The Massachusetts Medical Society: The Next Chapter

On the horizon: Google Glass and the EHR

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Google Glass embraced at Beth Israel Deaconess
Wearable screens a part of everyday medical care
Doctors eye Google Glass
Specs provide instant access to patient information

What is Google Glass?
- Wearable computer with optical head-mounted display
- Developed by Google with the mission of producing a mass-market ubiquitous computer
- Displays information in a smartphone-like hands-free format
- Wearers communicate with the Internet via natural language voice commands
- Picture-taking capabilities
- Video-streaming capabilities
Google Glass How-To: Getting Started

Applications of Glass to Healthcare?

- Start-ups developing the technology
- Wearable Intelligence
- Pristine
- Augmedix
- Remdey
Wearable Intelligence

- Developed multiple apps for Glass that will help providers in a doctor's office setting
- Working with John Halamka and Steve Horga at BIDMC

- Director
  - Dictate messages or retrieve information from clinical systems
- Mentor
  - Allows healthcare providers to take point-of-view videos and photos and send to colleagues for consults
- Informant
  - Offers near-realtime data to the clinician while he is with a patient

Pristine

- Offers a stripped-down version of Glass in order to keep it HIPAA compliant

- EyeSight
  - Streams new-realtime audio and video from Glass to authorized iOS devices, Android devices, Macs, and PCs
  - Wound care nurses can transmit point-of-view video to physicians
  - Emergency responders can send relevant video and information to hospital staff preparing to treat the patient
  - Surgeons can send a livestream of a surgery to those learning or consulting

- Checklists
  - Clinical decision support
  - Timeout checklists, Asystole checklists, cardiac arrest checklists
Augmedix

- Google Glass Clinical documentation program for physicians
- Raised $3.2 million
- Graduated from Rock Health accelerator

- Stripped off the features of Google Glass that make it less secure
- Instead of transmitting information through Google, the company transmits information through a secure portal
- 2013 study to see if 300 patients at 3 different pilot sites would be comfortable—99% said yes

Rafael Grossmann, MD: Dr-Patient Interaction
Patient-Physician Relationship

- Intrusion of privacy
- Etiquette and ethics of using Glass in public
- Safety and security concerns

Top 10 Places Glass is Banned, Search Engine Journal, August 7, 2013
1. Bars
2. Casinos
3. Strip clubs
4. Classrooms
5. Hospitals
6. Cars
7. Movie Theaters
8. Locker Rooms/Dressing Rooms
9. Sports Arenas/Concert Venues
10. Banks/ATMs

We need to think about

The Doctor-Patient Relationship, Not seeing same screen, Not making eye contact, Privacy issues (psychiatric patients, pap smears, breast exams, ER patients with chest pain)
MedTech Boston Google Glass Challenge
Over 50 Clinician Ideas Submitted

Before Glass
Live Demo of what BIDMC has deployed in the Emergency Room

Steve Horng, MD
BWH’s Glass Prototype: The Radically Reinvented Wearable EHR

Karandeep Singh, MD
Because the system knows where you are in the hospital, it will display content that it intuitively predicts you want.

For example, the Wearable EHR has your full docket of 20 or so patients. When you walk by or into your patient’s room, it will know to display most recent vital signs, lab reports, and progress notes.
The system will allow physicians to make focused queries that can retrieve information from multiple sources.

For example, “shortness of breath” is a common complaint with a generally standard investigative route. Say you walk into your patient’s room after a nurse pages you because of your patient’s new shortness of breath. You will be able to say, “Glass, Shortness of breath.” With just this one query, the Wearable EHR will display the last chest x-ray, the last arterial blood gas, and the last pulse oximetry reading along with the patient’s current oxygen requirement.

The Wearable EHR will be able to link systems.

For example, a physician will be able to say, “Glass, start patient diet when he/she gets back from the operating room (OR).” Glass will be able to cross reference with the OR schedule and order the diet to start based on this time.
The Wearable EHR would keep Task Lists for the physician.
Blue Button +

Thank you!
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