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# Healthcare Cybersecurity

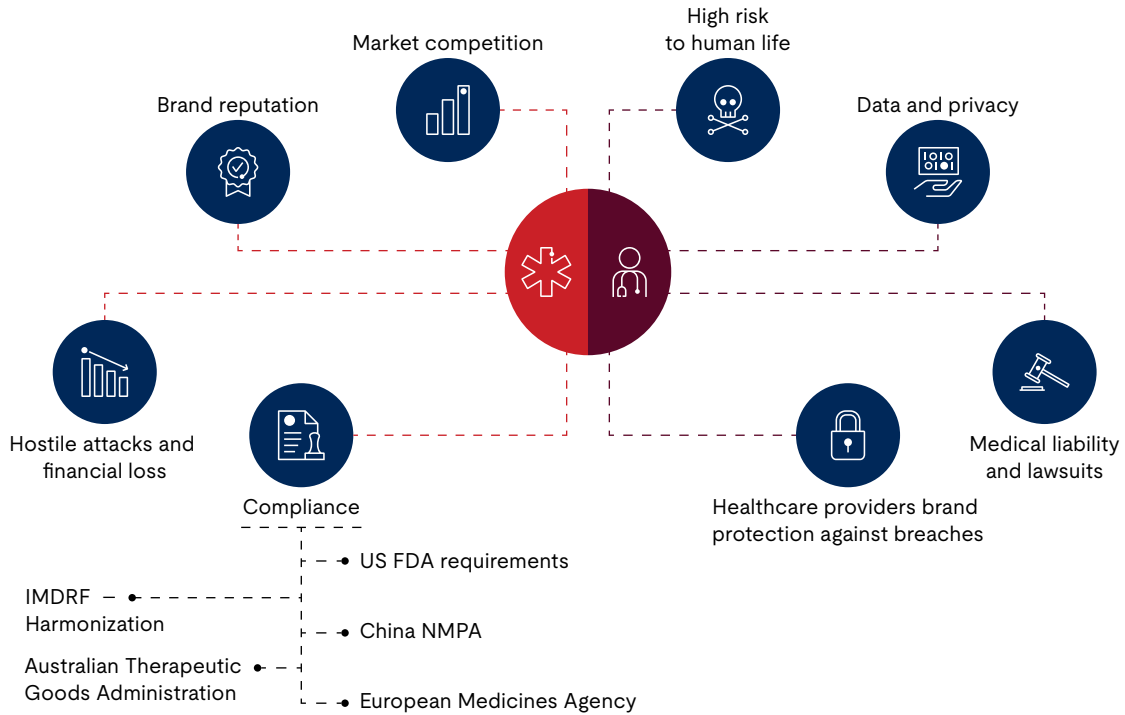
## Healthcare industry cybersecurity breaches may cost human life

The integration of advanced information technologies in medical devices is transforming the healthcare industry, driving dramatic improvements in the efficiency and effectiveness of healthcare and related services. But this integration has fostered the emergence of a new set of challenges for patients, healthcare providers and device developers and manufacturers. Today, the healthcare industry is a significant target for hackers and cybercriminals, potentially compromising private and confidential healthcare data and placing the safety and health of patients at risk.

# Healthcare cybersecurity trends and challenges

## Manufacturers

## Healthcare providers



## Collaborate with UL Solutions

Your cybersecurity journey along the medical device development lifecycle

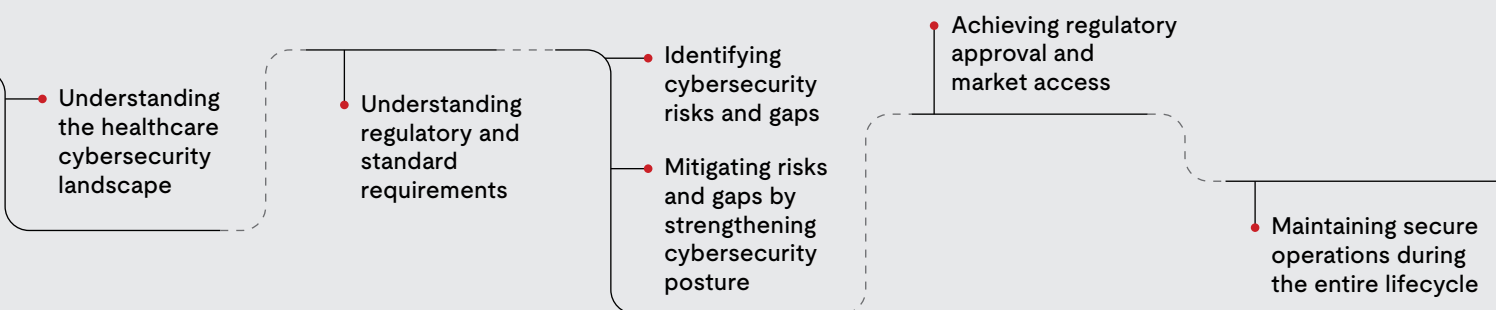
### 01 Advisory

### 02 Training

### 03 Gap analysis

### 04 Certification

### 05 Lifecycle management



# Healthcare cybersecurity solutions

- Private and confidential security workshops to share best practices and learnings unique to your needs.
- Gap analysis services to detect non-conformities and errors early on in the design phase.
- Custom testing and assessment services throughout the development life-cycle.
- Complete evaluation and certification services to the U.S. Food and Drug Administration (FDA) recognized UL 2900 Series of Standards and other industry-leading standards.



I need comprehensive cybersecurity services.

**UL Cybersecurity Assurance Program (UL CAP)** — A full suite of advisory, testing and certification services is designed to help organizations manage their cybersecurity risks and validate their cybersecurity claims.



### Advisory

- Customized program
- Education support
- Cybersecurity best practices and standards
- Assess cybersecurity objectives and processes
- Qualify risk
- Product development



### Testing

- Penetration testing
- Structured security assessments
- Exposing software vulnerabilities
- Embedded systems analysis and firmware evaluation

### Certification

- Highest recognition of due diligence
- Product or system

## UL CAP Cybersecurity Assurance Program

Based on the UL 2900 Series of Standards | UL 2900-2-1



I want to understand and mitigate the software risks.

**Medical device penetration testing services** — Extends from medical device software security testing through authoring the FDA recognized UL 2900 Series of Standards.



Vulnerability scanning and binary analysis

Protocol and packet analysis of communications



Examining security controls and circumventing security features

Cryptography attacks

## Medical Device Penetration Testing



I need to meet the regulatory requirements.

**Medical device cybersecurity certification** — Verify compliance to requirements by validating that product and systems offer a reasonable level of protection against risk.



US FDA  
European Medicines Agency  
Australia TGA  
China NMPA



Fuzz, patch and malware, product testing  
Gap assessments  
Training  
Informative, summative and other testing reports

## Medical device cybersecurity certification

Remote support available—sample management, witnessing, video conferencing, virtual engineer, 1:1 document reviews

# Why UL Solutions for cybersecurity?



Independent, trusted  
third party



Full life cycle  
solutions



Hardware- and  
software-based  
security evaluations



Assessment of security  
development practices



Cybersecurity  
expertise



Industry  
knowledge



Cybersecurity  
and safety



Global teams and  
local support

## Cybersecurity foundation

- Expertise in global standards and frameworks
- Extensive knowledge of best practices
- Growing list of Internet of Things (IoT) security solutions

Learn more and speak  
to one of our experts  
today at [UL.com/  
healthcare-cybersecurity](https://www.ul.com/healthcare-cybersecurity).



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