



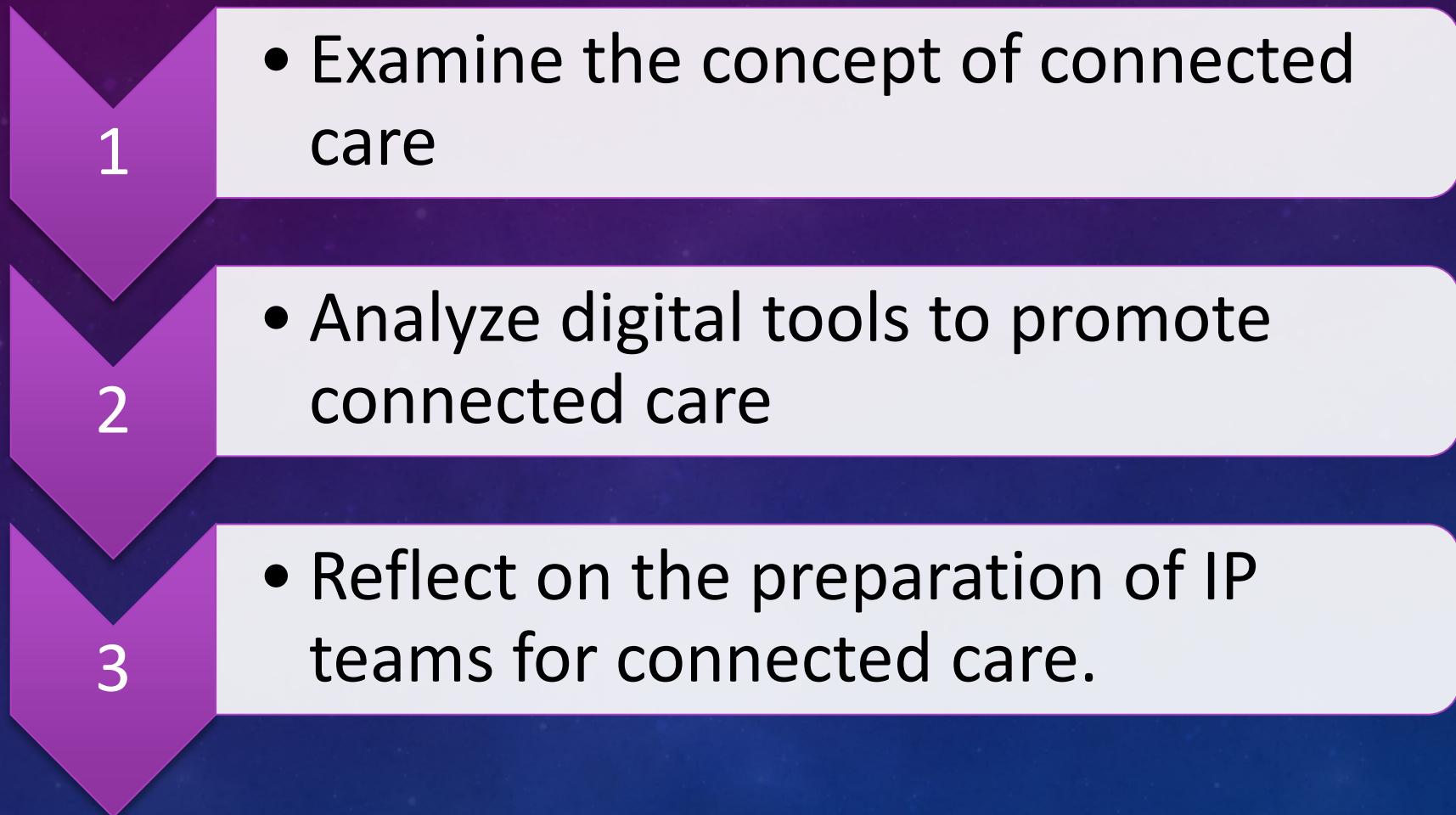
INNOVATIONS IN E-CARE DELIVERY

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GOALS



- 1 • Examine the concept of connected care
- 2 • Analyze digital tools to promote connected care
- 3 • Reflect on the preparation of IP teams for connected care.

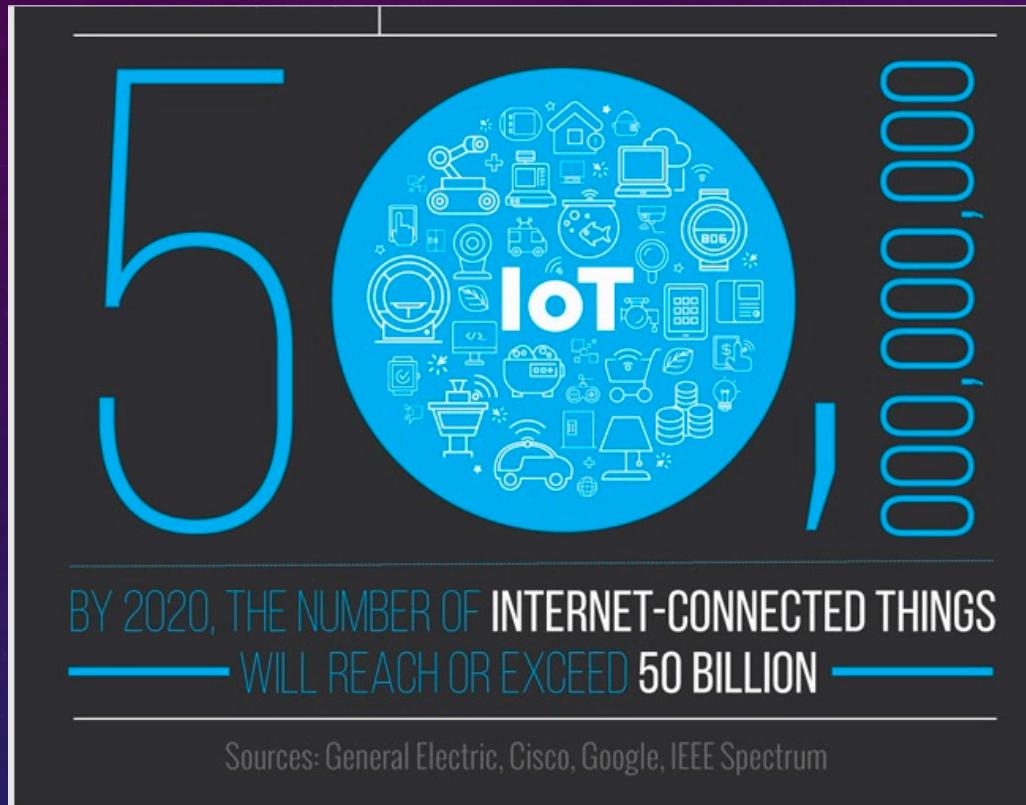
INTERNET OF THINGS (IOT) AND CONNECTED AGE

We live in a connected age....

