How Digital Health Tools Will Transform Personalized Medicine in 2021 and Beyond?

March 24, 2021 by Leo Cole

Did you know? According to a study from Accenture, 60% of patients would prefer access to care via telehealth technology using digital communication tools than walking to a doctor's office.

The verdict is mounting that digital and telehealth communication is here to stay with us. Telehealth adoption has exploded since the onset of the COVID-19 pandemic taking much of primary care to people's homes.

Patient-centric care

Today, the quickest way to destroy a customer experience in the healthcare business is to treat every patient the same. Patients don't want to be treated like just another case or file number. They expect personalized and high-quality care and treatment on their own terms. This is one of the prime reasons we're witnessing a spike in the number of virtual digital front doors these days that make it easy for patients to interact with the caregiver while taking control of when and where they prefer to receive care.

Source: Metova (Published via ITN Editor)

Healthcare providers ought to understand the fact that each patient is different from the other – not only in terms of medical history, but also in terms of preferences and personality. These differences go a long way when it comes for caregivers to make key decisions pertaining to a patient's health and treatment plans. Clearly, the 'one-size-fits-all' doesn't seem to work in the healthcare business anymore.

With the inception of digital technologies and tools, offering personalized care and medicine has never been this easier for healthcare organizations and pharmaceutical companies.

Here's how digital health tools and solutions are redefining personalized medicine and care:

1. **Personalized Medicine Model**

Source: Pharmaceutical Technology at L. J. Institute of Pharmacy (SlideShare)

Personalized medicine, also referred to as precision medicine, is a novel medical model aimed at enabling pharma companies and healthcare providers to address critical regulatory and business requirements while providing personalized care experience to patients.

A personalized medicine model uses advanced analytics and digital technologies such as AI (Artificial Intelligence), Machine Learning (ML), IoT (Internet of Things) and blockchain to manage patient treatment lifecycle at individual level – from patient's enrollment and scheduling to their post clinical treatments, which in turn helps to curb patient treatment lifecycle. These solutions support seamless integration with existing business processes/systems that most hospitals use.

Patient-centricity is the 'word' for healthcare and life sciences industry. Personalized medicine can provide the needed transparency and visibility to patients by bringing together a complex network of entities such as pharmacies, care provider, insurance companies, etc. that patients have to deal with.

It's time healthcare and pharma companies evolve from the conventional 'make-to-stock' model and embrace a personalized/tailored 'make-to-order' model. Now this requires analyzing huge volumes of patient, therapeutic and genomic data, in real time and personalized medicine solutions can help.

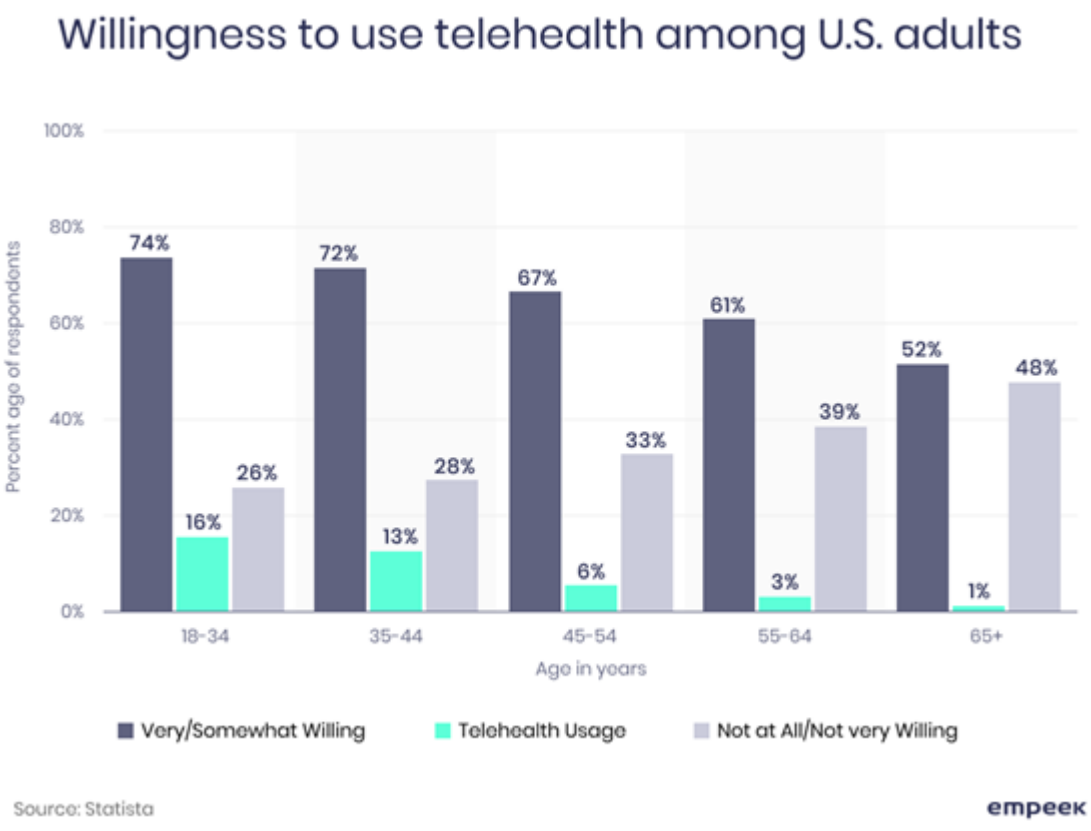
Adidas sets a fine example of 'make-to-order' model aimed at offering its consumers with ultra-personalized experience. Under this model, customers get to personalize their own athletic shoes. Adidas leverages AI and machine learning algorithms to understand customer behavior before coming up with a prototype. From measuring athletic performance to evaluating health metrics, Adidas leverages a range of user data to come up with these personalized and smart shoes.

