It is the year 2025

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A woman develops dysuria (burning on urination)

She reaches for her SHERLOCK* kit and places a drop of her urine on the supplied piece of paper

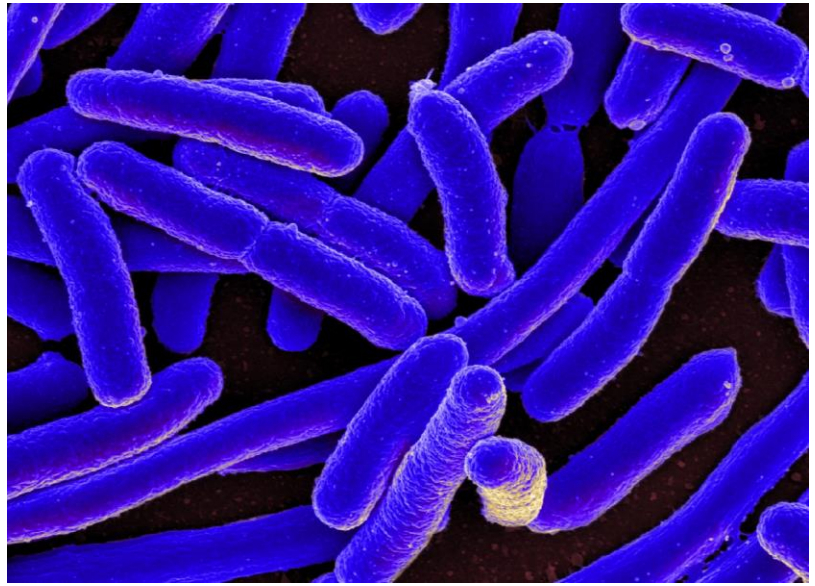
**SHERLOCK (Specific High-sensitivity Enzymatic Reporter unLOCKing):**

**RNA-targeting CRISPR enzyme: a highly sensitive detector — able to indicate the presence of as little as a single molecule of a target RNA or DNA**

**Appications:**

- **detecting the presence of virus in blood or urine and distinguishing genetic sequences of virus strains**
- **discriminating specific types of bacteria, such as E. coli;**
- **detecting antibiotic resistance genes;**
- **identifying cancerous mutations in DNA fragments**
- **rapidly reading human genetic information, such as risk of heart disease, from a saliva sample.**

**Can be designed for use as a paper-based test that does not require refrigeration for fast deployment and widespread use inside and outside of traditional settings — such as at a field hospital during an outbreak, or a rural clinic with limited access to advanced equipment.**



