

Artesient CONSULTING

White Paper

Digital Health Toolkit for a Social Distancing Age

Healthcare firms are urgently turning to a host of digital health solutions in response to the coronavirus pandemic. Because patients are widely embracing and becoming accustomed to these empowering technologies, their adoption should expand even more in a post-pandemic world. To avoid falling behind, here is what you need now in your digital health toolkit.



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Introduction

Digital health has certainly been growing at a fast rate leading up to 2020 but now, with social distancing and the related challenges for in-person care, the necessity to embrace this virtual-based care technology is leading to a huge surge in deployments.

However, with so many solution options available, it's not always clear on where to focus one's efforts and how, ultimately, this fits into a larger, long-term digital health strategy now that patients, care providers, health plans, and regulators are turning so dramatically to digital health.

We can address these questions by examining emerging digital health needs and then narrowing our focus on the solutions and key success factors that should make up your go-to digital health toolkit today and into the future.

Our viewpoints have been informed from delivering almost 10 years' worth of digital health projects for some of the largest healthcare companies in the U.S. To view a sampling of our digital health projects, please go to page 17.

Challenges to Confront

Current Challenge: *Redirecting patients to virtual care alternatives*

With many healthcare facilities re-configuring space for Covid-19-related patients and reducing person-to-person contact, in-person appointment requests need to be redirected to as many virtual care alternatives as possible.

To make this happen effectively, digital health tools need to assist in screening patients and routing them, when applicable, to appropriate virtual care options. Appropriate criteria need to be applied to screen patients and steer them to a suitable virtual care engagement modality (e.g., phone, video, messaging). The situations that most commonly meet applicable criteria include:

- Illness screenings (especially for potential Covid-19 infections)
- Low-acuity condition assessments (e.g., common cold, rashes, urinary symptoms, allergy/asthma, bronchitis, conjunctivitis, low back pain)
- Prescription refills
- Follow-up visits (to review progress and make adjustments to care plans, if necessary)
- Therapy / counseling
- Health guidance and education questions

Although patients in these situations, prior to Covid-19, were often provided access to virtual visit alternatives, they tended, as a whole, to use them rarely. It is only now with social distancing rules that patients, providers, health plans, and regulators have all aligned on the need to default to using virtual care whenever possible, thus, necessitating healthcare organizations have access to a robust suite of digital health solutions. As an example of this, Cleveland Clinic reported being on

Now that social distancing rules are in place, patients, providers, health plans, and regulators have all aligned on the need to default to using virtual care whenever possible.

track to complete more than 60,000 telemedicine visits for the month of March, compared to its prior average of around 3,400 visits per month.¹

Emerging Challenge: *Preparing for the post-coronavirus world*

Today's healthcare model is mostly centered on care being delivered via in-person settings. Covid-19 is compelling us to radically adjust this model so that only specific care services are provided in-person with most others provided through virtual channels. This huge shift will have a lasting impact as all parties involved (care providers, facility administrators, health plans, and patients) become comfortable with and, in some cases, enthusiastically embrace, these digital health offerings. It is believed the overall benefits (to all stakeholders) of adopting these new methods will make a powerful case for digital health to outlast the duration of the pandemic and rapidly scale, with regulatory bodies providing applicable policy support.

In anticipation of this, healthcare companies that have, out of necessity, cobbled together a series of practical yet separate, non-integrated digital health solutions in response to Covid-19, need to plan for the long-term. Specifically, it will be key for them to comprehensively integrate digital health into the fabric of how care is delivered and managed as this should improve the timeliness, efficiency, and quality of patient care.

We suggest focusing on mastering a few, key digital health capabilities that can serve as a solid foundation upon which new innovations can, over time, be incorporated. The recommended "foundational digital health toolkit" we highlight below can be incrementally enhanced, starting with a short-term set of limited capabilities in response to the

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¹ Becker's Hospital Review, May 5, 2020: "Telemedicine's role after the COVID-19 pandemic: 3 insights"

pandemic, then expanding to a more comprehensive set of capabilities in preparation for the post-coronavirus world.

