

## Oxytocin in the Uniject™ Injection System

### Health need

Obstetric hemorrhage is estimated to cause 25 percent of all maternal deaths and is the leading direct cause of maternal mortality worldwide. Postpartum hemorrhage (PPH) is generally considered to account for the majority of cases of obstetric hemorrhage, occurs in over 10 percent of all births, and is associated with a 1 percent case fatality rate. It is a particular problem in low-resource settings where home deliveries of infants are prevalent. The short response time required in the event of hemorrhage makes referral and transport to a health care facility impractical in most cases. The percentage of maternal deaths due to PPH has been reported as 34 percent in Africa, 31 percent in Asia, and 21 percent in Latin America and the Caribbean, while only 13 percent of maternal deaths in developed countries are due to PPH. The use of oxytocin for active management of the third stage of labor can significantly reduce the incidence of postpartum hemorrhage. The World Health Organization recommends use of a 10-IU dose of oxytocin given intramuscularly. To facilitate the recommended use of oxytocin in developing countries, particularly in peripheral health settings and in home deliveries (attended by a person with midwifery skills), a prefilled, easy-to-use, injection-ready dose of oxytocin would be ideal.

### Technology solution

The Uniject™\* injection system is a compact, prefilled, autodisable syringe that offers delivery of the life-saving benefits of oxytocin to women in peripheral health care settings and homes. This easy-to-use, injection-ready format ensures an accurate dose in a nonreusable, sterile device with minimal preparation and minimum waste. These benefits can improve the ability of midwives and village health workers to administer oxytocin outside of health care facilities and in emergency situations or remote locations. Oxytocin can stand moderate heat exposure for some time, but substantial heat exposure reduces potency. Therefore, a time-temperature indicator can be included on the product package to help ensure that medication given to a woman is potent while allowing more flexibility for field transport and storage of oxytocin in Uniject.

### Current status and results

Instituto Biológico Argentino, an Argentine pharmaceutical manufacturer, has obtained regulatory approval in nine Latin American countries.

A summary of research that has been conducted to date with oxytocin in Uniject is available at: [http://www.path.org/publications/files/TS\\_oiu\\_res\\_sum\\_1998-2011.pdf](http://www.path.org/publications/files/TS_oiu_res_sum_1998-2011.pdf).

\*Uniject is a trademark of BD.



PATH/Glenn Austin

**Compact prefilled, autodisable injection device filled with oxytocin.**

**“Uniject [with oxytocin] was well tolerated and offers an alternative for oxytocin administration.”**

Strand RT, et al. Postpartum hemorrhage: A prospective, comparative study in Angola using a new disposable device for oxytocin administration. *Acta Obstetrica et Gynecologica Scandinavica*. 2005;84:260–265.

### Availability

Uniject injection systems 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

For more information regarding this project, contact Steve Brooke at [sbrooke@path.org](mailto:sbrooke@path.org).

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