

Protecting the Public Against Rabies: Building Bridges Between Public Health and the Emergency Department

In an era of declining resources, especially since the 2008 recession, many communities have been faced with deep program cuts and staff reductions in their public health departments.¹ Even in that environment, the health department's accountability to the public and medical community demands maintaining the integrity of existing programs and managing situations that are life threatening, such as a rabies virus exposure.

Handling these types of challenges is familiar territory to **Richard Tooker, MD, MPH, who is Medical Director of the Allegan County Health Department in Michigan.** A veteran public health director, he recalls a time many years ago when a human rabies virus exposure would be evaluated and treated at the health department. In those days, a state-owned lab manufactured ample supplies of rabies vaccine at no cost. Human rabies immune globulin (HRIG) still had to be purchased, but money flowed a bit more freely in those days.

Fast-forward to the present, where rabies postexposure prophylaxis (PEP) is most often initiated at a local hospital's emergency department. **According to the [Advisory Committee on Immunization Practices \(ACIP\) guidelines](#) for rabies PEP, a patient with a rabies virus exposure who has not been previously vaccinated for rabies should be treated on day 0 (the day treatment is initiated), day 3, day 7, and day 14.² Vaccines on subsequent days are usually administered at the same facility as the day 0 treatment, even though the patient is not managed as an emergency case.**

The health department will coordinate PEP if the patient chooses treatment at a federally funded clinic or at his or her primary care physician's office; however, most choose the hospital emergency department.

Even though PEP is usually administered in the emergency department, the health department still shoulders a large portion of the responsibility for following appropriate protocol.



Allegan County, MI, Health Department Medical Director Richard Tooker, MD, MPH, and Cindy Styles, RN, BSN. "Nurse Cindy" heads up the health department's rabies team.

Please see Important Safety Information at the end of this article and [HyperRAB® S/D \(rabies immune globulin \[human\]\) full Prescribing Information for complete prescribing details.](#)



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“We are the experts; we coordinate and ensure that things are getting done correctly,” says Dr. Tooker. “We are the ‘glue’ between the various providers.”

This strong bond between public health and emergency medicine in Allegan County is no accident. Forging strong relationships throughout 6 area hospitals and other providers in the community creates an interdependence aimed at improving community health and individual patient outcomes. **“Everything we do is a partnership,” Dr. Tooker notes.**

What are the keys to building these relationships? He cites the quarterly meetings of the county’s Immunization Council, where hospital emergency staff and others involved with immunization gather to review the latest in vaccines; listen to experts discuss current practices such as the [ACIP guidelines](#) for rabies PEP; and address issues, concerns, and questions from various healthcare providers. This network of healthcare professionals communicates regularly, even outside of its regular meetings.

Other relationship-building opportunities involve the health department’s lead infection control nurse, who meets with hospital infection control teams. Additionally, staff members at the health department are cross-trained, ensuring minimal service interruption in the event of an absence by a specialist or lead nurse. **Dr. Tooker says it’s also very important to be familiar with each hospital’s “ad hoc” expert on ACIP guidelines. “Hospitals always have somebody who is knowledgeable. We nurture that relationship.”**

FOUR MAJOR ROLES OF THE HEALTH DEPARTMENT IN MANAGING RABIES VIRUS EXPOSURES:

- 1) Surveillance:** Gather, report, and monitor data about the disease in animals and humans
- 2) Policy and procedure:** Develop policies and procedures in alignment with current law, statutes, and guidelines, such as the Advisory Committee on Immunization Practices (ACIP) guidelines for rabies postexposure prophylaxis (PEP)
- 3) Assurance:** Provide assurance to the community that ACIP guidelines and PEP procedures are followed
- 4) Education:** Create educational opportunities to increase awareness of ACIP guidelines and effective management of rabies virus exposures using PEP

All information in this article was provided by Richard Tooker, MD, MPH, in a personal interview in June 2015



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IMPORTANT SAFETY INFORMATION

Rabies vaccine and HyperRAB® S/D (rabies immune globulin [human]) should be given to all persons suspected of exposure to rabies with one exception: persons who have been previously immunized with rabies vaccine and have a confirmed adequate rabies antibody titer should receive only vaccine. HyperRAB S/D should be administered as promptly as possible after exposure, but can be administered up to the eighth day after the first dose of vaccine is given.

HyperRAB S/D should be given with caution to patients with a history of prior systemic allergic reactions following the administration of human immunoglobulin preparations.

The attending physician who wishes to administer HyperRAB S/D to persons with isolated immunoglobulin A (IgA) deficiency must weigh the benefits of immunization against the potential risks of hypersensitivity reactions. Such persons have increased potential for developing antibodies to IgA and could have anaphylactic reactions to subsequent administration of blood products that contain IgA.

As with all preparations administered by the intramuscular route, bleeding complications may be encountered in patients with thrombocytopenia or other bleeding disorders.

Soreness at the site of injection and mild temperature elevations may be observed at times. Sensitization to repeated injections has occurred occasionally in immunoglobulin-deficient patients. Angioneurotic edema, skin rash, nephrotic syndrome, and anaphylactic shock have rarely been reported after intramuscular injection so that a causal relationship between immunoglobulin and these reactions is not clear.

Administration of live virus vaccines (e.g., MMR) should be deferred for approximately 3 months after rabies immune globulin (human) administration.

HyperRAB S/D is made from human plasma. Products made from human plasma may contain infectious agents, such as viruses, and, theoretically, the Creutzfeldt-Jakob disease (CJD) agent that can cause disease. There is also the possibility that unknown infectious agents may be present in such products.

[Please see HyperRAB S/D full Prescribing Information for complete prescribing details.](#)



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For more information, go to www.rabieswatch.com

References

1. Newman S. *Local Health Department Job Losses and Program Cuts: Findings from the 2013 Profile Study*. National Association of County and City Health Officials (NACCHO). July 2013. www.naccho.org/topics/infrastructure/lhdbudget/upload/Survey-Findings-Brief-8-13-13-3.pdf. Accessed June 8, 2015.
2. Rupprecht CE, Briggs D, Brown CM, et al. Use of a reduced (4-dose) vaccine schedule for postexposure prophylaxis to prevent human rabies: recommendations of the advisory committee on immunization practices. *MMWR Recomm Rep*. 2010;59(RR-2):1-9.

GRIFOLS

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