

## *Medical Devices - Gifted gadgets in service of our health Clinical Context*

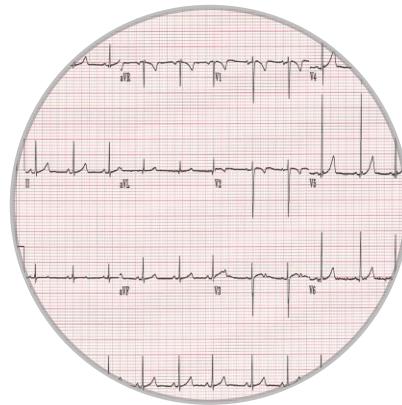
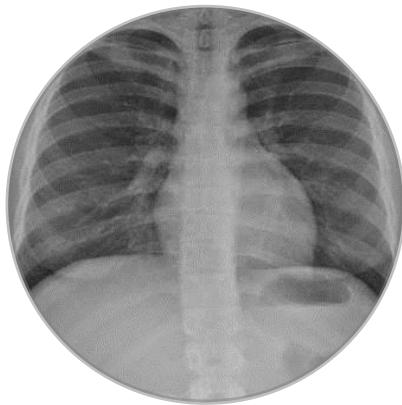
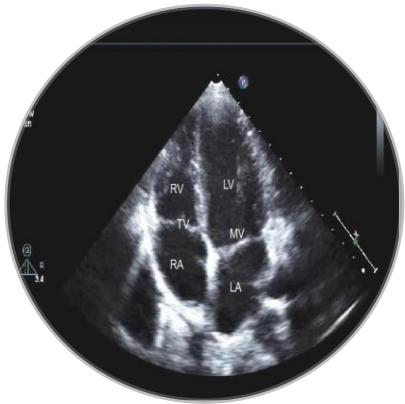
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# The president has palpitations





# Echocardiogram, X-ray, EKG and Holter monitoring are all normal





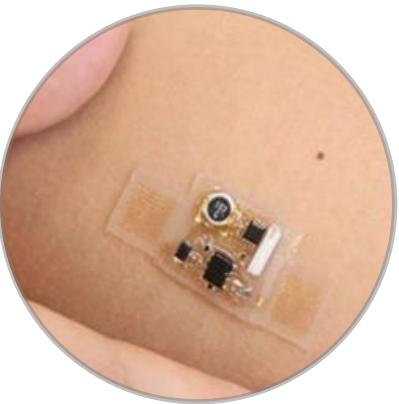
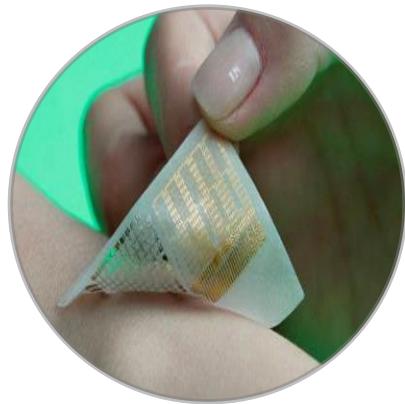
# Integration of information from all surrounding environmental devices is reassuring





Three weeks later, while standing at attention on a hot day in Arlington Cemetery, the president suddenly gets dizzy.

Short-term, continuous, non-invasive monitoring is undertaken.





Two months later, while attending a state dinner, the president briefly passes out.





Again, no cause is found, and diagnostics are stepped-up to include a smart, unobtrusive, implantable sensor.





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Sensor alerts teams, locates nearest AED, pings local resources, links EMS to ongoing telemetry and links nearest hospital to medical records.