**An App for *E. Coli*Detection**
High-tech droplets could let workers spot pathogens with their phones.

She uses her phone to capture the result and transmit it to an AI-operated virtual “clinic”, and to her cloud-based personal health record.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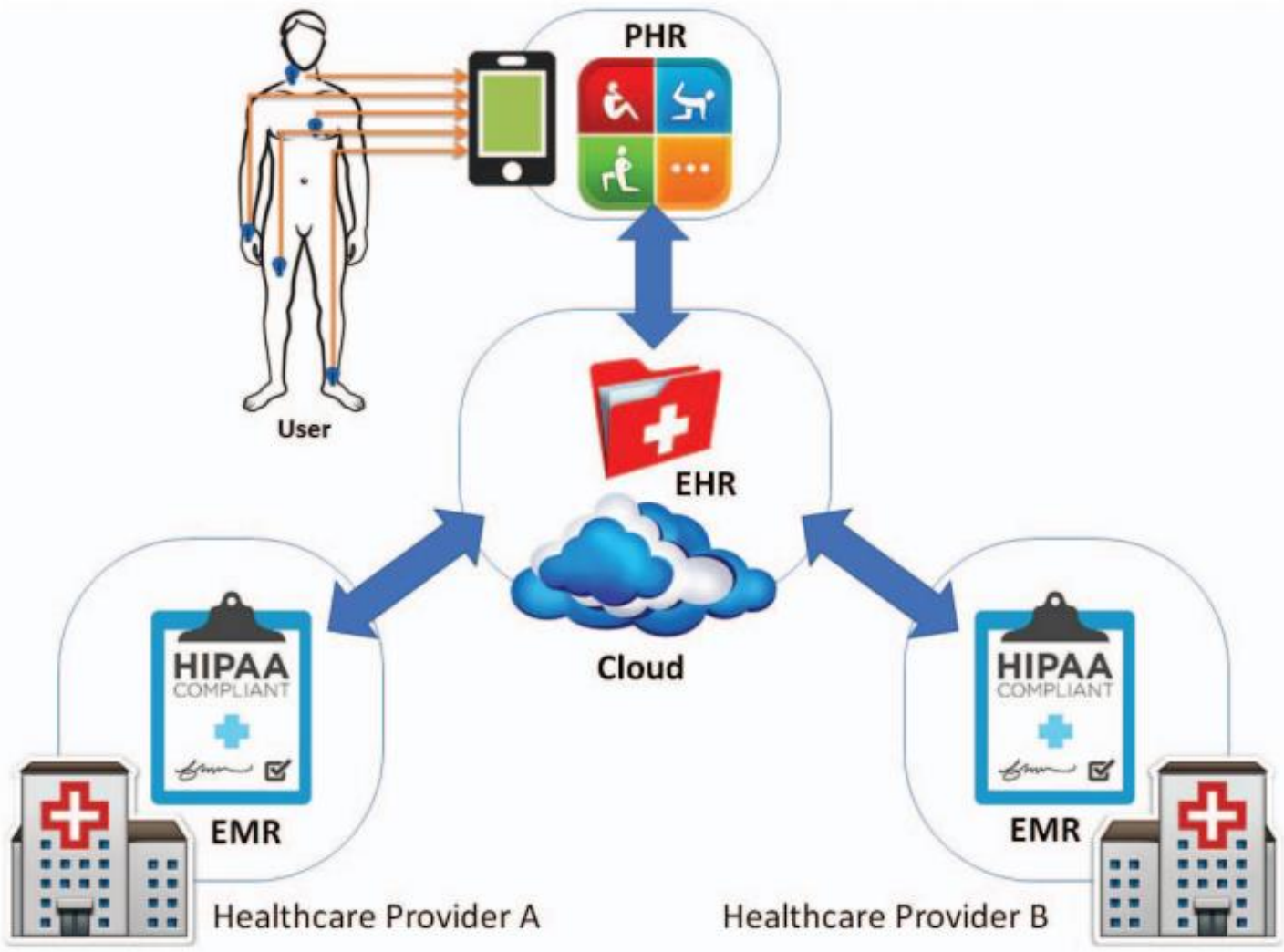
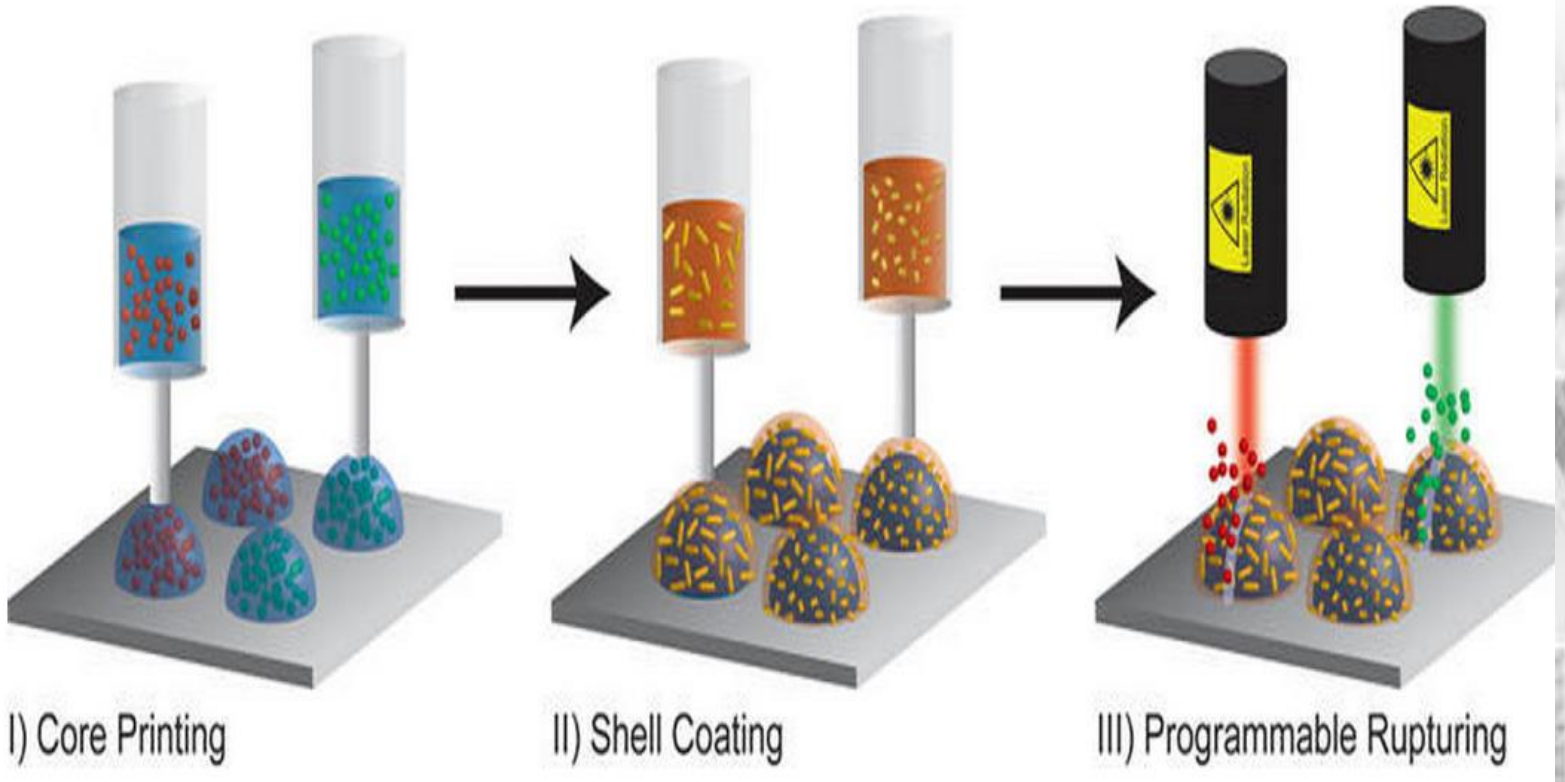


The needed pills in the precise doses for her are generated and packaged in an AI/3-D printing-powered virtual ”pharmacy” nearby





In 2015, the US FDA approved the first **3D printed** tablet.

Package with meds and specific instructions are placed in a pharmacy drone

Costs are charged to her credit card (10-20 dollars maximum)

Drone delivers package to patient’s living room (provided she opens the window)

She reaches for her SHERLOCK* kit

She places a drop of her urine on the supplied piece of paper

She uses her phone to capture the result and transmit it to an AI-operated virtual “clinic”, and to her cloud-based personal health record.

Bacteria is identified genetically, antibiotic sensitivity determined accordingly, and the appropriate medication and prescribing instructions are generated and checked against her entire medical history and genetic background

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**Total time: ~ 10-30 minutes**

*Will you still need me?*
*Will you still feed me?*
*..in 2064!*