1. **Personalized Telemedicine Care**

The rise of data-driven EHR has helped healthcare organizations across the world to drastically improve communication and cross collaboration both between patients, healthcare providers and caregivers. Heading into 2021 and beyond, telemedicine is one healthcare trend that promises to transform the way patients perceive healthcare.

Did you know?

More than 70% of millennials prefer to avoid scheduling appointments, as it's often annoying and time-consuming.



Source: Statista (published via Empeek)

It is expensive as well as time-consuming to visit a doctor's office. This is why more patients prefer telemedicine or virtual care access. Telemedicine not only facilitates seamless and personalized virtual care, but also offers the options for patients to view health records, check prescriptions, book appointments, pay bills, insurance, etc. anywhere and anytime. Patients can even check their symptoms online through virtual assistant/chatbot or live chat option. All these and more from the comfort of their homes.

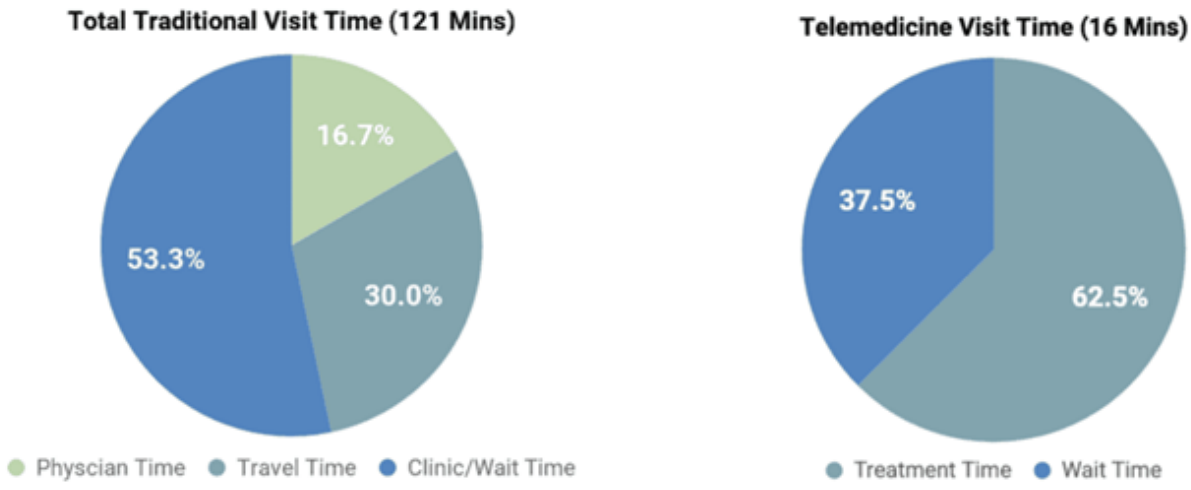
Personalized telehealth at a glance:

- No waiting rooms
- Saves time and cost
- Rural access (get access to best-in-class doctors irrespective of location)
- Faster prescriptions and billing

- Doctor on demand
- Personalization (better hospital-patient relation)
- Remote data sharing across providers, insurance, pharmacies, etc.
- Patient portal to view health records, pay bills, check prescriptions, etc.
- Faster appointments
- Symptom checker
- Live chat and bot chat
- Paperless appointment, billing and consultation

Examples of personalized telemedicine and care:

1. ***Orlando Health*** *sets a great example of personalized telemedicine and care. The healthcare organization leverages patient data to offer personalized communication to new moms. It allows the new mothers to pick a preferred track to focus on like caring for the newborn or for their entire family and receive personalized emails/notifications addressing their queries. Instead of aimlessly surfing the web for help, new mothers can get answers to their queries right from the comfort of their homes.*
2. ***Your.MD*** *leverages Artificial Intelligence (AI) to create personalized health recommendations. The intelligent virtual app utilizes AI algorithms to run extensive searches of medical literature spanning more than 1,000 different conditions. Patients can interact with the bot about their questions or symptoms to receive personalized responses on the go. The bot after identifying a patient's potential health condition connects him/her with the best available doctors.*
3. ***Talkspace*** *makes therapy available to everyone, anytime and from anywhere. Patients take assessments and are then matched with a licensed therapist/physician. The therapists tailor their care approach to each patient and offer personalized care for a range of mental conditions.*
4. ***Novo Nordisk*** *(a leading diabetes company) uses a personalized digital tool for monitoring diabetes. The app makes it easy for its users to track their meals and blood sugar levels and leverages up-to-date research data to offer personalized recommendations for exercise, diet and diabetes management. The app uses patient's data to come up with accurate recommendations.*
5. ***Carle Foundation Hospital*** *uses a digital patient portal that maintains notes, treatments, care plans, diagnoses, prescriptions, etc. in one centralized location that patients can access from anywhere.*



Source: OrthoLive

As more and more healthcare organizations continue to deal with large influx of patients on daily basis and with factors such as limited availability of healthcare personnel, time crunch, patients with physical disabilities, etc., it becomes difficult and expensive to manage face-to-face appointments. Telemedicine solutions are enabling caregivers and healthcare providers with the ability to manage increased influx of patients, provide personalized care, improve care quality, and tame operational costs of the hospital.

Most telemedicine solutions today are focused on providing end-to-end telehealth applications to healthcare providers with features including paperless appointments, patient charting and scheduling, appointment reminders, stronger billing process, etc. to accelerate process efficiency as well as save costs and time.

Telemedicine solutions give easy access to physicians and doctors to all the patient related information, past medical history, clinical records, etc. on a single click. These solutions are a boon when it comes to remote patient monitoring (RPM) and care. Remote patient monitoring is akin to telemedicine, as RMP automatically tracks and reports on patients, often the ones with chronic diseases thus, assisting caregivers to come up with accurate and relevant care plan or strategy eliminating last minute emergencies.

Upshot

Adoption of digital tools for virtual care access witnessed a staggering spike during the pandemic with more healthcare providers and caregivers stepping beyond the four walls of hospitals to offer personalized care experience to patients.

In fact, four in ten patients adopted a new mobile app or digital tool/technology to stay connected with their care providers at the onset of the pandemic. Common digital tools include health apps, live chat/virtual assistant or Chatbots and video calls.

Patients want convenient, personal and timely access to care today. Rather than commuting to a doctor's office or care facility and undergo the pain of sitting in a waiting room for hours, it is time healthcare organizations enter the homes of their patients – in a backdrop, place and time where patients feel the most comfortable.

Personalized medicine and care is here to stay and the sooner healthcare providers realize it, the better. Nevertheless, healthcare organizations ought to invest in money and time to ride on this momentum. Unfortunately, many healthcare businesses lack the necessary skills and resources when it comes to digital. It is time these companies ask for help and engage a trusted digital transformation partner to unlock the true value of digital tools and redefine the concept of personalized care.

The future is digital, the future is now – especially for healthcare.