

drawn up into the sterile syringe, preferably a tuberculin syringe, expelling air bubbles in the syringe barrel. The needle used for reconstitution is removed, and a 30-gauge needle is attached, and the concentration will be 4 U/0.1 mL and a total dose of 20 U in 0.5 mL. The duration of activity of botulinum toxin type A cosmetic for glabellar lines is approximately 3 to 4 months.

The safe and effective use of botulinum toxin type A depends upon the proper product storage, selection of the correct dose, proper reconstitution, and proper administration. Physicians administering botulinum toxin type A must have a clear understanding of the relevant neuromuscular or orbital anatomy of the area involved and any alterations to the anatomy caused by prior surgical procedures.

Botulinum toxin type A must not be confused with botulinum toxin type B. Botulinum toxin type B is a preservative-free injectable solution, that is, 5,000 U/mL. Type B is also indicated for CD. The clinical doses of botulinum toxin are not interchangeable between products.

RESPONDING TO BIOTERRORISM

In the wake of the events of September 11, 2001 (9/11), awareness of the necessity for vigilance to illness patterns and diagnostic clues that might indicate an unusual infectious disease outbreak heightened. Pharmacists and allied health professionals were asked to report any indication of suspicious symptoms to local and state health departments. Evidence of intentional release of biologic agents includes infection in these groups: (a) people in the same location with symptoms that suggest an infectious disease outbreak (e.g., unexplained febrile illness associated with sepsis, pneumonia, respiratory failure, rash, or botulism-like syndrome with flaccid muscle paralysis), (b) age groups not normally associated with the disease in question, and (c) numerous cases of acute flaccid paralysis with prominent bulbar palsies that suggest the release of botulinum toxin.

Pharmacists are also encouraged to participate in their community's disaster preparedness efforts. The pharmacist can bring an important and unique perspective to determining and preparing for health care needs during times of natural disasters or manmade crises. The American Pharmacists Association has attempted to assist involved pharmacists by creating a National Pharmacists Response Team. The 10 teams will assist communities with chemoprophylaxis or vaccinations during times of need. Interested pharmacists can apply for the team online at www.aphanet.org/pharmcare/NPRTform.pdf.

After 9/11, the news media concentrated on the threat of an anthrax outbreak without realizing there were other more prominent diseases with greater potential harm to the public. Those listed by the CDC as the biggest biologic threats in addition to anthrax included smallpox and pneumonic plague. Other agents of concern include *Clostridium botulinum* toxin (botulism), *Francisella tularensis* (i.e., tularemia), and hemorrhagic fevers.

Smallpox, caused by variola virus, has initial symptoms that include high fever, fatigue, headache, and backaches. These symptoms are followed by a rash. While most patients recover, up to 30% of cases result in death. This disease is spread by face-to-face contact. Routine vaccination against smallpox ended in 1972, so the level of immunity among persons vaccinated up until this time is unknown. Therefore, all individuals are considered susceptible. In 2002, after evaluating the risk of a bioterrorist attack and the adverse effects of the smallpox vaccine (e.g., lymph node swelling, rash, fever, scarring, severe skin reactions, encephalitis), the ACIP concluded that the risks outweighed the benefits and recommended that the general public not be inoculated against smallpox. It recommended that vaccinations be offered to a total of about 15,000 health care workers around the country who would be designated to investigate smallpox cases and provide direct care at designated hospitals.