# US federal agency invests in needle-free vaccine technologies

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From CNN's Maggie Fox

The US federal government said Wednesday it's investing nearly $2.5 million in efforts to create a needle-free coronavirus vaccine.

The Biomedical Advanced Research and Development Authority (BARDA) announced four small grants to groups trying to make either oral vaccines against coronavirus, or patches that could painlessly deliver a vaccine.

> "The novel routes of administration they are developing could reduce the dependence on needles and syringes that are used to deliver vaccine via intramuscular injection. Instead, a wearable skin patch or oral option for vaccines may support rapid, large-scale immunization while reducing the strain on the manufacturing supply chain," BARDA said in a statement.

The four new technologies are also "shelf-stable" -- unlike current coronavirus vaccine candidates, they don't have to be kept under special conditions or temperatures, making them easier to store and deliver.

**The four groups:**

- **Michigan-based Esperovax** is working on vaccines people could take in capsules. They received $600,000 from BARDA.
- **The University of Connecticut** already has a microneedle patch that can deliver pneumonia vaccines. They are now testing a coronavirus vaccine in animals. BARDA gave them $430,000.
- **Vaxess Technologies** spun out of research done at Tufts University and MIT. Its patch releases a vaccine over time. BARDA gave them $749,000.
- **California-based biotech startup Verndari** is creating a fast-production, sugar-based microneedle patch. BARDA awarded them $700,000.