Initial attempts at resuscitation are unsuccessful,



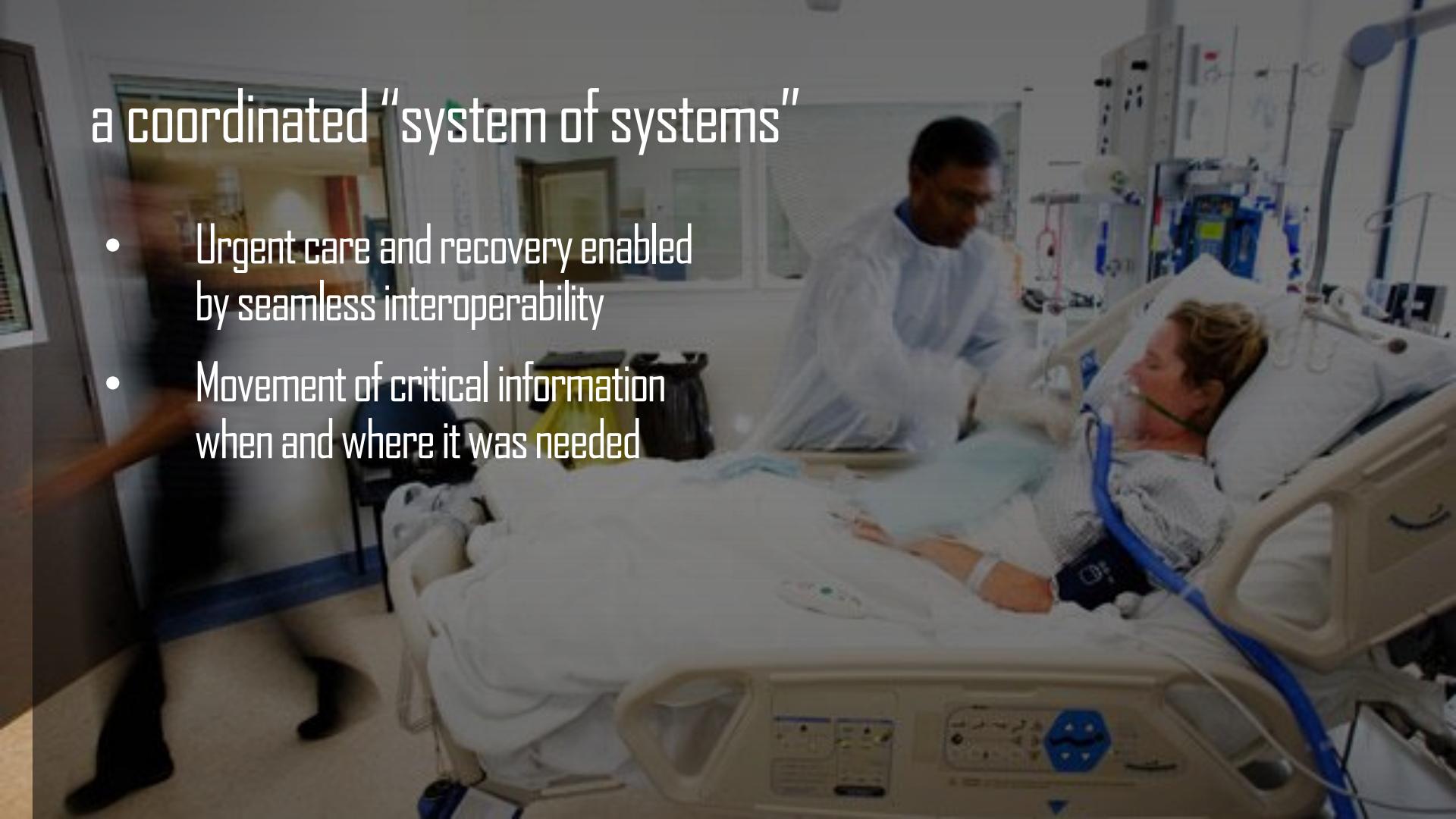


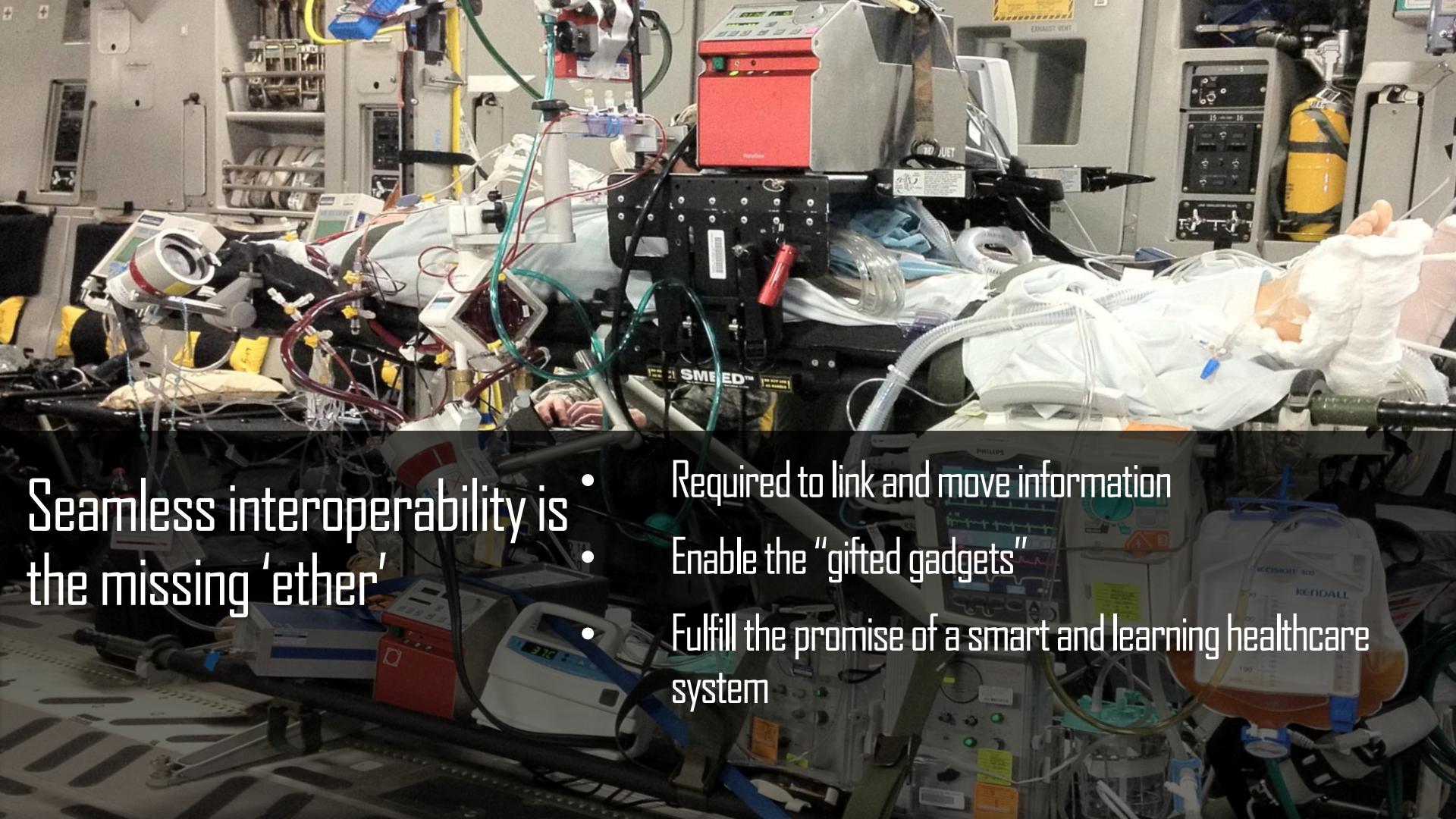
Expert medical systems, provided with medical history and recordings from ongoing arrest identify a critical link -



# a coordinated “system of systems”

- Urgent care and recovery enabled by seamless interoperability
- Movement of critical information when and where it was needed



A photograph of a busy Intensive Care Unit (ICU) scene. In the center, a patient is connected to a ventilator, with numerous tubes and wires attached. To the left, another ventilator is visible. In the background, there are more medical devices, monitors, and a yellow oxygen cylinder. The scene is filled with the complexity of modern medical technology.

Seamless interoperability is  
the missing 'ether'

- Required to link and move information
- Enable the "gifted gadgets"
- Fulfill the promise of a smart and learning healthcare system

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# Thank You