IOT and Connected Age, speak to connections to everything and everyone.

IOT focuses on those connections with **physical objects** whereas the Connected Age refers to more **virtual connections** especially with people, resources and ideas.

INTERNET OF THINGS



IEEE Projections

CONNECTED THINGS

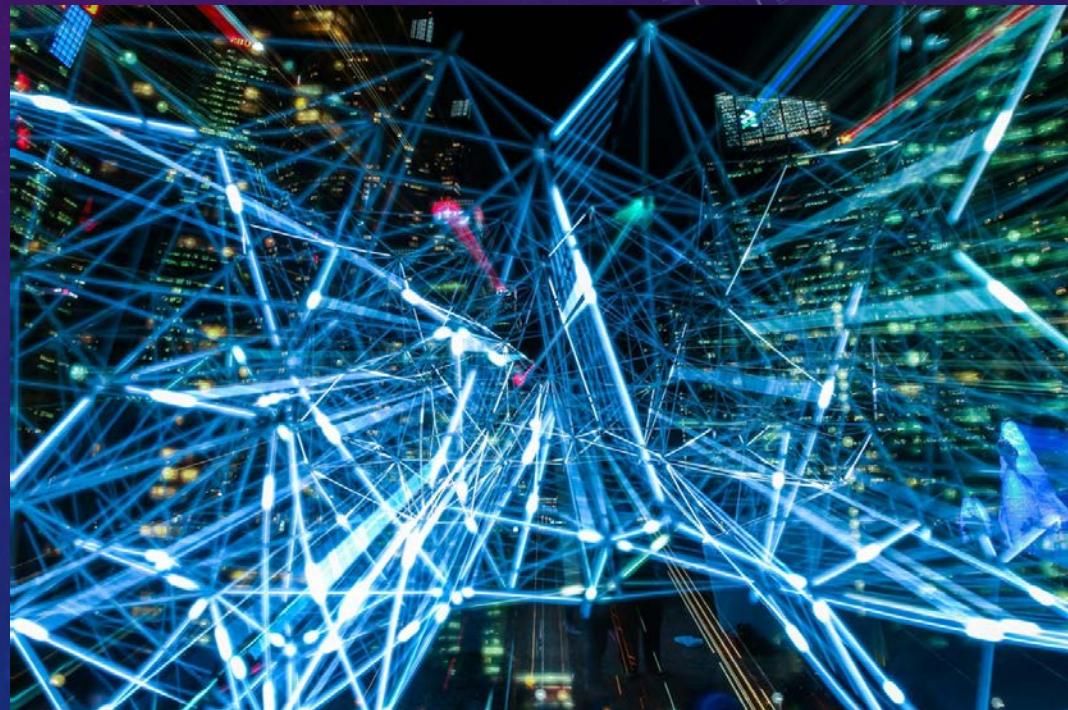


BY 2020 | 250,000,000
VEHICLES WILL BE CONNECTED TO THE INTERNET

Internet of Things

Current count:

- ✓ Gartner's estimate: 6.4 billion *
- ✓ International Data Corporation's of 9 billion*
- ✓ IHS estimates: 17.6 B includes all devices



- ✓ * doesn't include smartphones, tablets, and computers

CONNECTED HEALTH

“a conceptual **model** for health management where devices, services or interventions are designed around the patient’s needs, and health related data is shared, in such a way that the **patient** can receive care in the most **proactive and efficient manner** possible. “

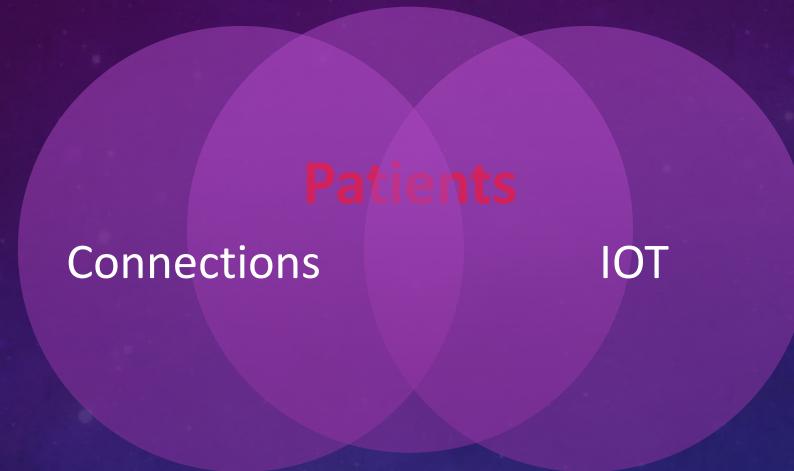
Caulfield & Donnelly (2013) What is Connected Health and why will it change your practice? *QJM: An International Journal of Medicine*. 106(8), 703-707.

CONNECTED HEALTH

“patients, caretakers, and providers are ‘**connected**’ by means of timely sharing and presentation of accurate and pertinent information regarding patient status through **smarter use of data, devices, communication platforms and people.**”

Caulfield & Donnelly (2013). What is Connected Health and why will it change your practice? *QJM: An International Journal of Medicine.* 106(8), 703-707.

CONNECTED CARE



Connected care blends the **high touch** of connections with the **high tech** of the Internet of Things

CONNECTED CARE

Is an ecosystem that provides the collaborative care team new ways to connect to health care systems....

People

Experiences

Communities

Diverse Content

Resources

CONNECTED CARE

is about connecting patients, families and caregivers to the person's health data and their collaborative care team at the point of care. The point of care is now not just within the walls of a healthcare system ...but also through wireless connections that are inclusive of ...

