

The Emerging Role of Technology Companies in the Life Science Marketplace, and it's Ethical and Compliance Implications

Abhiroop Gandhi

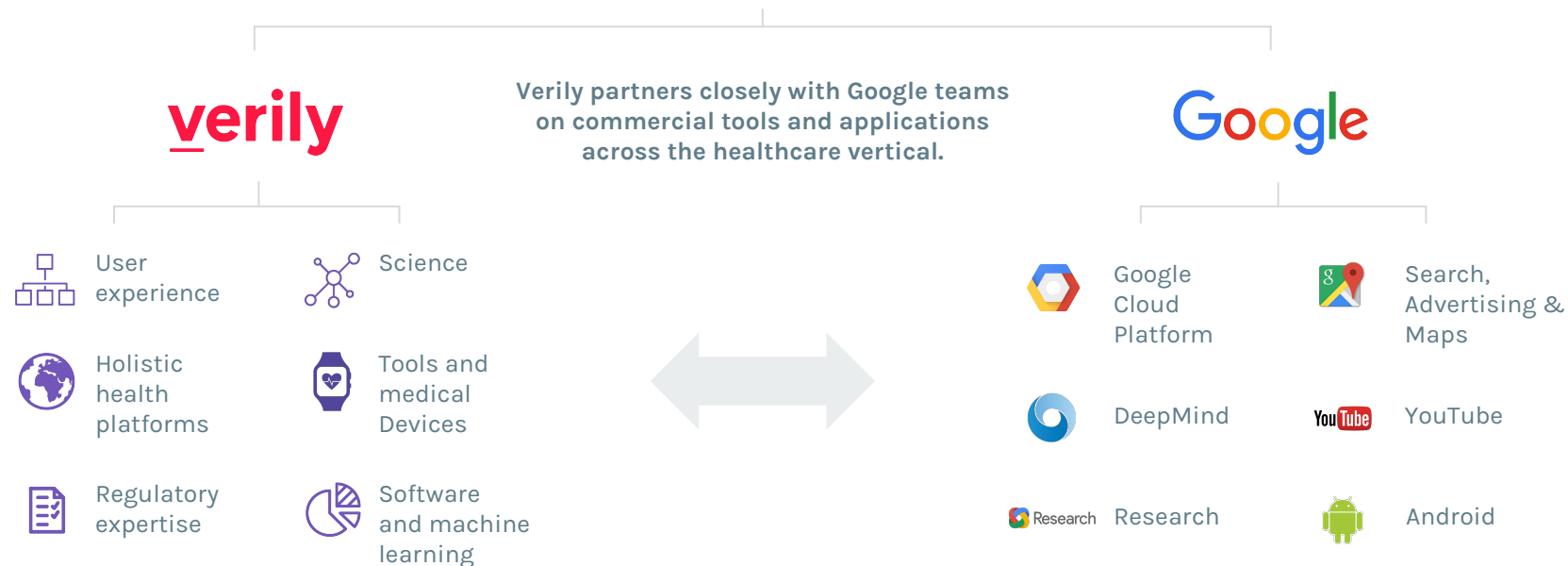


Corporate Overview

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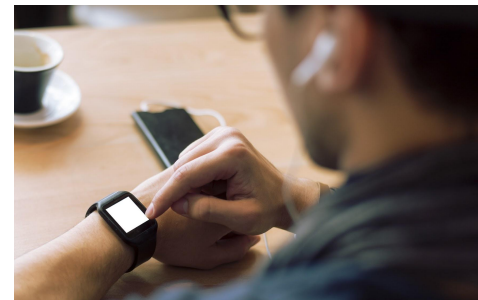
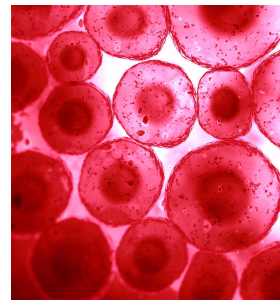
The Alphabet family

Alphabet





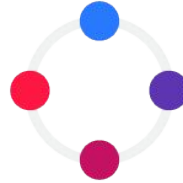
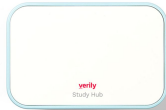
Our mission is to make the world's health information useful so that people enjoy healthier lives.



How we achieve our mission



Collect



Organize



Verily +
All of Us



Activate

Verily +
3M

Verily +
Onduo

The medtech world is moving fast.

