Innovation is at the heart of healthcare transformation. As consumer technology propels us into the future, the healthcare industry is advancing the way patients engage in their health through mobile devices and applications. But patient engagement hinges on one important factor — providing patients with technology they can understand and will want to continuously use.

In the age of wide-scale mobile adoption and smart devices, it’s our responsibility as healthcare innovators to design solutions that are advanced in functionality, yet also improve the patient experience.

We believe that technology design plays a key role in patient adoption and program engagement. After all, what good are advanced mobile technologies if patients can’t understand how to use them or aren’t interested in returning to the app?

That’s where patient-centric mobile design comes in.

**PUTTING THE PATIENT AT THE CENTER OF THE EXPERIENCE**

The goal of patient-centric mobile design is to make even the most advanced telehealth technology accessible and engaging, so the patient is at the center of the experience and every interaction, however small, is as engaging and easy as possible. This is especially important for patients with complex, chronic, co-morbid conditions, who tend to be older and may be less technology savvy.

Patient-centric mobile design puts the patient at the center of the experience and ensures that every interaction, however small, is as engaging and easy as possible.

We follow several design practices that may significantly improve the experience for this population. Many are based on the Web Content Accessibility Guidelines established by W3C, the primary international standards organization for the Web.

To put the patient at the center of the design, industry best practices include:

1. **Accessibility** so users can easily read, interpret, and touch content on the screen, even when using screen readers
2. **Usability** to provide an intuitive, user-friendly process that doesn’t feel overwhelming
3. **Familiarity** with icons and other design elements; for example, because the three-bar “hamburger” menu isn’t familiar to many older users, replace it with the word “menu”
4. **Cognition** to reduce mental load, such as simple progress bars that show users where they are in any given task

The goal is to provide an engaging experience that encourages patients to submit their symptoms and biometric data each day to their clinicians, who then use the data to focus care coordination on at-risk patients.
Since patient engagement is believed to be key to success, we designed our next-generation remote monitoring mobile platforms to be engaging for regular use, and included the following features:

- Easy setup and log in
- Written and audible prompts in daily health checks to help instruct patients
- Large, consistently formatted call-to-action buttons with broad margins to help people with motor-control issues
- Large, widely used fonts with sufficient spacing between letters, lines, and margins
- Colors and contrast ratios that work for patients with color blindness, macular degeneration, and light sensitivity
- Clear and consistent navigation
- Minimal steps to complete a task
- No irrelevant information or complicated screens

None of this happens by chance, of course. A rigorous process is at the heart of patient-friendly design. It starts with interviewing key stakeholders such as RNs and client care services managers to gain end-user insights. Prototypes are designed and developed around patients with complex, chronic, co-morbid conditions. Testing with a range of patient groups takes place during and after development to validate and modify the design and functionality for target audiences.

The goal of this process is to create an experience that makes a broad range of patients feel confident, empowered, and engaged.

Removing the Technology Barrier to Remote Patient Monitoring

In the end, we’ve found that patients want their health technology to fit with their lifestyle — and patients have varied levels of savviness with technology. To remove complex technology as a barrier to engagement, we’ve developed a range of options for patients to engage in remote monitoring. From a simple tabletop device designed for in-home use, to a web-based application for those who prefer to be in front of their computer, to a solution that calls patients on their home phone for those who prefer very little “technology” at all, Medtronic offers patient engagement solutions that span the technology savviness curve. We let post-acute care providers and payers choose the option that best aligns with their patients’ lifestyles and habits, so that patients may more regularly engage.

With continued feedback loops from patients and clinicians, Medtronic is committed to delivering solutions that provide an engaging experience that brings patients back to their health check each day.

To focus on the unique needs of the complex, chronic, co-morbid patient population to help clinicians provide better patient outcomes, we feel that it is imperative to continue advancing technology innovation with patient-centric mobile design. With continued feedback loops from patients and clinicians, Medtronic is committed to delivering solutions that provide an engaging experience that brings patients back to their health check each day.

Learn how Medtronic puts these best-practices into action through Medtronic Care Management Services.

For more information on how Medtronic is using data and technology to help advance the future of healthcare, visit medtronic.com/data.

Author Arun Ramasubramanian is Vice President Technology & Data Analytics for Medtronic Care Management Services.