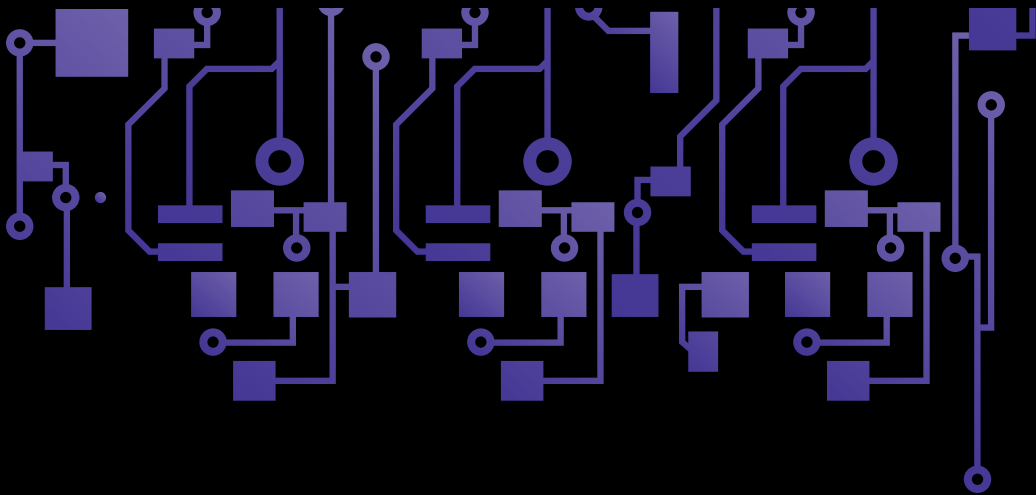


## **Seven Things You Must Consider Before Deploying a Telehealth Device**



Telehealth will be one of the most important categories of medical care in the 21st century because it encompasses both preventative and curative aspects. It also benefits patients where access to healthcare is affected by distance or a lack of local specialists. Telehealth technologies have already clearly demonstrated their value for reducing hospitalizations and ER visits, while improving the patient outcomes and quality of life, however, when it comes to deploying telehealth devices, it's not a one-size-fits-all model. Here's what you need to do first:

### **1. Get Control of Costs With a Better Rate Plan & More Effective Troubleshooting**

As you are developing your solution, look for a partner that has a flexible billing system that can match your business and device needs. It's not always about the cheapest rate plan, but the platform that can minimize your overall cost of ownership. If you have devices that send higher volumes of data or data more frequently, you don't want that device on the same plan as an infrequently used device. Or if you have a wide array of usage profiles, consider pooling all your devices under one plan to minimize overage costs. Traditional carriers don't always offer flexible pricing; the M2M business is just a small part of most traditional operators' revenue stream so they tend to pigeonhole customers to adapt to their model. Aeris Communications built its billing platform, designed with machines in mind, so the company can offer the most flexible pricing structures in the industry.

### **2. Consider the User & Application of the Technology**

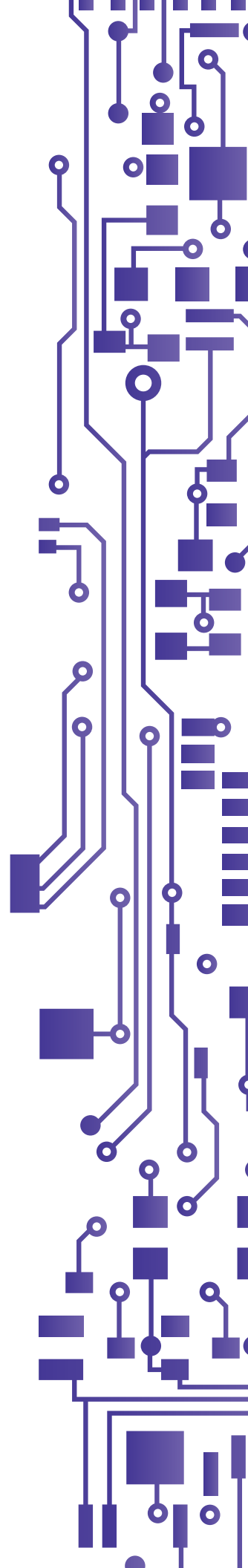
No two health monitoring scenarios are identical, but if you can make informed decisions about telehealth device form factors, power consumption, and communication paths (Bluetooth/Bluetooth LE, cellular, WiFi), etc., you will ensure the best possible patient outcomes for the largest group of people. For example, highly-mobile, young patients who want to monitor physiological/biological responses, like heart rate and body temperature, are more likely to be

comfortable with smartphone apps and Bluetooth connectivity. For older patients that are less familiar with technology, your devices *have* to work automatically, without the active understanding and participation of the patient. Some patients will need to read larger fonts, or prefer graphics and imagery; they might prefer buttons to touch screens, etc.

The ubiquity of smart phones – among both healthcare professionals and patients – is a boon to telehealth and certainly something to consider as you assess your device needs. A growing number of providers gather and monitor patient data on their phones or tablets, while others use them to share information with patients. There are hundreds of “off-the-shelf” apps that can be paired with existing devices. Also, building your own custom apps has become easier than even a couple years ago. Weighing your options for improved care via smartphone technology should be part of your pre-deployment process. Naturally, the ease of use for the patient is paramount, and knowing which device is appropriate and how to use it, is a key part of a smooth installation and successful program moving forward. Work with your cellular network partner to identify all of your different technology scenarios, based on patient needs, to determine the right technologies and rate plans for your organization.