New, innovative approaches are being developed and commercialized.



47%
Booking appointments



42%
Managing prescriptions



38%
Diet and exercise tracking and advice



36%
Heart rate and blood pressure monitoring



32%
Reviewing symptoms and advice



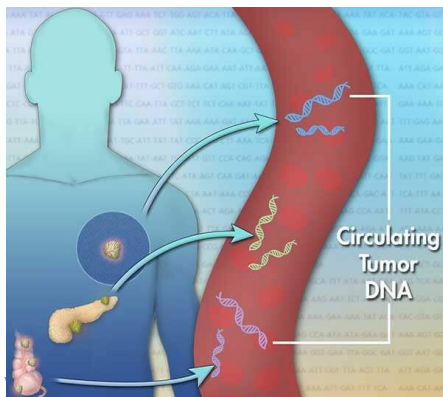
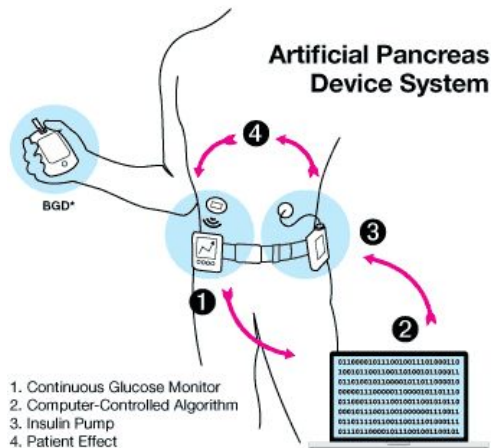
29%
Reporting symptoms and illness



25%
Mental health support



23%
Messaging with medical services



THE INTERNET OF (MEDICAL) THINGS TECHNOLOGY

3.7M Medical devices in use today connecting to & monitoring various parts of the body

Active implantable medical devices control stimulation &/or precision medicine therapy to treat disease & improve patient quality of life.

Monitors medical conditions specific to patient's disease & other systemic conditions such as heart rate, blood sugar, exercise, etc.

One IOMT system solution collecting data from medical devices, medications, & biometrics to modify therapeutic window towards best care option

Closed-Loop System "Smart" software supports device iteration based on data inputs to deliver best patient therapy

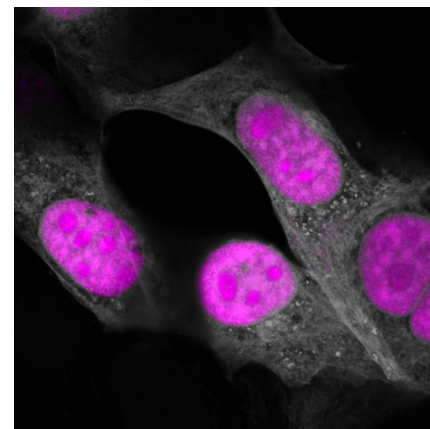
97% Wi-Fi adoption rates in hospitals

10% Medical devices enabled with Wi-Fi

OPTIMIZED RESULTS FOR:

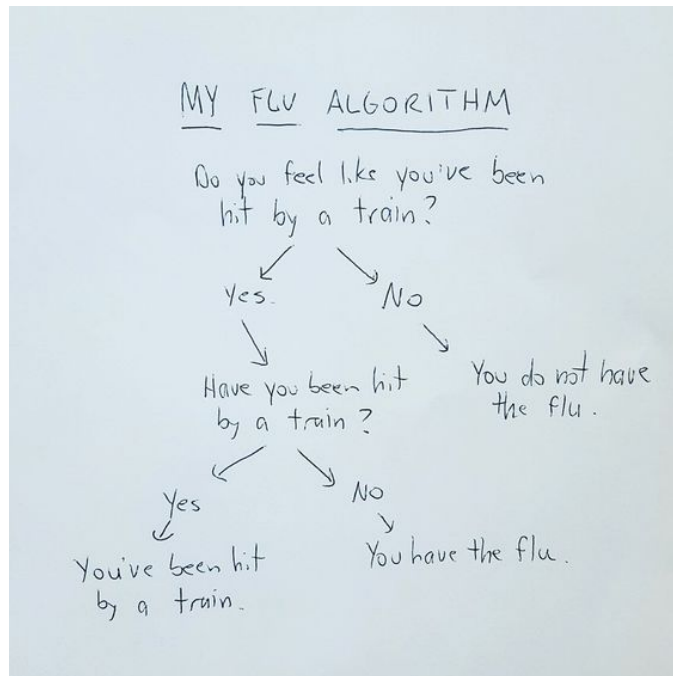
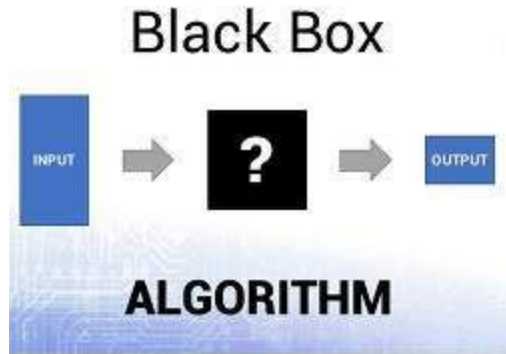
- PATIENTS...** Receive individually-optimized care faster, with few doctor office visits, and decreased overall time "thinking" about the disease
- HEALTHCARE PROFESSIONALS...** Monitor patient status, disease progression, & device performance. This allows for:
 - Enhanced patient support
 - Reduced risk
 - Feedback on device design improve opportunities
- PATIENT FAMILIES...** Can be included in regular communications to help monitor or reassure assurance of patient wellness
- HEALTHCARE SYSTEM...** Automated monitoring & verification of advanced products to eliminate human error & falsification

NEXEON



Key (emerging) risks

1. Black box of algorithms



Key (emerging) risks

1. Black box of algorithms
2. Diagnosis inconsistencies



**“Rapid pulse, sweating, shallow breathing ...
According to the computer, you’ve
got gallstones.”**

Key (emerging) risks

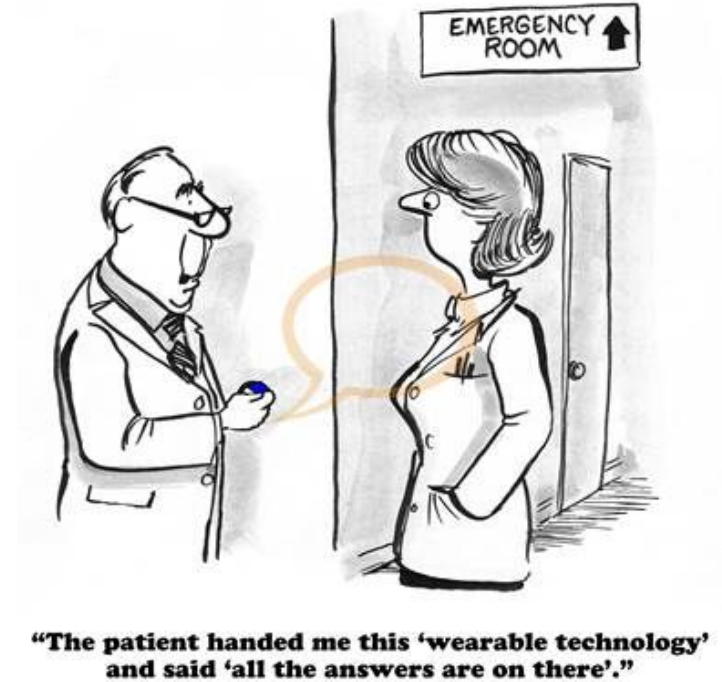
1. Black box of algorithms
2. Diagnosis inaccuracies
3. Data sharing



“Your previous provider refused to share your electronic medical records, but not to worry — I was able to obtain all of your information online.”

Key (emerging) risks

1. Black box of algorithms
2. Diagnosis inaccuracies
3. Data sharing
4. Liability. Who's responsible for decisions?



Key (emerging) risks

1. Black box of algorithms
 2. Diagnosis inaccuracies
 3. Data sharing
 4. Liability. Who's responsible for decisions?
- and...

Ethical conundrums

How should a Compliance Officer manage such risks?

1. Stay ahead
....*of the business*

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2. Ability to see in to the future - crystal ball??
3. Traditional risks continue of AKS, privacy breach, improper influence

Guiding Principle

Critically, you have to ask your organization..

It's not "*Can we do this?*"

Critically, you have to ask your organization..

It's not Can we do this?

But..

“Should we do this?”

verily

Thank you.