Foundational Digital Health Toolkit

To meet current and long-term needs, there are a wide variety of potential solutions that are offered to healthcare organizations. The four digital health tools listed below, at minimum, play a particularly important role. These are not new digital health solutions as they have seen limited implementation for a number of years now. It is precisely because they are now considered relatively mature, effective solutions that they should form the foundation of most healthcare companies' digital health strategy. Yet, it is surprising that broader integration of these solutions remains limited within healthcare companies.

We offer a brief review of each tool and the key components critical to ensuring a successful outcome.

Tool #1: Telehealth Visits (synchronous or “live”)

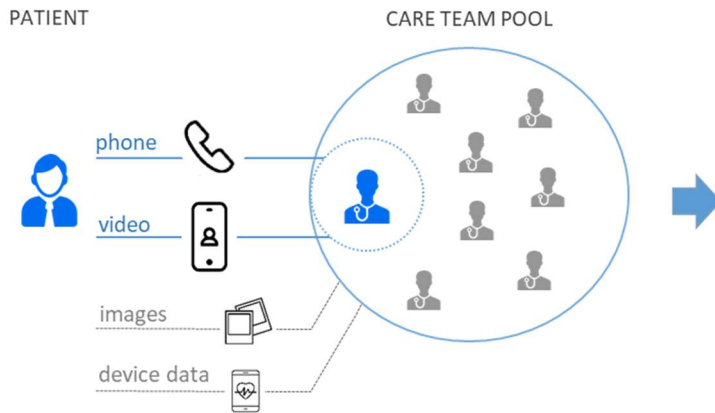
Although virtual visits don't always involve patients and care providers conducting a “live” call (see e-visits below as an example), it is often desired if not required for certain patient conditions. In these instances, telehealth physician visits, via a telephone or a video call, can help. Key elements to enable as part of a telehealth solution include:

- **Accessing a Physician:** Telehealth visits should be enabled so they can be initiated from any location using a phone, PC or mobile device. This service, at minimum, is required to enable sufficient care access while social distancing is in effect. In a post-coronavirus world, telehealth visits will remain vital to a consumer base that is far more familiar and comfortable with using this technology. In addition, once populations of people can regroup, telehealth visits can also