### **3. Extend the Life of Your Existing Device**

Retrofitting existing devices for cellular is an excellent way to prolong the life of your telehealth hardware and ensure that it's using the most updated transmission technology. There is a variety of analog-to-wireless converters that can help you get a few more years out of your investments. Similarly, fitting a new cellular module into an existing device (from devices that previously used Bluetooth, Wifi, or other wireless modules) is another way to get the most out of the telehealth technology you're already using. For example, the medical alert systems, which typically operate from phone lines can be retrofitted for cellular to increase mobility or assist when phone lines are down.





#### 4. Improve Emergency Response

Clearly cellular technology will have a lasting impact on the quality of acute-care services and emergency response, especially in connecting ambulance personnel and emergency room staff. Increasingly, emergency response teams are able to bypass dispatch and communicate directly with the hospital and attending physicians. In these critical situations, two things are of utmost concern: (1) data security: Aeris' network services offer the highest level of security available for cellular data transmissions to ensure that critical data and patient information is never compromised; and (2) reliability of the signal. Ambulances that operate outside urban environments in particular, must consider signal strength in remote locations. You need a provider whose service always selects the strongest signal - not just their own; traditional operators keep their customers on their own signal, even if it is weak. Aeris guarantees your cellular signal will operate on the strongest available cellular network, regardless of operator.

#### 5. Patient Engagement

Network reliability and security are the tip of the iceberg when it comes to the successful deployment of telehealth devices. What type of data you are collecting,

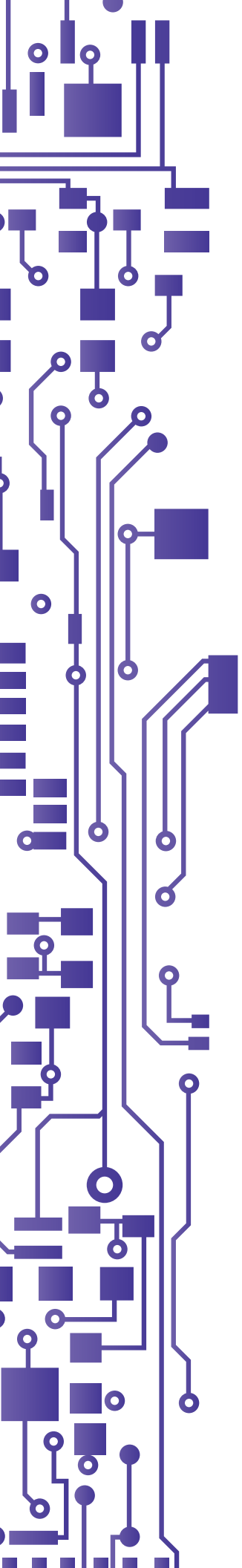
how it's delivered, and to whom, can greatly affect patient engagement and outcome. First and foremost, you must decide who will own the data: the patient, the healthcare organization, or both. If your treatment will be more effective by engaging the patient to proactively collect and share data, you should consider not only the device they will use (see user-experience in item #2), but also how the data is displayed, analyzed and delivered. For example, most patients using EKG devices would not benefit from the raw data collected; however, with a few key pieces of information, they can track their health daily and make necessary adjustments to diet and exercise as needed.

#### 6. Wearable tech products

As the telehealth space evolves, we will see an uptick in wearable devices. In fact, by 2016, ABI Research has projected that more than 100 million wearable medical devices will be sold annually. Two factors will drive this increase: (1) the improvement of the aesthetics - wearable devices are becoming quite sleek and small; and (2) the improved capability of devices that can now transmit via cellular.

The breadth and capabilities of the new wearable devices are impressive. For example, thin t-shirts





that can measure heart rate, respiration rate and skin temperature (that recharge via solar panels) are now on the market. Healthcare organizations can also provide patients with adhesive strips that precisely measure motions, swelling, posture, etc. And insole wireless sensors can measure distribution and motion parameters for rehabilitation.

These devices will also improve patient access to healthcare support and emergency personnel; for example, a wristband that can bypass a dispatch system and connect a patient directly to a nurse. Lastly, with the evolution of cellular services, new wearable telehealth devices can finally assist patients who might travel to remote locations, but **MUST** remain connected; for example, a wearable EEG headset that monitors brain and heart activity.

## **7. Review of National Privacy Standards and Regulations**

This wouldn't be a complete discussion on telehealth if we didn't address patient privacy and security. The provisions of the Health Insurance Portability and Accountability Act of 1996 (HIPAA, Title II) require the Department of Health and Human Services (HHS) to adopt national standards for electronic health care transactions and national identifiers for providers, health plans, and employers. Managing mobile devices and meeting federal HIPAA standards can sometimes be a challenge, but it's not impossible. Beginning with a risk assessment, you can track the flow of data through your system to identify any potential breaches. That way you can determine the most appropriate wireless technology for keeping your data secure, e.g. CDMA v. GSM or Cellular v. WiFi.

## **Why Aeris Offers the Right Solution**

Aeris services and technology lead the industry in reliability, flexibility, control, and total cost of ownership. We believe in a straightforward and simple approach to everything from device design to billing to operation and maintenance. We have developed a deep insight into customer issues, business model considerations, and operational concerns related to

scalable and profitable M2M services. This understanding is rooted into everything that we do – our processes, people, platforms, and our connected development with partners.

**Contact us now at [info@aeris.net](mailto:info@aeris.net) or 1-888-GO-AERIS to speak with one of our telehealth experts.**