Stanford University graduates have developed Embrace Warmer, a temperature-controlling sleeping bag that can prevent hypothermia in premature babies.

Millions of prematurely born babies in developing countries die each year because of a lack of access to hospital incubators that the western world takes for granted. By providing adequate warmth in the first few days after birth, the rate of survival could be much higher. A group of Stanford University graduates is hoping to tackle this problem with the Embrace Warmer, a temperature-controlling sleeping bag that can prevent hypothermia in premature babies.

The device essentially takes the form of synthetic swaddling for babies, complete with velcro fasteners to keep it securely wrapped around the newborn baby. Each kit also comes with an AccuTemp heater and a WarmPak warming pad. After babies are strapped into the Warmer, it emits heat at the optimum temperature to keep them warm. It monitors their temperature to adjust the heat, cooling the baby when they’re too hot and warming them up if their temperature drops.

Since the Warmer is much like a sleeping bag rather than a bulky incubator, the device enables mothers to hold their baby immediately after they’ve been born instead of waiting for them to improve their health. Another advantage over an normal incubator is that it costs significantly less. All of the components together cost around USD 200.

Alongside the technology, the creators of the Embrace Warmer also support women in developing countries through partnerships with clinics, governments, and nonprofits, helping to train mothers in using the device and looking after their premature child.
The video below offers more information about how the device works:

https://www.youtube.com/watch?v=SrpK8XLOLg

Are there other medical devices that could be redesigned for the particular environments and challenges of the developing world?

17th November 2014
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