Oxytocin in prefilled auto-disable injection system

Country of origin | United States of America

Health problem addressed
Postpartum hemorrhage (PPH) is the leading cause of maternal death worldwide. Women delivering outside of health facilities or in facilities with constrained resources may not receive the WHO-recommended dose of 10 IU of oxytocin for the prevention of PPH. There is a need for an easy-to-use delivery system for oxytocin that increases access.

Product description
A compact, prefilled, auto-disable injection system is used to deliver Oxytocin. A time-temperature indicator on each package indicates heat exposure. Oxytocin in this device can enable minimally trained health workers to provide the PPH prevention dose in low-resource facilities, emergency situations, or remote locations.

Product functionality
As a prefilled system the easy-to-use device allows caregivers to safely inject drugs or vaccines with minimal training. The system prefilled with Oxytocin ensures that an accurate dose is delivered to a patient with minimal preparation, minimum waste, and a guarantee that the syringe and needle will not be used again.

Developer's claims of product benefits
Current practice is to use a syringe and two 5-IU ampoules or one 10-IU ampoule of Oxytocin. Oxytocin in described injection system is prefilled with 10 IU and ensures an accurate dose by minimally skilled health workers. It is individually packaged and sterile in an injection-ready format, optimal for low-resource settings. It is compact and prefilled so generates minimal waste.

Operating steps
1. Check the time-temperature indicator; 2. Open the foil pouch; 3. Activate the device; 4. Remove the needle shield; 5. Continue to hold the injection device by the port and insert the needle into the patient; 6. Squeeze the reservoir to inject the oxytocin; 7. Do not re-cap; 8. Dispose according to medical waste procedures.

Development stage
Oxytocin in conjunction with described injection device is currently being produced in Argentina and India. Oxytocin in Uniject is commercially registered in Argentina, Guatemala, Honduras, Paraguay, and India. Additional registrations in Latin America and Africa are being pursued.

Future work and challenges
The value of oxytocin in conjunction with described injection system has been demonstrated in the field. More and more countries are recognizing the need to reduce maternal mortality, and the easy and safe delivery of oxytocin has been identified as an important tool, but more must be done to raise awareness. The next phase of work will include efforts to raise awareness, increase demand, and ensure a sustainable supply.

User and environment
User: Nurse, midwife, physician, technician
Training: User instructions are included in the box and on the primary packaging. Training requires no more than 1 day.
Environment of use
Setting: At home and in health care facilities in rural and urban settings.
Requirements: Cold chain is ideal, but the time-temperature indicator on the package allows for brief excursions outside the cold chain, like to low-resource health posts or to a woman’s home.

Product specifications
- Dimensions (mm): (foil pouched product) 148 x 56 x 10 (reservoir height)
- Weight (kg): 0.0025 (filled, excluding pouch)
- Shelf life: 24 months
- Retail Price (USD): Varies by country
- Other features: Portable and single-use.
- Year of commercialization: 2009
- Currently sold in: Argentina, Guatemala, India

Contact details
Steve Brooke  Email sbrooke@path.org  Telephone +1 206 302 4712  Fax +1 206 285 6619
http://www.who.int/medical_devices
http://www.who.int/ehealth
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