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Telehealth Visit

Remote Visit



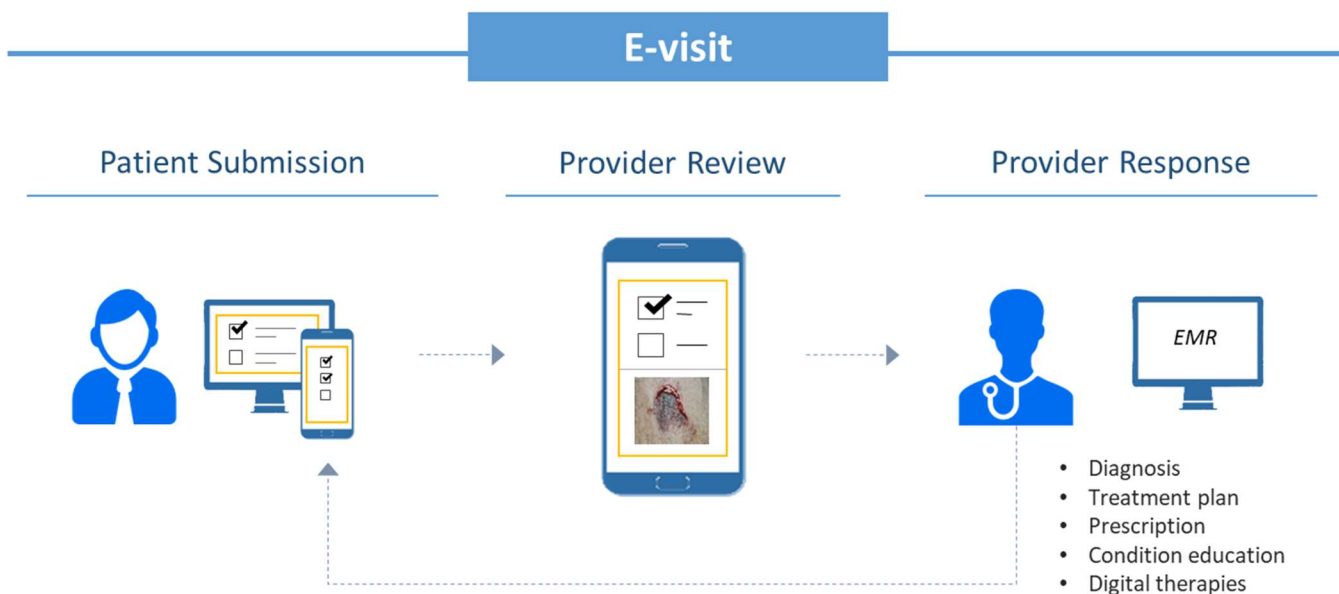
Physician Guidance Options

-  Prescription Sent to Local Pharmacy
-  Patient Education & Digital Therapies via Mobile App
-  Virtual Follow-up (e.g., Provider Texting & Email)
-  In-person Visit

be enabled from a fixed physical location as a complement to existing services (e.g., a retail clinic or a specialist telehealth visit performed in a primary care physician's office) or as an add-on service for employers (e.g., an employer telehealth kiosk for on-the-job injuries).

- **Remote Visit:** Telehealth visits are enabled through a real time (synchronous) connection between a provider and a patient in separate locations. When paired with a mobile or desktop app, a telehealth visit may be complemented by data shared from a patient's connected device (e.g., a Bluetooth enabled glucometer or an activity tracker). This data can be shared live during the telehealth visit or stored and forwarded to the provider before or after a telehealth visit.
- **Physician Guidance:** Upon completing a virtual visit, a patient should be given a diagnosis and treatment plan that may include a prescription, educational information on how to self-manage their condition, additional mobile apps for condition monitoring

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and management (i.e., “digital therapies” for conditions such as obesity, asthma, insomnia, anxiety, and depression), care plan execution follow-up reminders (via app notifications, texts, emails), or be redirected to schedule an in-person visit when a virtual visit isn’t sufficient for the given condition.

Tool #2: E-visits (asynchronous)

In those instances where a live telehealth visit is not necessary or is not possible or convenient, an e-visit, where key information about a patient’s health condition can be captured and then transmitted securely (e.g., email, messaging) to a care provider, can typically still provide a patient with health guidance within a relatively short period of time (e.g., 1-24 hours). Key elements of this solution include:

- **Structured Data Submission:** A patient should be provided with an e-visit web site or mobile app to submit answers to questions about health history and specific illnesses or conditions. Diagnosing some conditions may require or be enhanced by the

E-visits should be structured following a logical decision tree approach so that a focused yet comprehensive understanding of a patient’s condition is captured.

inclusion of images of a patient's condition as captured by a mobile phone or attached device (e.g., a photo of a skin condition for a dermatologist to review). Questions asked of a patient during an e-visit encounter should be structured following a logical decision tree approach so that a focused yet comprehensive understanding of a patient's condition is captured in a relatively short period of time (e.g., 3-10 minutes).

- **Provider Review:** A patient's submission should be packaged into an easily digestible profile accessed by a physician in a way that is integrated into his/her normal work flow such as an EMR in-basket. It is necessary for e-visit submissions to use specially-designed routing protocols so that specific physicians are receiving submissions depending on medical condition (e.g., primary care physician for cold symptoms, dermatologist for skin conditions).
- **Provider Response:** Upon reviewing an e-visit submission and, when available, any associated patient history, a physician makes a diagnosis, documents the encounter in the EMR system, and responds with a treatment plan that may include many of the same outcomes listed in the telehealth example above (e.g., prescription, education/guidance, digital therapies). In some instances, where there is not enough information to perform an assessment, a physician may request specific information from a patient and/or suggest participation in a telehealth visit or in-person visit.

Mobile Health Management



Tool #3: Mobile Health Management

Asking patients to reduce the degree of interactions they have with their care providers, at least in person, increases the importance of having comprehensive guidance on how to effectively self-manage their health conditions.