Digital Tools

Social Media

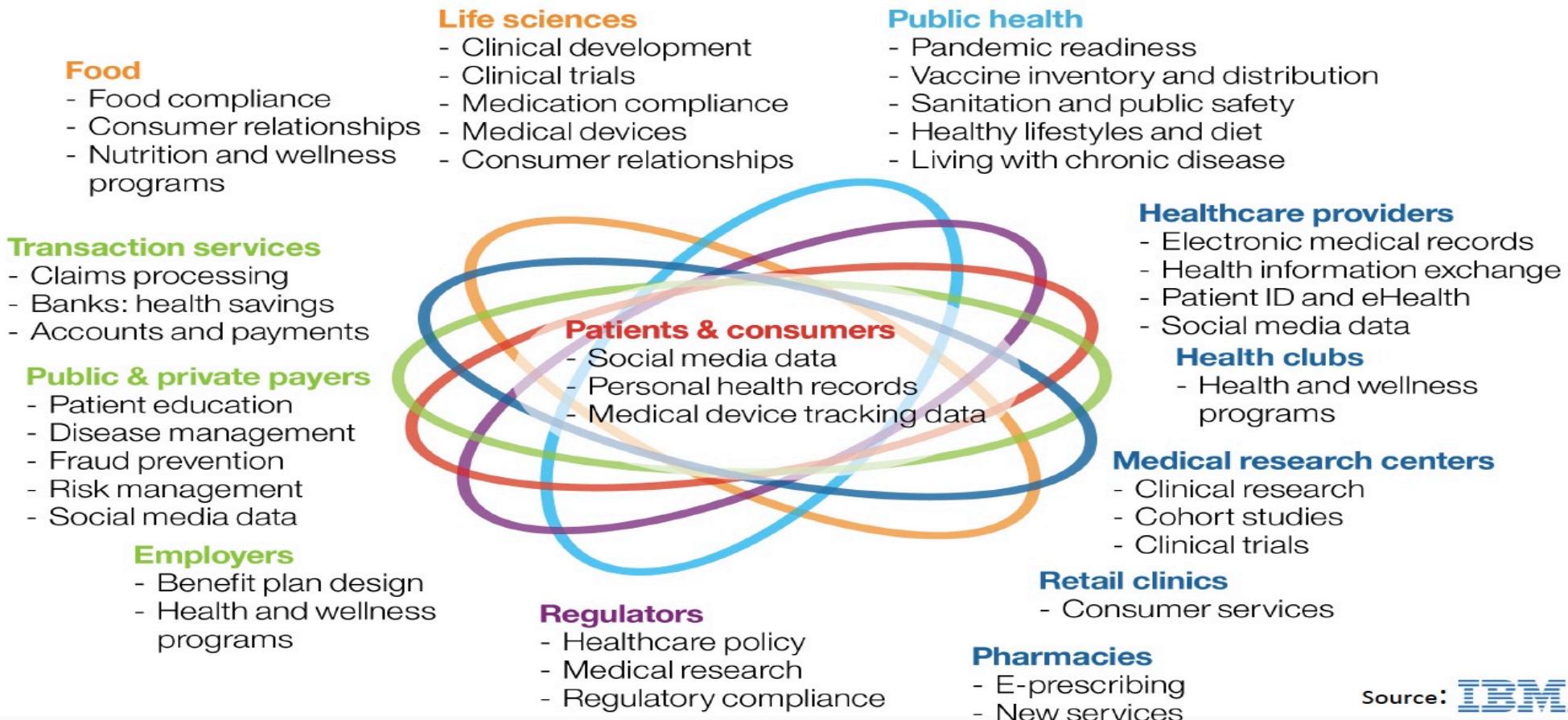
E-Patients

Mobile apps

Patient Portals

PGHD

The Connected Health Ecosystem



CONNECTED CARE- LEARNING HEALTH SYSTEM



Institute of Medicine. Best Care at Lower Cost: The Path to Continuously Learning Health Care in America. Washington, DC: National Academy Press, 2013.

MEET JOSEPHINE



IP CARE: PATIENT AS TEAM MEMBER





BRIGHAM AND
WOMEN'S HOSPITAL



PROSPECT Web-Based Patient-Centered Toolkit (PCTK)

PATIENT FACING TOOLS



CONSUMER-FACING TOOLS

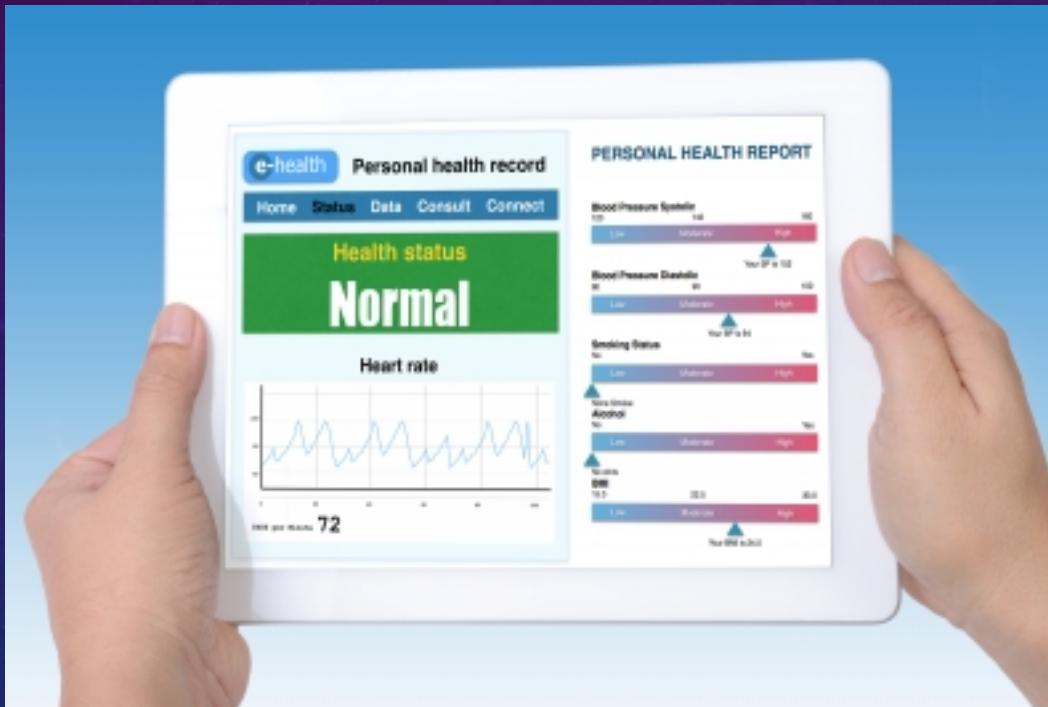


Image courtesy of pandpstock001 at FreeDigitalPhotos.net

CONNECTED CARE



PRECISION MEDICINE- AI- WATSON FOR HEALTH CARE

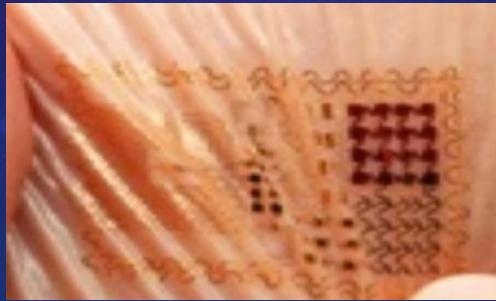
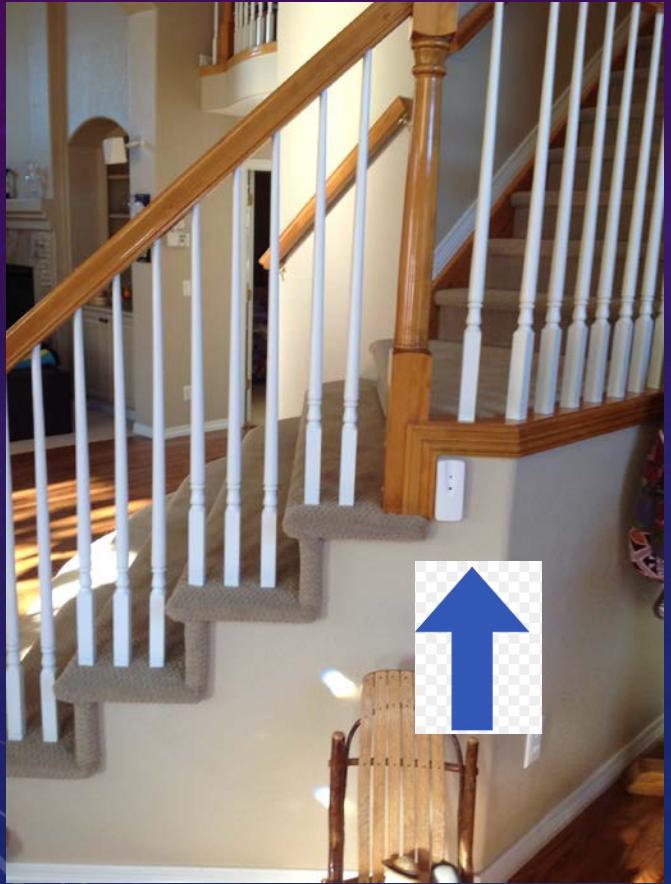


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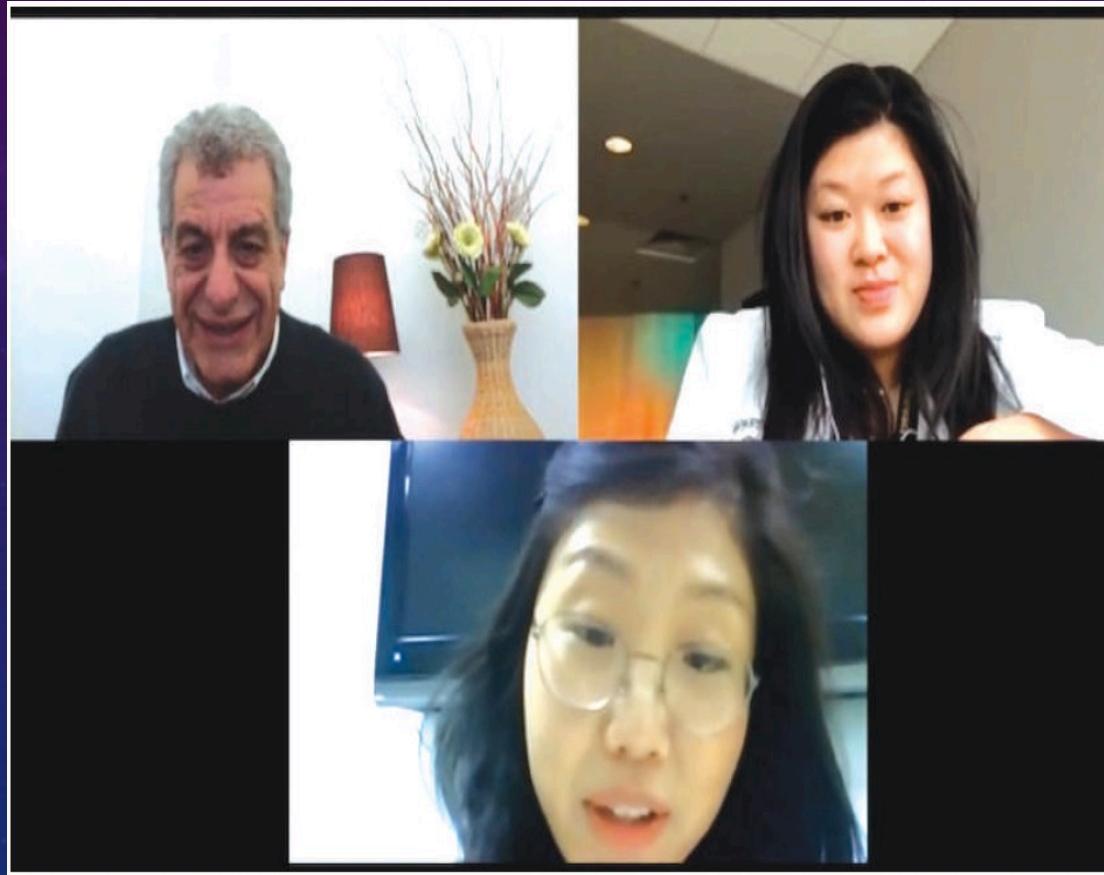
DISCHARGE TOOLS FOR HOME



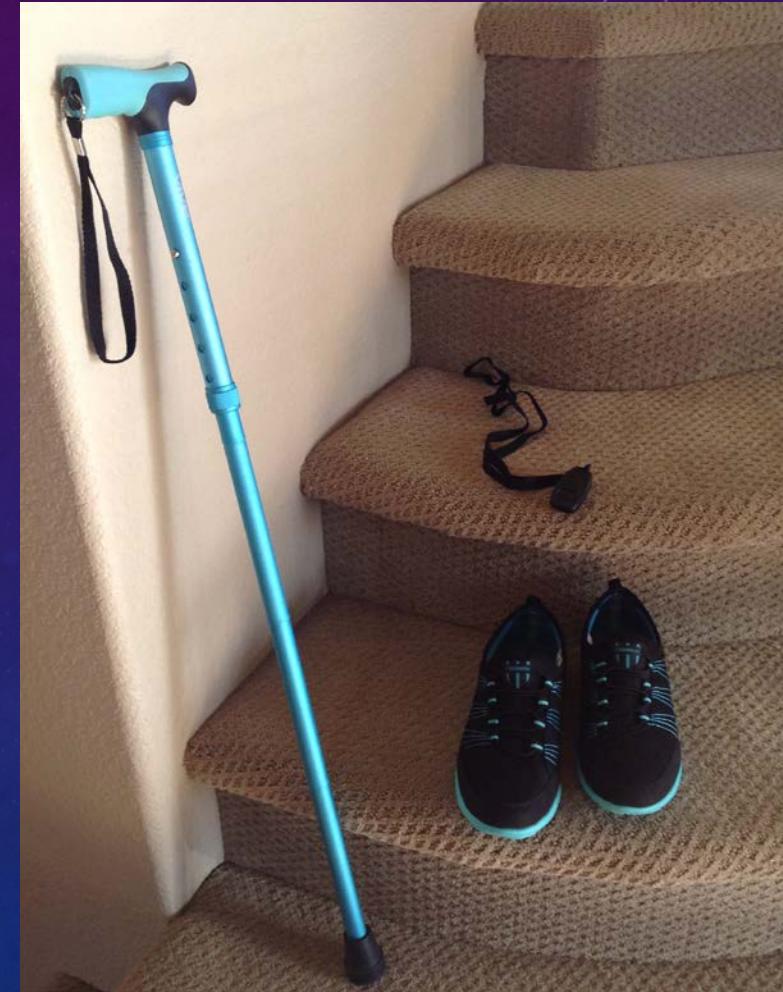
SMART HOME



VIRTUAL VISITS



SMART TOOLS



RING-ABLE REMINDER & MONITORING SYSTEM



CONNECT-ABLE OBJECTS



HEALTH HUB-SMART & CONNECTED REFRIGERATOR

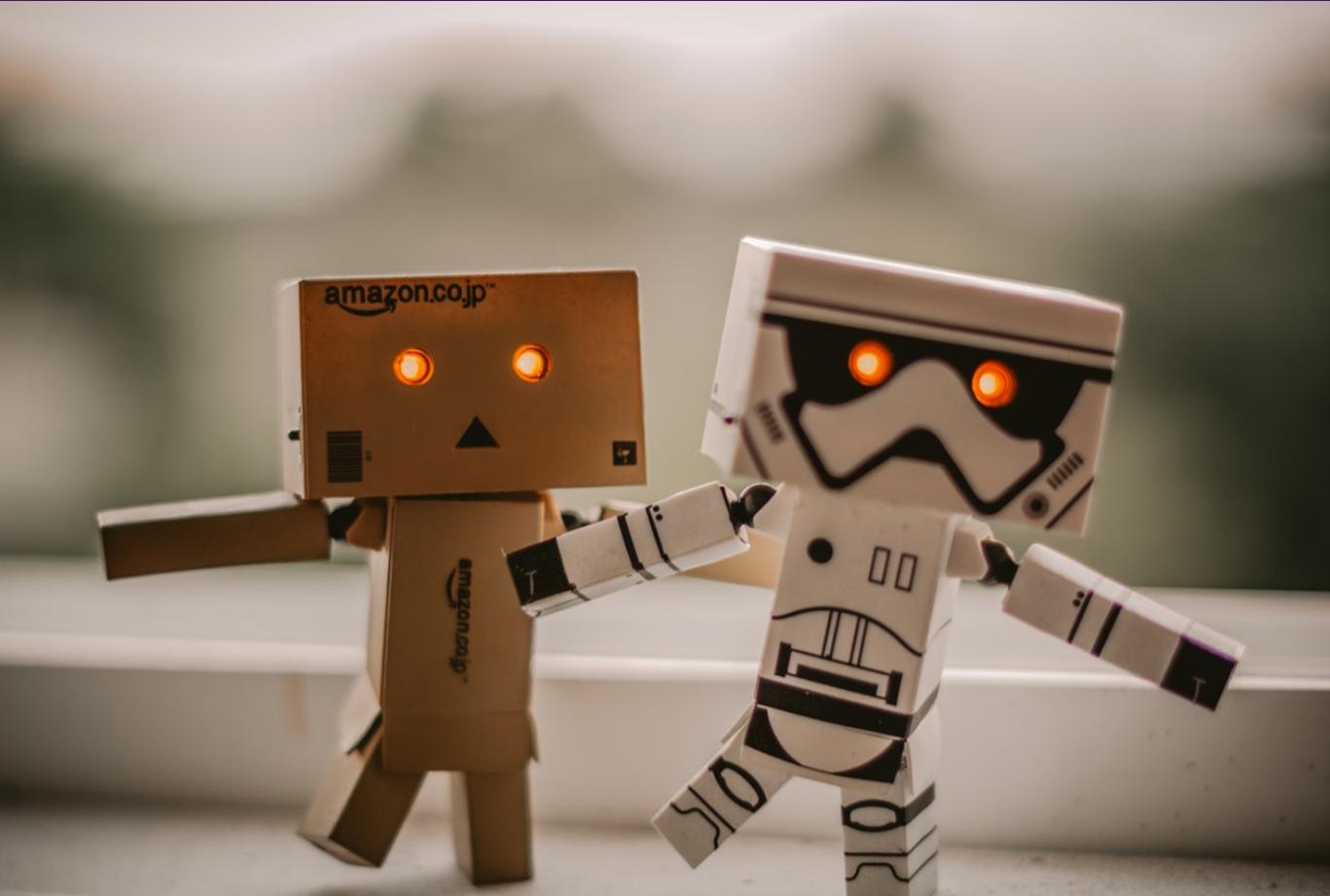
- Reminders & Calendar
- Sensors
- Cameras for food intake and grocery list
- Family connections
- Ring-ables- Front Door Camera
- Connect to Echo for Questions and Refills
- Patient Education
- Recipes



SOCIAL MEDIA-CONNECTIONS



MEET YOUR NEW HOSPITAL STAFF & HOME ASSISTANTS



MEET YOUR NEW HOSPITAL STAFF

Pepper

<http://www.dailymail.co.uk/sciencetech/article-3641468/Pepper-robot-finds-job-healthcare-friendly-droid-trialled-two-hospitals-Belgium.html>

RoBear

<http://www.ibtimes.co.uk/japan-meet-robear-robot-bear-nurse-that-can-lift-patients-into-wheelchairs-1489337>

Zora

<https://www2.deloitte.com/nl/nl/pages/risk/articles/healthcare-robot-zora-personifies-healthcare-digitization.html>



Image courtesy of digitalart at FreeDigitalPhotos.net

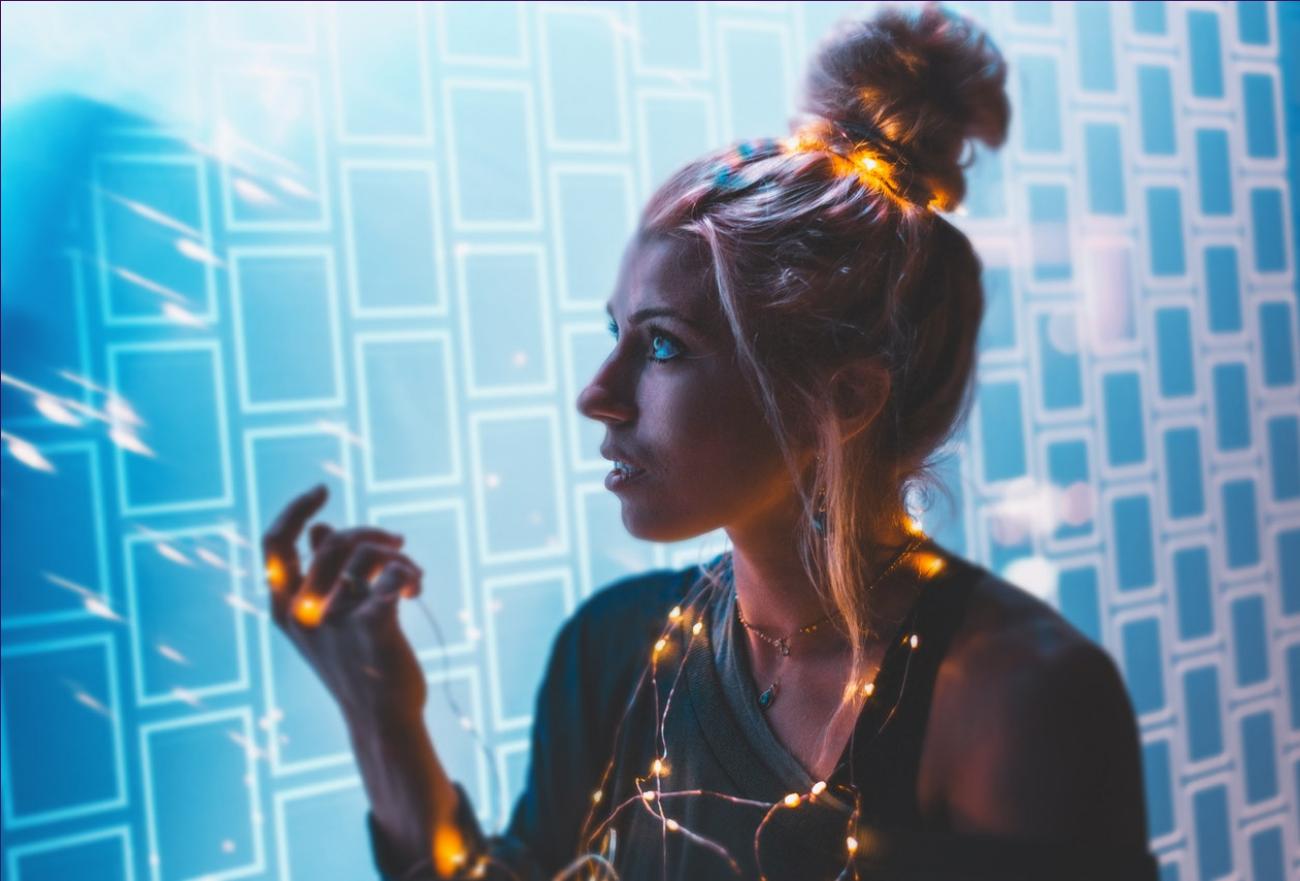
ALL OF US—NIH PRECISION MEDICINE



<https://allofus.nih.gov/>



WIRED HEALTH



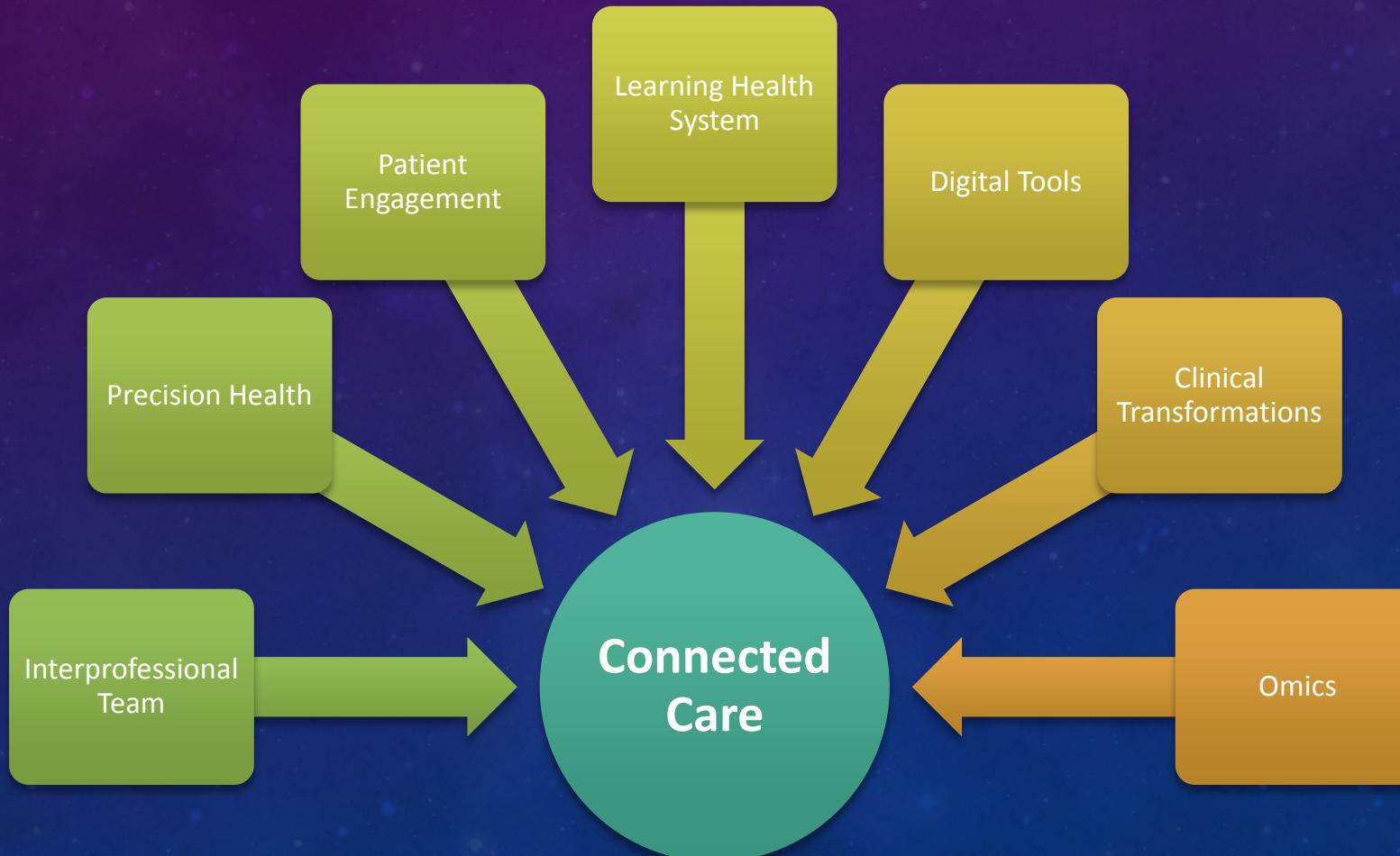
QUANTIFIED HEALTH



CONNECTING THE DOTS



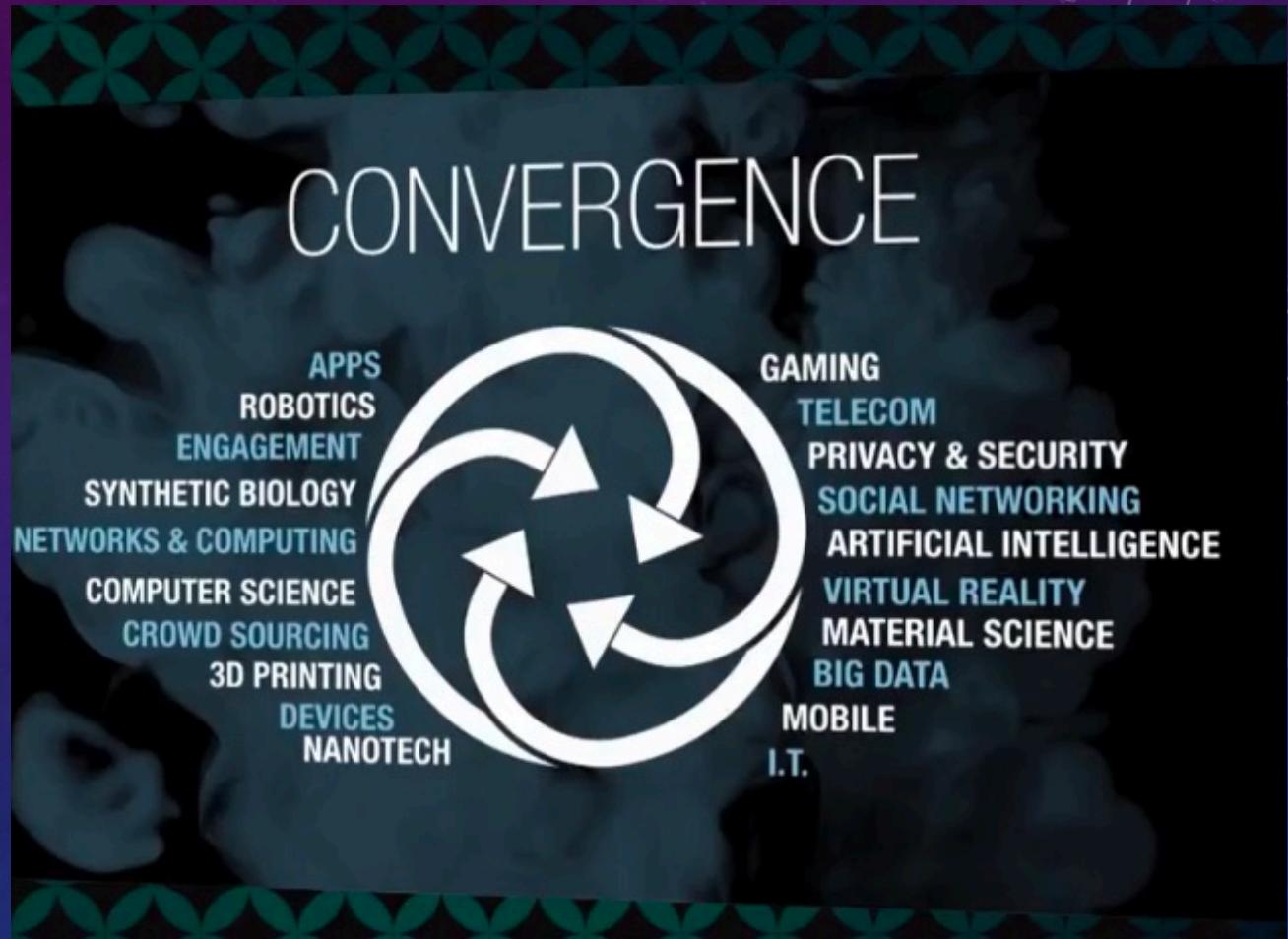
CONNECTED CARE FRAMEWORK



DANIEL KRAFT:

<http://www.wired.co.uk/article/hospital-prescribing-tech>

Quantified self to quantified health: how tech helps doctors fill gaps in patient records



CLINICIANS' TOOL KIT ?



FUTURE KNOWLEDGE AND SKILLS



Image courtesy of Pixomar at FreeDigitalPhotos.net

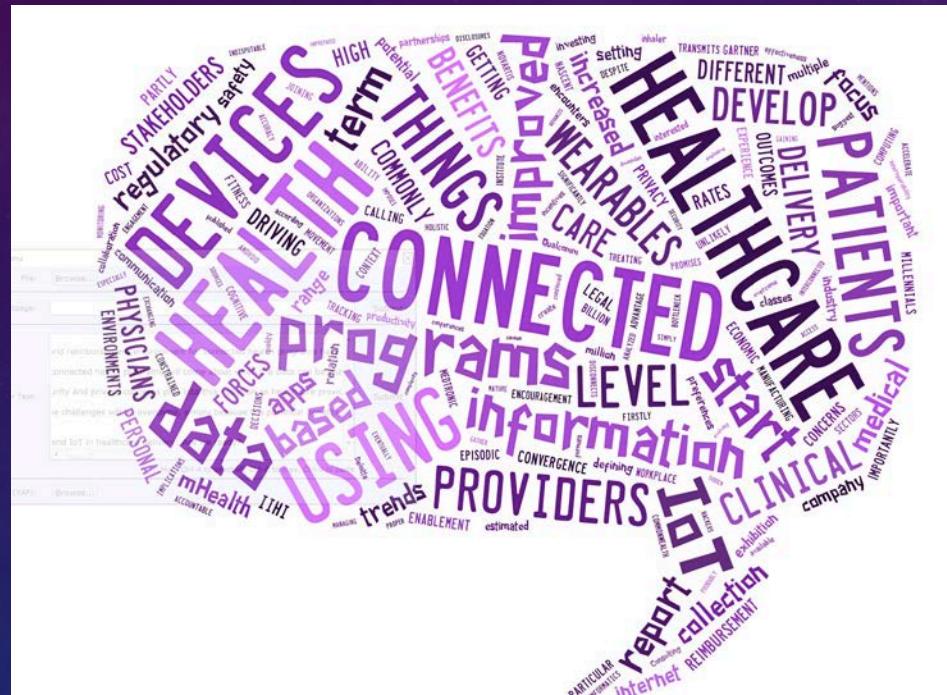
- Do they have the communications skills—IP team, patient Engagement, robotics, social media?
- Can they process & manage data and use data analytics to provide the best care?

TRANSFORMATION OF CARE



Lee, T., Campion, E. Morrissey, S. & Drazen, J. (2015). Leading the Transformation of Health Care Delivery — The Launch of NEJM Catalyst. *N Engl J Med* 2015; 373:2468-2469 December 17, 2015 DOI: 10.1056/NEJMMe1515517

EMERGING TECHNOLOGIES

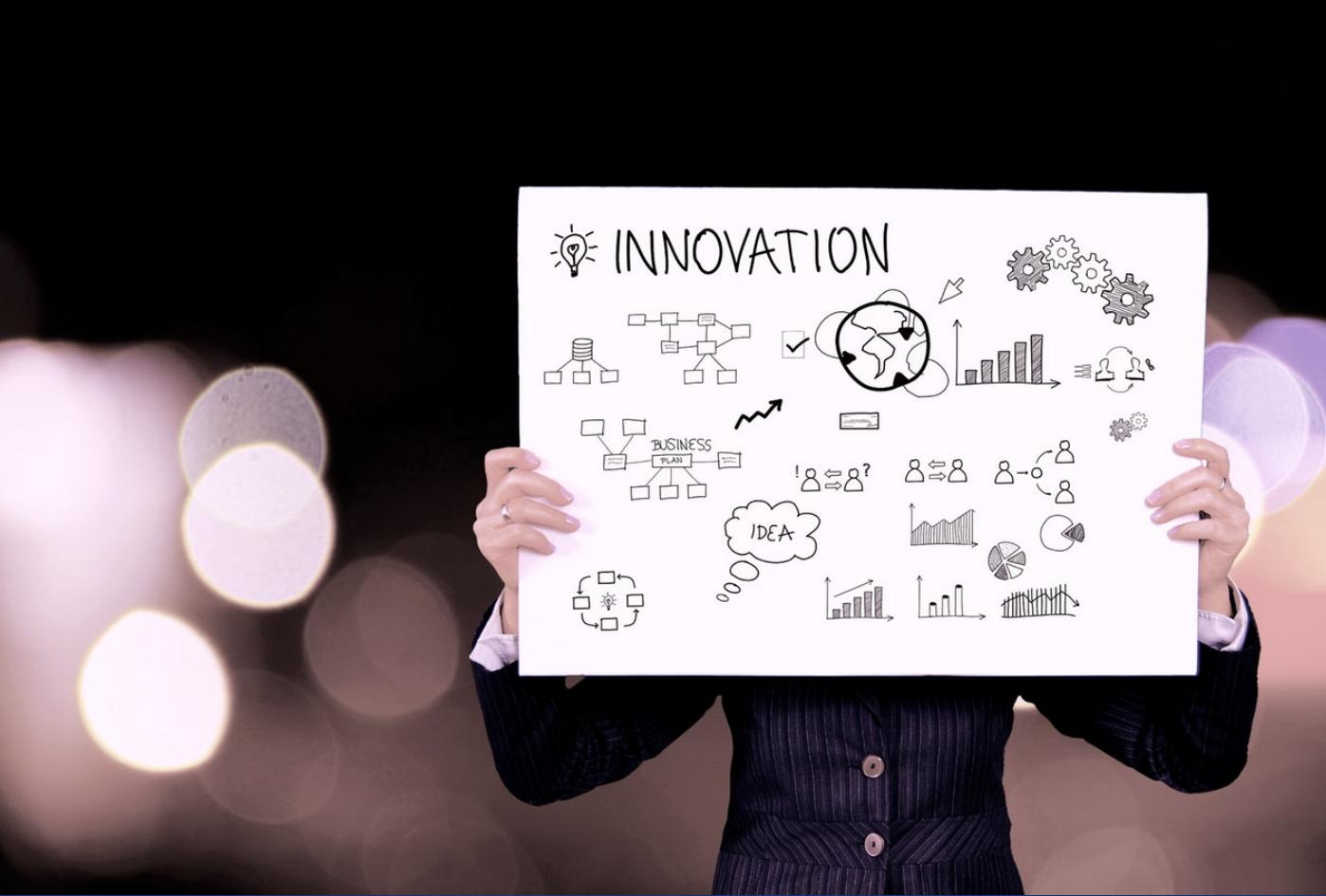


Padmanabhan, P. (2016) Connected Health and IoT in healthcare delivery: Are we ready? CIO Nov/Dec 2016 Digital Magazine .<http://www.cio.com/article/3039261/healthcare/connected-health-and-iot-in-healthcare-delivery-are-we-ready.html>

DATA DELUGE-QUANTIFIABLE HEALTH



HEALTH CARE INNOVATIONS



CHANGING HEALTH CARE DELIVERY SYSTEM



Image courtesy of cooldesign at FreeDigitalPhotos.net



Image courtesy of Suwit Ritjaroon at FreeDigitalPhotos.net

FUTURE COMPETENCIES



THANK YOU

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