

BD tools for vaccine combination product developers

BD Uniject™ Auto-Disable Prefillable Injection System

Valve Disc

Discourages attempts to refill the reservoir

Isolation barrier

in the port maintains sterility of the vaccine

Needle Assembly

- Consists of needle and hub
- Covered by the needle shield until injection

Double-pointed Needle

Allows piercing of the reservoir when activating the BD Uniject™ System



Prefillable Drug Reservoir

- Delivers contained dosage to reduce waste/cost
- Transparent: easy medication inspection
- Collapses after use (not refillable or reusable)
- Design without silicone nor elastomer

Port

- Covers the needle hub
 - Isolates the drug prior to use
 - Connects the needle to the reservoir
- NB: No needle shielding safety system

BD Uniject™

- Auto-disable, all-in-one design for simple roll-out
- Available in 0.5 mL and 1mL volumes
- Standard needle sizes available 23 G and 25 G in needle diameter 3/8" (10 mm)- 1 1/2" (38 mm) in needle length
- Delivered in BD SCF™ Sterile, Clean and ready to Fill

Experience

- 125+ million doses sold to date⁸
- In combination with vaccines: Pentavalent,⁹ Tetanus¹⁰, Hep. A10, Hep. B¹⁰
- Experience with contraceptive drugs,¹⁰ and treatment of postpartum hemorrhage¹⁰
- Potential to improve access to and delivery of contraceptives, vaccines and maternal and child health medicines¹¹

Availability

- Samples available on demand
- Sample filling capacity in BD lab for testing purposes
- Filling and sealing pilot machine available for early feasibility studies
- Availability for a few million units

Key benefits

- **Prefilled ready to administer:** Vaccine protected until administration, complete content injection, preparation and delivery time saving^{2,3,4}
- **Easy to use²**: ease of preparation and drug administration
- Less waste disposal than syringes:^{4,5} **25% less voluminous and 62% lighter than vial⁶**
- **Dose-sparing:** no waste of unused multi-doses
- Perceived as **less painful⁷** and experienced **no anxiety¹**
- Comes with **regulatory** documentation and support, **technical deployment support**



References

1. Sutanto et al., Home delivery of heat-stable vaccines in Indonesia: outreach immunization with a prefilled, single-use injection device, Bulletin of the World Health Organization, 1999. In this study, 96% of the 23 midwives correctly use the Uniject device to complete the injection of contents Of the 456 mothers who had received injections by means of the BD Uniject™ device, 94% said they had experienced no anxiety
2. Lavidalie et al., 2010, Pilot Introduction of Oxytocin in Uniject During Active Management of the Third Stage of Labor (AMTSL) at the Institutional Level in Guatemala, PATH. Data is from 77 providers on ease of use of oxytocin in BD Uniject™. 92% of providers find ease of preparing the oxytocin in BD Uniject™ very easy, and 80% find ease of administering the oxytocin in BD Uniject™ very easy
3. Lorenson et al., 2014, Pentavalent Vaccine in the Uniject™ Injection System, A Time and Motion Study, PATH
4. Guillermet et al., 2015, Acceptability and Feasibility of Delivering Pentavalent Vaccines in a Compact, Prefilled, Autodisable Device in Vietnam and Senegal, PLoS One. 2015 Jul 17;10(7):e0132292
5. Berman et al., 2014, Pentavalent Vaccine in the Uniject™ Injection System: Health Care Waste Management Considerations, PATH
6. Childress et al. 2011, Logistics and waste management benefits of depo-subQ in Uniject, PATH
25% less voluminous and 62% lighter than DMPA vial packed with syringe and safety
7. Burke et al., 2014, Observational study of the acceptability of Sayana® Press among intramuscular DMPA users in Uganda and Senegal
In this study, 1020 women in Uganda and 242 in Senegal received Sayana® Press (SP) in BD Uniject™. 84% of Ugandan participants and 80% of Senegalese participants said they would select SP over Intramuscular administration (DMPA IM). One of the reason for selecting SP were less pain
8. BD analysis [Internal report]. Pont de Claix, FR: Becton, Dickinson and Company; 2021
9. Pentavalent Vaccine in the Uniject™ Injection System. Lorenson et al 2014
10. A Health Historical Profile, The Uniject™ device, 2005, PATH
11. Childress et al., 2011, The Uniject™ injection System: Multi-country experience and evidence, PATH

BD Medical

Pharmaceutical Systems

United States

1 Becton Drive

Franklin Lakes, NJ 07417

+1 800 225 3310

Europe

11 rue Aristide-Bergès

38800 Le Pont-de-Claix

France

Phone: +33 4 76 68 36 36 - Fax: +33 4 76 68 35 05

Becton Dickinson France S.A.S - Share capital: 64 719 915 €

RCS Grenoble B 056 501 711

bd.com