Mobile health management apps or internet sites are well-positioned to provide assistance. Ideally, these apps should be integrated into patients' overall treatment plans, providing personalized content according to a specific patient's health history and current medical condition. This would include the establishment of specific health goals, the tasks required to achieve these goals, specific guidance on how to perform these tasks, as well as opportunities to interact with a care provider when patients have questions or concerns. Furthermore, as

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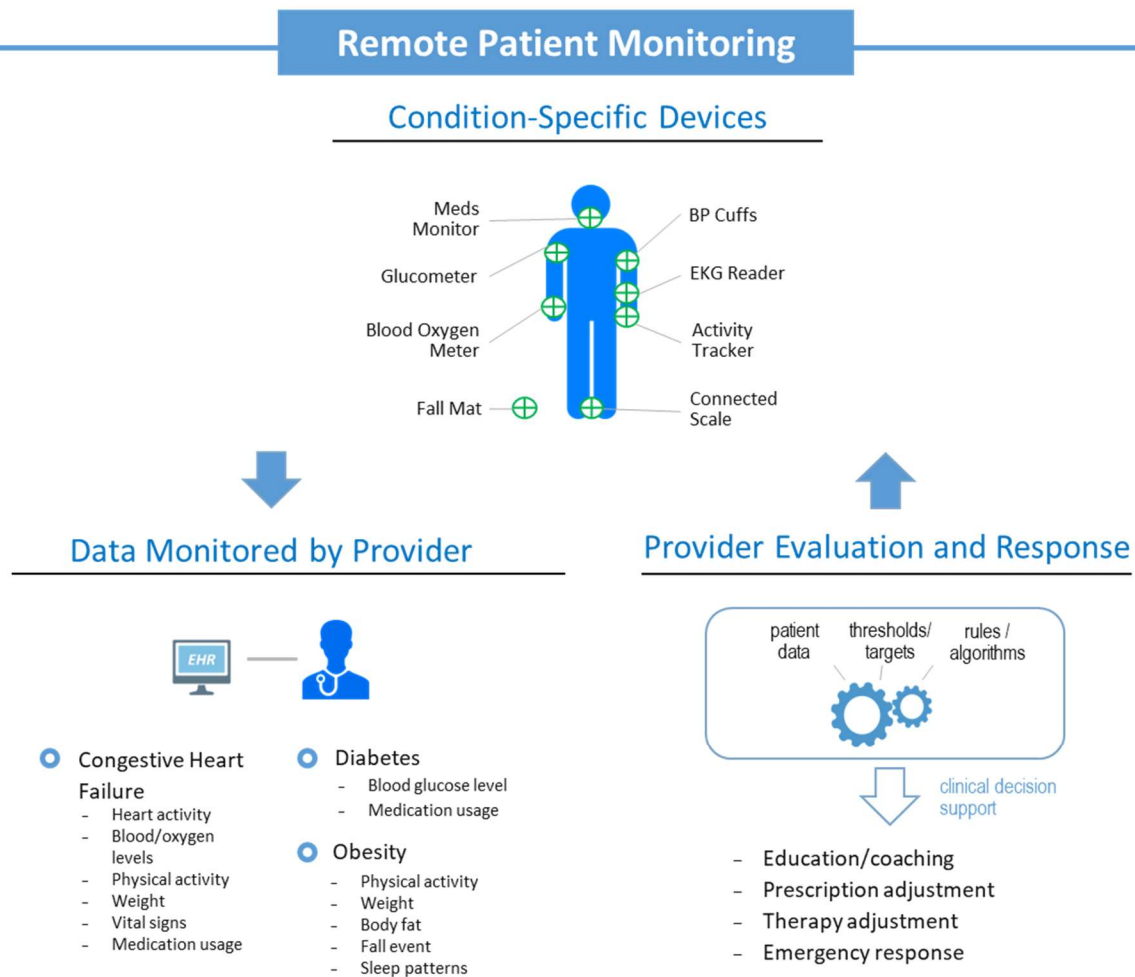
patients' health conditions evolve, this customized self-help guidance also should adjust to best support patients' current health status. Some of the attributes to consider in developing a successful mobile health solution include:

- **Personalized Action Plan:** Real-time guidance via in-app functionality as well as notifications displayed periodically on a mobile device should be provided to help patients self-manage care according to their specific health conditions and care plans.
- **Direct Access to Care Team:** Apps should allow patients to consult with their primary care physician, applicable specialists, and/or assigned case managers / coordinators (via video, phone, or texting) as needed, especially in regards to getting questions about their condition answered in a reasonable period of time.
- **Connected Device Readings:** Notifications should be configured to remind patients, when applicable, to capture vitals and other readings using Bluetooth-enabled peripherals allowing them to stay informed of trends in their conditions as well as alerting providers when health data indicate interventions are required.
- **Digital Therapeutics:** Based on patients' specific conditions and care plans, apps should provide physician-prescribed digital therapeutics designed to help patients manage their conditions. This could include in-house developed functionality or capabilities provided by third-party solution providers (e.g., Omada Health for Diabetes) that, ideally, "plug-in" to your branded app to create a seamless, personalized patient experience.
- **Patient Education:** At minimum, a mobile health app should include evidence-based content to educate patients about their condition. Ideally, this educational content would change over time based on changes in patients' conditions as well as phases of treatment (e.g., pre- or post-surgery). This educational content

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and functionality can, once again, be developed and maintained in-house or provided by a third-party solution provider.

- **Condition-Specific Support Groups:** Apps should allow for patients to connect with support groups specific to their conditions to assist with self-management and promoting psychological and emotional well-being.



Tool #4: Telemedicine / Remote Patient Monitoring

There are many patients with chronic conditions who need care on a regular basis. These people are especially vulnerable during the coronavirus crisis as they need frequent clinician engagement at a time

when direct, in-person care may be more limited. Telemedicine via remote monitoring devices allows for this patient population to have greater and, in some cases, real-time oversight by care providers while, at the same time, helps increase the work capacity of clinicians. Essential elements of a well-designed remote patient monitoring program include:

- **Condition-specific Devices:** Health monitoring devices best suited to monitoring and managing a patient's specific health conditions should be included in a patient's care plan and provisioned during initial treatment planning. Ideally, these should be paired with condition-specific self-management apps as discussed above with the health readings from one or more clinical devices being transmitted with contextual information captured by a paired mobile health app.
- **Data Monitored by Provider:** Data specific to a patient's condition or illness gathered and transmitted by a patient's mobile health app should be shared with the applicable care team and be appended to a patient's electronic health record. The data submitted should support what is required by care providers given a patient's specific condition or set of conditions (e.g., blood glucose level for diabetics).
- **Provider Evaluation and Response:** The timely and effective assessment of patient information transmitted by applicable devices is key to making telemedicine work well. With the potential for a high volume of data, specially-designed data evaluation rules and algorithms should be used to assess patient data and supply care providers with clinical decision support guidance (e.g., potential care plan adjustments). Automatic notifications and alerts also should support a provider's proactive and intelligent response to changes in a patient's health condition.

Devices best suited to monitoring and managing a patient's specific health conditions should be incorporated into a patient's care plan and provisioned during initial treatment planning.

Putting the Toolkit to Work

Our foundational digital health toolkit consists of relatively mature solutions supported by a wide assortment of vendors. Despite their maturation, however, these digital health tools, historically, have rarely been fully integrated into clinical operations. Rather, they are frequently deployed as a separate, disconnected set of offerings from traditional in-person care interventions. To provide the greatest benefit, digital health solutions should, instead, be integrated as part of a broader, comprehensive care delivery vision that seamlessly blends together traditional in-person and new remote care delivery approaches.

With this in mind, the following are some of the actions required to successfully integrate and deploy these digital health tools.

To provide the greatest benefit, digital health solutions should be integrated as part of a comprehensive care delivery vision that seamlessly blends together traditional in-person and new remote care delivery approaches.

Align digital health strategy with corporate strategy

- Frequently, digital health deployments occur as disconnected efforts in pursuit of emerging industry innovations. On the one hand, this approach is promising as healthcare companies try to leverage grass-roots efforts by their front-line staff. But, without a clear understanding of how these efforts specifically fit into achieving overall business strategic goals, many of these deployments fail as they are poorly understood, supported, and funded by senior leadership.
- We have seen greater success when a clear business vision has been established with investments in digital health solutions playing a specific role in achieving measurable results. In this way, a portfolio of digital health investments/projects can be properly justified, funded, managed, and their success measured within the context of a broader business strategy.

