Health systems invest in robots to abate nursing shortage—but privacy concerns are still an issue

Article

The news: Service robot startup **Diligent Robotics** scored **$30 million** in a Series B raise. **Cedars-Sinai Medical Center** was among investors. The startup has raised $50 million to date.

How we got here: Robot assistants are helping health systems contend with worsening nurse and labor shortages.

- Diligent Robotics' flagship robot (**Moxi**) delivers and collects supplies, meds, and lab samples across the hospital, for example.

  Last year, Cedars-Sinai introduced Moxi in its neurology, orthopedic, and surgery units.

- Cedars-Sinai nurses can request Moxi via text through hospital-issued phones. Moxi responds within 5 minutes with its estimated time of arrival.

- **Moxi saved nurses over 300 hours of walking**, according to Cedars Sinai's website.

- So, it's unsurprising to see Cedars-Sinai take part in the startup's Series B haul.

  The problem: 97% of large US hospitals faced a nursing shortage, even a month before the omicron variant blew in, per McKinsey's 2021 Hospital Insights Survey.

- And **92% of healthcare leaders** say the nurse labor **shortage will intensify in the next 18 months**, per a late 2021 Wolters Kuwer survey of 300 US nurse leaders.

- That means hospital nursing staff will be at higher risk for burnout and need an extra set of hands (like Moxi).

  Robot roadblock: Most patients like robot healthcare assistants. But privacy issues could be a barrier to widespread hospital implementation.

  93% of patients who interacted with a robot during their hospital visit said they **liked the experience**, according to a 2021 US survey of 1,000 adult from MIT and Brigham Women's Hospital.

- Patients are also open to using robots for other health-related tasks. **Most (83%) said their robot-facilitated triage** interview was the **same quality as with a clinician.**

  But cybersecurity vulnerabilities with robots could be costly for health systems.
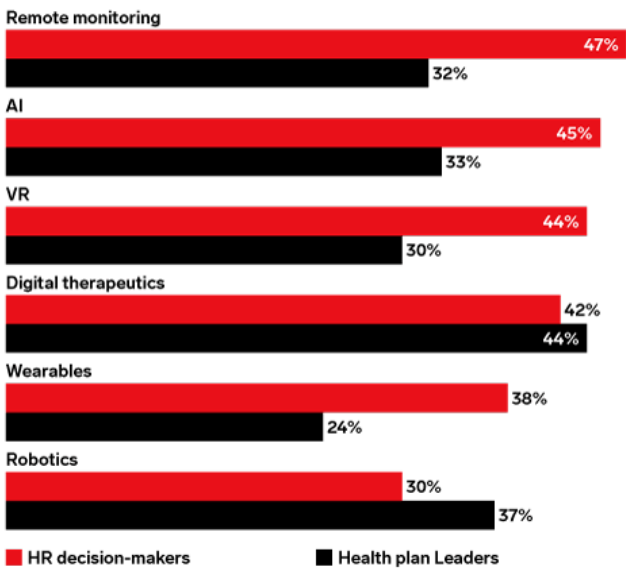
- Researchers found that autonomous healthcare robots (like **Aethon's**) had at least five bugs with the base servers they use to communicate.

- Hackers could create new logins with high-level access to enter restricted areas—or spy on patients using the robot's built-in cameras, per TechCrunch.

Cybersecurity vulnerabilities are bad news for health systems. Especially since privacy threats rack up long-term costs for hospitals.

- **A typical data breach can cost health systems up to $9.2 million per incident,** according to IBM.

Emerging Technologies that Will Have the Greatest Impact* on Healthcare According to US HR Decision-Makers vs. Health Plan Leaders, Nov 2020
% of respondents

Technology	HR decision-makers	Health plan Leaders
Remote monitoring	47%	32%
AI	45%	33%
VR	44%	30%
Digital therapeutics	42%	44%
Wearables	38%	24%
Robotics	30%	37%

■ HR decision-makers   ■ Health plan Leaders

Note: *in the future
Source: Evernorth, "Health Care in Focus" conducted by Ipsos, March 10, 2021
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