standard operating procedures. Maybe we should have been categorizing jobs all along; many of us have been, although in a much less formal way.

However, as we review our professional responses to HIV and the OSHA recommendations, there is a trap. A new set of rituals and myths are emerging from the "glove mania" of the UP/BSI approach to infection control. Did anyone ever worry about the difference between latex or vinyl gloves before AIDS? Rituals seem to grow out of misinformation, fear of disease, ignorance, or some combination of these factors. New infection control rituals are emerging rapidly, as aptly pointed out by Sue Crow recently.⁷ The OSHA regulations can add to the growing list of emerging rituals if we are not careful to prevent them.

The OSHA recommendations are an attempt to focus on what must be done in response to the HIV/AIDS problem. We have identified a problem that needs to be corrected. The problem is that we have become lax in our approach to infection control. The solution is that better infection control practices will ensure a higher level of protection for health care workers. We will need to provide a clear, consistent message to our health care workers not only about what they can do to protect themselves, but also what the health care industry is doing to protect them from infectious agents in the workplace. In doing so, we can help facilitate and improve medical care for a group of patients who will need to access the health care system in the years to come.

The process by which we respond to HIV/AIDS may need more review. Since it will be at least a year before the recommendations are out in final form, there will be opportunities for the infection control community to respond to them. The OSHA regulations merely point

out the enormous scope of the problem and the complexity of the solution. In some ways, the OSHA regulations may not go far enough because they deal only with protection from blood-borne diseases. The body substance isolation (BSI) system is a common sense approach to infection control. BSI is a bit broader in scope than UP because it recognizes that certain aesthetic issues as well as common sense must be considered in our practice. A compromise incorporating the best of both systems might be helpful here.

In broader terms, the OSHA recommendations are a response at the federal level to the HIV epidemic. Many people have turned to government to help control the HIV epidemic and OSHA's recommendations are a response from one level of government. The final report of the Presidential Commission on the HIV Epidemic contains a much broader agenda for the federal response to AIDS. On the other hand, OSHA's first attempt could be seen as a way of facilitating high-quality medical care for patients with HIV-related disorders. With certain minimum standards to ensure the safety of all health care workers, maybe more hospitals and physicians will evolve toward providing medical services for people with HIV infection/AIDS.

This could be an opportunity to have a major impact on improving patient care for all patients. We should be careful not to be victimized by irrational fears of contagion. Otherwise, we will only evolve a new set of rituals. We will have false starts as we try to find the best response to HIV. Initially, many will try to legislate it, burn it, sterilize it, throw it away, or double-glove it. Or we can make a difference for patients and health care workers by trying to lend some order to the health care response to HIV/AIDS. In many cases the infection control message should help break down some of the barriers to medical care for patients with HIV infection/AIDS.

The challenge to us is to stay on track by implementing better infection control strategies without becoming ritualistic. All of this needs to be done within the context of the science that is available to help us make the right decisions. Granted, the recommendations are awkward and add work to an already overburdened system. A good infection control response to AIDS and to OSHA's recommendations should ultimately result in infection control strategies that really do improve patient care, both now and in the future.

REFERENCES

1. Joint Advisory Notice; Department of Labor/Department of Health and Human Services; HBV/HIV; Notice. Federal Register, Part II, Department of Labor. October 30, 1987.
2. OSHA recommendations spark concern, criticism from ICPs. Hospital Infection Control, Atlanta: American Health Consultants, 1988; 15:29-33.
3. Gerberding JL, Bryant-LeBlanc CE, Nelson K, et al: Risk of transmitting the human immunodeficiency virus, cytomegalovirus, and hepatitis B virus to health care workers exposed to patients with AIDS and AIDS-related conditions. *Infect Dis* 1987; 156:1-8.
4. Friedland G: AIDS of compassion. *JAMA* 1988; 259:2898-2899
5. US Department of Health and Human Services, Public Health Service. Centers for Disease Control. Recommendations for prevention of HIV transmission in health-care settings. *MMWR (suppl)* 1987; 38: 1S-18S.
6. Lynch P, Jackson MM, Cummings J, et al: Rethinking the role of isolation practices in the prevention of nosocomial infections. *Ann Intern Med* 1987; 107:243-246.
7. Crow S: Much ado about nothing. *Infect Control Hosp Epidemiol* 1988; 9:212-213.