

## **Anthrax Vaccine – Waste Not! Want Not!**

- According to the GAO<sup>1</sup> an estimated 1.5-2 million vaccine doses of the FDA-licensed anthrax vaccine stored in the Strategic National Stockpile (SNS) were to be wasted in both 2008 and in 2009. Some of this waste was averted by coordination between the CDC and Department of Defense. Even still, 500,000 doses of anthrax vaccine are destroyed each month due to expiration dating.<sup>2</sup> These doses could be saved and offered to Americans at high risk to anthrax bioterrorism.
- **Who should be considered for the vaccine?** The CDC Advisory Committee on Immunization Practices (ACIP) supports offering the anthrax vaccine, “... for persons involved in emergency response activities including but not limited to, police departments, fire departments, hazardous material units, government responders, and the National Guard.”<sup>3</sup>
- Because the anthrax weapon is invisible, odorless, tasteless, and easily re-aerosolized the task of identifying the safe zone is nearly impossible.<sup>4</sup> As a result the vaccine must be considered for all who routinely respond to “white powder scares”.<sup>5</sup> This adds public works personnel, utilities employees, and first receivers in emergency rooms to the CDC proposed list of vaccinees.
- Learning from the two-wave, multi-site, deadly attack via the US Postal Service, the vaccine is also appropriate for all Americans from groups victimized by the 2001 anthrax attacks.<sup>6</sup> This includes mail/shipping carriers, media personalities, government officials and their staff.
- To bolster community resilience, the US Department of Labor has a tool on its website <http://www.osha.gov/SLTC/etools/anthrax> to help determine the credible risk of anthrax exposure/attack. It is suggested that a workplace in the Yellow or Red zone of this matrix should consider a pre-attack vaccination program for its employees.
- **Why not rely on antibiotics after an attack?** Experts agree future biological attacks may use anthrax that is resistant to all currently-stockpiled, pertinent antibiotics.<sup>7,8</sup> In an attack with antibiotic-resistant strains of anthrax of sufficient dose, the antibiotics would afford no protection and the infection could quickly progress to a toxic death well before the vaccine (if given after exposure) could be expected to confer immunity to the victims.<sup>9</sup> Pre-attack vaccination is the best strategy for preparedness to anthrax bioterrorism since there is time to establish immunity which protects against anthrax disease inflicted by both antibiotic-sensitive and antibiotic-resistant organisms.<sup>10</sup>
- **There is very little risk in this cost-effective strategy.** The anthrax vaccine is FDA-licensed as safe and effective.<sup>11</sup> Over 2.5 million people have received more than 10 million doses of the anthrax vaccine and the Institute of Medicine has stated that the rate of adverse events for this vaccine is similar to rates with other adult vaccines (flu, HAV, Tetanus).<sup>12</sup> The vaccine in the SNS is already purchased and if rotated out before expiration, the cost of a vaccination program is reduced by at least 70% from retail pricing.
- **What is the demand or support for the vaccine?** Presently emergency responders (and many civilians) are expressing a wish to receive the vaccine according to the current FDA approved label.<sup>13</sup> Vaccinating local emergency responders would bring their level of preparedness up to the federal standard of protection enjoyed by the National Guard Weapons of Mass Destruction Civilian Support Teams.<sup>14</sup>
- **CONCLUSION:** With the wisdom to think ahead, the courage to face the worst case scenario of antibiotic resistant anthrax, and a smart pre-attack vaccination plan, the anthrax bioterrorism risk to Americans could be significantly mitigated.

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## References

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