

Vaccines in the Uniject™ Injection System

Health need

According to the World Health Organization (WHO), the percentage of injections given with syringes or needles reused without sterilization is as high as 70 percent in some countries. At the same time, the use of multidose vials often leads to 50 percent of vaccine being wasted or children being turned away because health workers are reluctant to open a vial for just one child.

Technology solution

Two decades ago, prefilled syringes were too costly for use in developing-country public-sector health programs, and no prefilled syringe on the market offered an autodisable feature. In collaboration with the United States Agency for International Development, WHO, and many others, PATH developed a compact prefilled autodisable injection system known as the Uniject™ injection system.

The Uniject injection system simplifies the act of giving an injection, makes the reuse of the syringe impossible, and reduces the burden on logistics systems by making medicament, needle, and syringe available at the same place and time. It also eliminates the wastage commonly associated with multidose vials. PATH licensed the Uniject technology to BD, the world's largest manufacturer of injection equipment, for commercial production and distribution. BD sells empty Unijects to pharmaceutical and vaccine producers, who then fill their products into the devices and sell the finished, prefilled drug or vaccine in Unijects to public health programs and/or through private-sector health channels.

Current status and results

Today, BD produces Uniject devices in Singapore with a fully automated, high-volume production line and markets them globally to pharmaceutical companies. WHO has prequalified PT BioFarma's tetanus toxoid (TT) and hepatitis B vaccines in Uniject.

Hepatitis B vaccine in Uniject has been used nationwide in Indonesia for birth dose immunization since 2005. Hepatitis B vaccine in Uniject is also currently in use in the private sector in India. In addition, Crucell, a major multinational vaccine producer, is developing a new presentation of Quinvaxem® fully liquid pentavalent vaccine in Uniject to be distributed in an innovative form of secondary packaging that minimizes storage volume.

*Uniject is a trademark of BD.



UNICEF/HQ020263/Giacomo Prozzi

Compact prefilled autodisable injection device filled with vaccine.

“With Uniject anybody can inject the vaccine. An illiterate midwife who's never been trained in medicine or birthing can do an absolutely perfect job.”

Dr. Francois Gasse, UNICEF, *Reuter's Health*, July 2002.

Availability

Uniject and the associated equipment for filling and packaging are available to vaccine and pharmaceutical companies from BD Pharmaceutical Systems, New Jersey, USA
Roderick Hausser,
Tel: (201) 847-5185,
Fax: (201) 847-4869.

Hepatitis B vaccine and tetanus toxoid are available from manufacturers in India and Indonesia.

For more information, contact Steve Brooke at sbrooke@path.org.

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