The Department of Defense (DoD) released information on its Military Smallpox Vaccination Program on December 13, 2002. In a follow-up meeting to the press release—December 17, 2002, Deployment Health Support invited the Veteran Service Organizations to a meeting addressing the issue. LTC John Grabenstein from the Military Vaccine Agency conducted the Smallpox briefing.

With the possibility of another war with Iraq, DoD re-instituted its mandatory Smallpox Vaccination Program to protect troops from possible biological warfare attack. Initially, 400,000 to 500,000 service members will be vaccinated. They will consist of health care workers (from Ft. Belvoir, Bethesda, Walter Reed military hospitals) who will be required to assist those exposed to the virus in the event of an outbreak, those service members assigned to the CENTCOM area of responsibility (AOR), and those who would deploy in a supportive contingency.

The last naturally occurring international case of smallpox was in Somalia in 1977. The last case in the United States was in 1949. Smallpox has been declared eradicated since 1980. The symptoms include a severe rash covering the entire body that may leave permanent scars, high fever, severe headaches or body aches, death in 30% of infected people, and blindness in some rare cases. It takes 7 to 17 days for symptoms to manifest. Smallpox is spread from close contact with infected individuals, like prolonged face to face contact. Transmission of the virus can also occur via fine-particle aerosols and inanimate objects, like contaminated clothes and bed linen carrying the virus. The most deadly form is the hemorrhagic form. Lineage determines whether this form manifests. Someone with this particular form of smallpox could pass the disease to another who gets the normal version of smallpox, who could then pass it on to another who receives the hemorrhagic version.

The vaccine is administered with a two-pronged needle that is dipped into the vaccine solution and then used to quickly prick the skin in the upper arm repeatedly for a few seconds. Week one after the vaccination, the bump that developed at the site 3 to 4 days following vaccination becomes a large blister, fills with pus and begins to drain. Week two after the vaccination, the blister begins to dry and a scab forms. In the third week, the scab falls off and a small scar remains. Those who had no previous smallpox vaccination usually have a more successful reaction than those who were previously vaccinated. Adverse reactions to the vaccine can be mitigated my using Vaccinia Immune Globulin (VIG)-a solution of antibodies and Cidofir-an antiviral compound. There is also an eye drop for a spread to the eye resulting from touching the vaccination site and then the eye. All adverse reactions should be reported by submitting a Vaccine Adverse Event Reporting System (VAERS) form. CDC and FDA review every adverse-event report submitted to VEARS. DoD requires a VAERS form be submitted for loss of duty 24 hours or longer, hospitalization, and suspected vaccine vial contamination.

Current supplies of the vaccine are limited because production of the vaccine ended in the 1980s, after the disease was globally eradicated. Routine vaccination against smallpox among the general public ceased because it was no longer necessary for prevention. There will be a supply of the vaccine on hand in the event of an outbreak during deployment. Everyone who receives the vaccination will get a brochure explaining the vaccine and the effects of the virus and a form entitled "Initial Smallpox Note Page 1 and 2", which will be utilized for documenting vaccine administration and health history. The vaccine administration information on the Initial Smallpox Note page also includes documentation of the specific lot number and manufacture code, number of punctures, whether or not information about the vaccine was actually given to the patient and which arm was used for vaccination. The initial dose of the vaccine provides protection for 3 to 5 years, with declining immunity thereafter. A subsequent vaccination will make immunity last longer. Those who had been vaccinated 10-20 years ago are likely to die as a result of a smallpox exposure.

Those exempt from vaccination are service members who are pregnant or breast feeding, those with immune system deficiencies and HIV, those who have or had been diagnosed with eczema and atopic dermatitis, those with skin conditions—until it clears up, people with a household contact who meets any of
the previously mentioned conditions, and anyone who had problems after previous vaccination or has an allergic reaction to any part of the vaccine's components. 20% of the people who are exempt will still be deployed. Regardless of exemption, if an outbreak does occur, everyone will be vaccinated.

To prevent spread of the virus, the Army mandates that the vaccination site maintains a barrier at all times. During work, a sleeve is sufficient. At home around those who are not immune, a bandage or long sleeve shirt should be worn. If a service member has someone in his/her home who is pregnant/breast feeding and he/she absolutely must have the vaccination, the member will be removed from his household until the possibility of spreading the disease no longer exists. The service member will not be given the vaccine if he could possibly transmit the virus while en route to a deployment site; he will be give it when he arrives at his destination.

Legion Concerns Addressed

*Is the government actively seeking an alternate vaccine that is just as effective, but not contagious? The unlicensed vaccine, which is scheduled for release in 2004, utilizes the same live virus, but a more modern technique for creating the vaccine. Another one that the National Institute of Health (NIH) is investigating utilizes a live virus that is unable to reproduce itself, making the virus unable to be passed along by mere touch of the vaccination site.

*Is there another way to administer the vaccine? The vaccine does not work if injected into the muscle. It needs to be administered near the surface of the skin to be effective.

*What guarantees would the public have that this vaccine would be effective against all forms of manmade smallpox virus? There are two versions: variola minor and variola major. The vaccine has worked against both. Even the most talented scientists probably would not be able to create another that could evade the vaccine. There has been no evidence that the enemies have any manmade smallpox virus. This is a precaution taken due to the fact that one of the last known smallpox outbreaks occurred in Iraq. There is no way of knowing whether or not anyone had stored a sample for later use. Also, the Soviets had batches of the virus stored in ICBMs with refrigerated warheads prior to the collapse of the union. No one can be sure that some of the stored virus was not stolen by anyone who had access to it. Currently there is an international agreement that limits storage to the CDC in Atlanta and in a storage facility in Russia.

*What is the shelf life of the vaccine? 18 to 24 months. Although the vaccine that is being administered is from a batch that was stored in 1978, it is still potent due to the manner in which it was stored. It was frozen and remained in a static state for all those years. Once it is thawed for utilization, the 18 to 24 month expiration comes into effect. Each vial contains 100 doses and will not be opened until there are enough recipients to receive the 100 doses. This will prevent waste and ensure the maximum potency of each vial.

*Would administering both the anthrax vaccine and the smallpox vaccine simultaneously cause an adverse reaction? The government is allowed to administer an inactive vaccine with an active vaccine simultaneously or at intervals. If time allows, the smallpox vaccine will be given in an interval of the anthrax vaccine.

*What is the difference between an unlicensed vaccine and a licensed vaccine? A licensed vaccine has FDA approval. An unlicensed vaccine can be considered investigational. The unlicensed version of the smallpox vaccine to be given to those who insist on being vaccinated currently has passed safety and efficacy studies. Those from the general public who volunteer to receive it will become part of a trial study of the new vaccine.
More information can be acquired from The Military Vaccines Agency's website at http://www.vaccines.army.mil Other useful reference pages: