

COVID, Healthcare and the Future: Changes Today and the Impact Tomorrow

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Agenda

My presentation will be divided in 2 parts:

My life as a Project Manager during COVID19

- How my work changed due to the pandemic (short term)
- The pandemic's transformational long-term impact on my work

How have our lives and our work changed?

- What are other changes I have observed since March of 2020 in healthcare and more broadly?
- What are some of the “COVID changes” that will probably shape our lives going forward?

March 1st, 2020

- In the beginning of March of 2020, I was a Project Manager for the Behavioral Health Division at Henry Ford Health System, part of a team doing some exciting work that involved tele-medicine.
- Henry Ford Health System has a large Behavioral Health division, both inpatient and outpatient (clinics staffed with therapists and psychiatrists). I was part of the Outpatient Operations, which oversaw 5 outpatient clinics, with almost 100 providers.
- Part of our assignment was to expand the use of Telemedicine Visits. It would be an option to appropriate patients and offer so many benefits:
 - Access, convenience, patient satisfaction, etc.
 - After all, why drive to an appointment if you don't have to, yet you still receive the same excellent care?



March 2019 Cont'd:

- The effort was large and all encompassing: we had created telemedicine rooms in each of our 5 Outpatient clinics.
- In addition, we had equipped, the offices of each provider (both psychiatrists and therapists) with telemonitors so they could hear and see their patients!
- The training efforts were equally herculean: we provided each single one of our almost 100 providers with one-on-one training on:
 - How to use their cameras and audio system, how to use the new telemedicine visit types, how to use new billing codes, how to trouble shoot minor IT issues, etc.
- We even talked and provided support on the more subtle things, like how to start telemedicine conversations and suggest telemedicine appointments to appropriate patients.



Yet...

- This was an uphill battle - most of the patients thought they received better care when seeing the provider face to face.
- Even most providers were not interested!
- It was a cultural thing; and honestly, we were all guilty. In our personal lives, for years now we had been using apps like FaceTime to chat with family and friends far away.
- But getting care? No that wasn't part of our understating the world; not how we saw our doctors and therapists and how we wanted to be cared for!
- But then March 2020 came, and COVID19 went from being some faraway virus mentioned in the news to something in our very own doorstep!
- In the weeks and months that followed, all our lives changed fundamentally ...



Thank you!

No, thank you!

NO. THANK YOU!

But seriously,
thanks.



The Pandemic Gets it Done!

- In the 3 weeks that followed and after some very long working days, our entire outpatient department went 100% fully virtual!
- Under most amazing leadership, we managed to procure camera and audio enabled laptops for every single provider!
- We trained (re-trained?) providers and provided IT support for everyone to get connected and acclimated to this new way of work and had to address:
 - Visit types on our Electronic Health Record (EHR),
 - Correct billing issues and add additional billing codes
 - Address connectivity challenges
 - Rework telecommute working agreements
 - ...you name it, we dealt with!
- With COVID19 in our lives, all the apprehension, all the doubts literally disappeared! Providers were lining up to be trained on how to do tele-visits, while patients accepted them as the new reality!
- **COVID19 accomplished in a few weeks, what we couldn't for almost 2 years!!**

Of Course, Telemedicine Wasn't the Only Change...

- In March of 2020 and all the days and months afterwards, **all our lives changed** significantly. The coronavirus dramatically changed the way we live and work. It affected virtually every element of life.
- Some people experienced larger and more painful losses: loss of life, loss of loved ones, loss of employment, loss of safety, etc.
- A lot of us lost that sense of hopefulness and guarantee of the future: we went from planning birthdays and graduations and weddings, to not being able to see our loved ones!
- Certainly, a lot of things will come back as we go back to a post-pandemic life: being able to be with family, celebrate our significant milestones or go to school.



What I'm speaking of are the other changes: those feel more subtle, perhaps not as noticeable at first, but will be shaping our lives for years to come.

However, these shifts will also give us opportunities to do things differently, address bigger issues and perhaps right some wrongs!

These Things Have Happened before...

- Of course, big, fundamental, life changing transformations come after global events, such as world wars or pandemics!
- It's estimated that the Spanish Flu, took the lives of about 50 million people around the world! The world population at that time was 1.5 billion.
- It greatly affected the world economy, wiping out large numbers of healthy 18-to-40-year-old males! In many countries which had seen their male population decimated by World War I, the pandemic left even fewer young men to run the farms and factories.
- The resulting labor shortage, gave rise to the labor movements for better wages and working conditions. It laid the foundations to the modern welfare state, including socialized medicine and reliance on science.
- It also enabled women to join the workforce, and it bolstered their position and agency. It's not an accident that the American women were granted the right to vote in 1920!

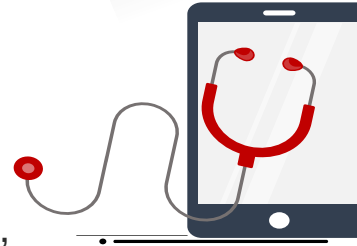
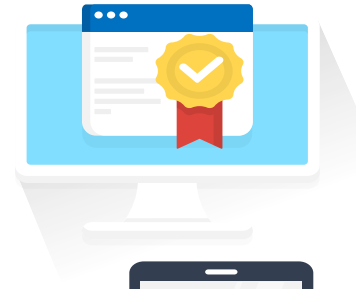




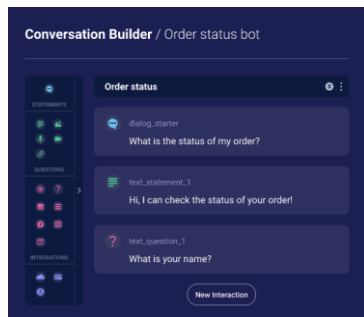
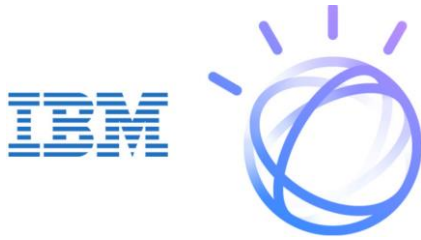
**If we had a crystal ball,
what are some of the
changes that will last
after COVID?**

Changes to Stay in Healthcare and Beyond...

- **Homes** – the centers of our universe!
- **Education** – virtual learning is everywhere. What will that mean for college learning and beyond?
- **Work from home** – is here to stay. Impact on tax revenue, salaries and the workforce?
- **Travel** – for pleasure and business, down and different, maybe vaccine passports?
- **Telemedicine** – doctor will “see” you now.
- **Automation** – some jobs will never come back...
- **Artificial Intelligence** – it’s closer than you think!



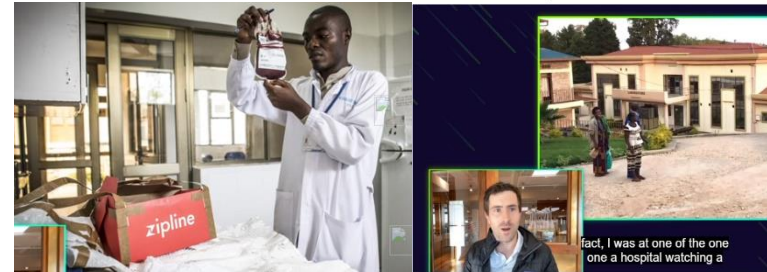
Automation & Machine Learning (AI)



AI Chat bots
from IBM
Watson and
LivePerson



Robotic food
delivery in Ann
Arbor, MI



Zipline drones delivering blood supplies via
drones in Rwanda

<https://youtu.be/dfNpQzivkJA>



Robot butler EMC2 Hotel,
Chicago, IL

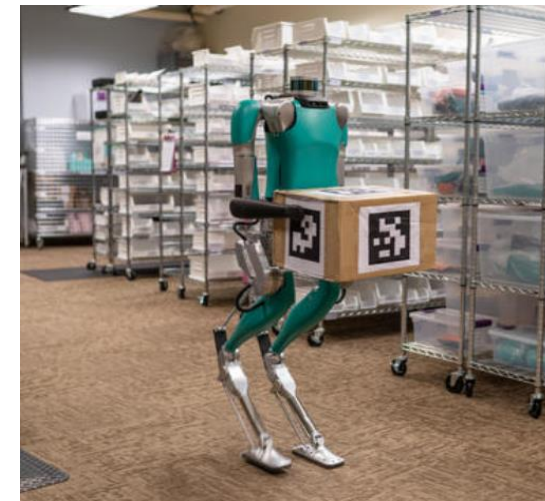


KnightScope –
security robot



Sally – the salad
making robot

Ford Motor Co. is exploring "Digit"
for warehouse work!



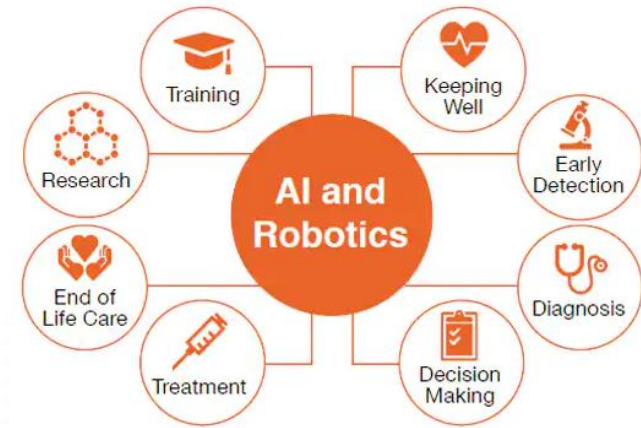
And Who Could Forget...

Sophia, the first robot, with a citizenship who beat Jimmy Fallon on Rock Paper Scissors game? Or later joined him for a singing duet?

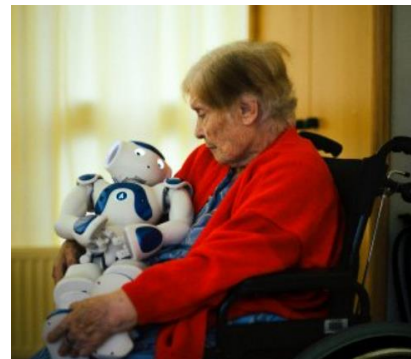


Automation, AI, Healthcare and Jobs of the Future...

- The drive to replace humans with machinery has accelerated during the pandemic, as companies attempt to keep infections and costs down
- The U.S. shed around 40 million jobs at the peak of the pandemic. On the high end, it's estimated that about 42% might not come back!
- White collar jobs (college educated) will also be impacted, because AI become more adept at jobs that used to be purview of humans.
- Healthcare is being transformed as we speak. There's already robots and AI involved in:
 - COVID tracing
 - Claims processing and workflows
 - Prescription dispensing
 - Reading medical imaging
 - Virtual nursing assistants
 - AI assisted robotic surgeries
 - Nursing facilities (safety, companionship, etc.)



Sanford Health robotics surgery



Zora, a companionship robot being tested at a nursing facility in Paris, France

From the News...

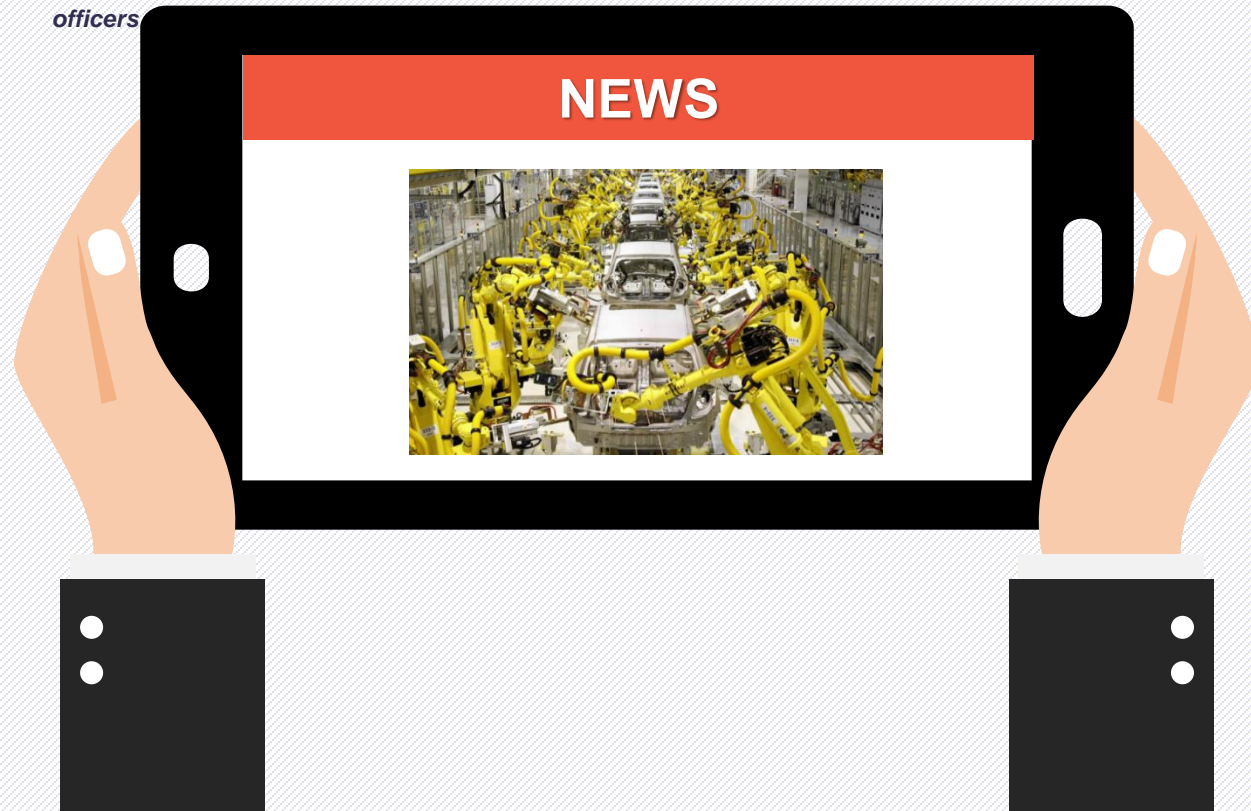
JP Morgan Chase has found a way to save on legal spending. The bank is using new software called "COIN"—short for Contract Intelligence—to review commercial loan agreements. The software reviews documents in seconds, doing work that once required 360,000 hours of work each year by lawyers and loan officers

Robots are being placed in recycling facilities, sorting materials. "The robots could work around the clock, didn't take bathroom breaks and didn't require safety training.."

LivePerson can design software that replaces 1,000 person call center and run it with 100 people and chat bots. For comparison, bots can respond to 10,000 queries an hour, an efficient call center rep 6!

iHeartMedia announced in January '20, it would fire hundreds of workers across the country, part of restructuring to take advantage of its "significant investments ... in technology and AI." The company, now uses software to schedule music, analyze research and mix songs...

MSN has laid off journalists and replaced them with AI that can scan and process content...



Quotes



Technology should not aim to replace humans, rather amplify human capabilities.

”

Doug Engelhard (1925-2013)

American engineer and inventor, and an early computer and Internet pioneer.

Adaptation Just Like Before...

In the past, the **U.S. responded** to technological change by **turning to education**:

- When automation fundamentally changed farm jobs in the late 1800s and the 1900s, we expanded access to public schools.
- GI Bill opened access to college, sending about 7.8 million veterans to school
- But since then, U.S. investment in education has stalled, putting the burden on workers to pay for it themselves. The country spends 0.1% of GDP to help workers navigate job transitions, less than half what it spent 30 years ago*.

“The real automation problem isn’t so much a robot apocalypse,” says Mark Muro, a senior fellow at the Brookings Institution. “It is business as usual of people needing to get retraining, and they really can’t get it in an accessible, efficient, well-informed, data-driven way.”



This new wave of working, (with some losses and pain along the way), will transform the way we work, most importantly it will **also open the world to endless new opportunities** and create new jobs:

- AI is replacing jobs while creating new ones and new job roles
 - In a report published in October 2020, the World Economic Forum, said that the rise of machines and automation would eliminate a huge 85 million jobs by 2025. But at the same time, the WEF expects 97 million new jobs to be created, meaning an overall addition of 12 million jobs.
 - The institution expects work to be divided equally among humans and machines by 2025, with computers handling much of the heavy lifting with respect to data processing, administrative tasks and routine manual jobs.
 - The new jobs are already here. For example, LinkedIn's 2020 Emerging Jobs Report, placed "Artificial Intelligence Specialist" as the number one emerging job, holding strong with a 74% annual growth over the past four years.
- *That will require a significant level of “reskilling” and “upskilling” from employers to ensure staff are sufficiently equipped for the future of work. According to the WEF, half of all employees will need some level of retraining in the next five years**.*

*Time Magazine, 08/06/2020

**CNBC 10/21/2020

With Change Come Opportunities...

- **Going green** – a renewed relationship with nature and more action on climate change?
- **Addressing inequities** – opportunities to address the gaps in care and access that have disadvantaged so many segments of US population.
- **Reflect and reconsider** – do we need everything we had before COVID? How do we realign our lives now that we understand nothing is guaranteed?





Thank You!
Q&A Time