Integrate digital health into the clinical operating model

- End-to-end clinical workflows involving patients, clinicians, and back-office staff need to be modified to complement deployed digital health solutions. Without this level of integration, disconnects in operational workflows (e.g., patient health data not captured properly during telehealth visits, scheduling call center staff not properly steering patients to digital health solutions, back-office staff not scheduling follow-up visits after digital encounters, patients not being billed accordingly) will limit the value of digital health solutions and stifle adoption among employees as well as patients.

Without comprehensive digital health integration, disconnects in operational workflows will limit the value of digital health solutions and stifle adoption among employees as well as patients.

Offer thorough initial and on-going training to all staff

- Since digital health is such a transformative change, comprehensive training of clinicians and administrative staff is necessary to ensure operational adjustments are executed smoothly and to ensure staff become comfortable with the role they play in executing digital health practices. Educational topics include changes to protocols, workflows, roles, responsibilities, new technologies, front-office and back-office procedures, billing, reimbursement, etc. Training should also be provided on emerging guidelines for accurate coding and encounter documentation related to digital health services, as CMS and private payors expand reimbursement coverage.

Personalize tools for a consumer-centric patient experience

- In designing and integrating various digital health tools, it is essential to consider the consumer perspective. Frequently, this can largely be addressed by answering the question “what patient information (health history, age, social determinants, current conditions, test results, etc.) do we already have or will be gathering that can be pre-populated into our digital health

solutions?” In this way, the content, workflows, protocols, and functionality relied upon by these tools can be personalized for each patient, significantly enhancing the value delivered.

Enhance data integration and interoperability

- Data capture, analysis, and integration across business and clinical workflows are critical for the effectiveness of digital health solutions. Integration is key to enable data exchange between deployed digital health solutions and existing, “legacy” systems (e.g., EMR, physician calendaring, patient scheduling systems). Additionally, patient data frequently needs to be exchanged with external entities such as third-party digital health service providers (e.g., a remote patient monitoring platform managed by an outside vendor). Accordingly, interoperability across separate operational entities (both internal departments and external partners) plays an increasingly important role. Continual investment are needed to maintain a high level of interoperability including cross-platform standards vendor integration.

Data capture, analysis, and integration across business and clinical workflows are critical for the effectiveness of digital health solutions.

Conclusion

Although we have argued that our digital health toolkit does not consist of dramatic new innovations, it does require a foundational shift in healthcare companies' business model to fully realize all of its benefits, most importantly improved care delivery and patient health outcomes.

For many years now, healthcare companies have exhibited a languid approach to digital health. They have experimented with it but rarely have fully embraced it. Now is the time, however, with digital health expanding rapidly in response to the coronavirus pandemic, to better align the business model (elements including strategic positioning, revenue capture, organizational roles, workflows, customer engagement approaches, clinical protocols, digital therapeutics, etc.) with a vastly expanded digital engagement approach. We suggest the four profiled components of our toolkit are foundational for establishing a comprehensive digital health strategy.

About Artesient Consulting

We take the business of providing care seriously. Our mission is to help our clients enhance the health of the communities they serve. For the last 20 years, we have done this by partnering with leading healthcare providers and insurers to promote, expand, and enhance effective healthcare solutions. It's what we know and it's our passion.

Projects from our digital health portfolio

- **Telehealth**
 - On-demand primary care and pediatric virtual consults across 15 medical centers
 - Teladoc's telehealth services incorporated into a major health plan's offerings
 - An occupational health video visit kiosk for employees injured on the job
- **E-visits**
 - A mobile "telederm" app linking patients to Dermatologists
- **Mobile health**
 - A mobile cardiac rehab care solution incorporating an app and smartwatch
- **Remote patient monitoring**
 - Remote wound care monitoring for home health patients
 - Remote palliative care solution including lung, heart, ear, temp monitoring
- **Digital health strategy**
 - Digital health enablement strategy across one firm's U.S. clinical settings
 - Plan for enabling several digital health solutions across a health plan's operations

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