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The Good and Bad of Connected Medical Devices

Connected medical devices (CMDs) are the new wave in digital health-care technology. They enable home-based care, limiting the number of visits to physicians and specialists. They also allow medical professionals to monitor conditions from a distance. Patients also like them because they provide the convenience of monitoring conditions and administering medications from the comfort of their homes.

CMDs monitor cardiovascular conditions such as high and low blood pressure, and arrhythmias. They provide at home monitoring of drug doses for cancer and a logging of symptoms from the drugs. Options for pain management include monitoring conditions by correlations in diet, exercise, stress, and drug dosage. Blood glucose levels, insulin dosage, and diet and exercise variables are monitored for patients with diabetes, too. CMDs even offer options to monitor weight management and smoking termination efforts.

Benefits

With connected medical devices, health-care professionals no longer have to log in data manually. They also provide a convenient way for professionals to manage a steady stream of data from patients who use their devices only once or twice per day. The visual representations of data such as charts and graphs make for quick interpretations by healthcare professionals and provide easy to understand results for patients. Connected medical devices also group results by day and time while communicating the exact information needed to analyze data related to other occurrences and maintain effective treatment of conditions.

Specific information provided for analysis also helps patients identify what they were doing at the time of an occurrence to help determine which actions had any effect on the logged result. Health-care professionals can then refine a patient's therapy if needed. CMDs also provide useful ways to understand the effectiveness level of treatment. The best part is that patients can maintain their lives at home while being monitored or receiving treatment, and family members can rest easy that their loved ones are being looked after.

Risks and Lawsuits

When relying on technology, there are always risks. Even though most connected medical devices have a battery backup system, a loss of power on the receiving end can interrupt, corrupt, or even lose data. Computer crashes on the receiving end can also lose data as can hardware and software upgrades. Hacking into these devices is the biggest risk, especially if a hacker were to gain access to an insulin pump and alter insulin dosage levels or dosages of medications of any kind.

Oversight on the part of the patient to change batteries or on the health-care professionals to schedule functionality tests can be problematic as well. These devices from time to time

malfunction, and it is up patients and professionals to make sure the devices are functioning right. Some devices, unbeknownst to physicians, come from the factories with defects. For instance, cracks in connectors cause pacemakers to malfunction. Other problems such as incorrect data readings from heart monitors, electrostatic discharges causing pumps to fail, and infusion pump alarms failing to sound when treatment is interrupted, put patients a risk. A worst case scenario would be if one of these failures to perform caused the death of a patient.

Lawsuits happen due to failures in some devices, and sometimes, health-care professionals are sued as well as the vendors. These professionals need to ensure the devices they assign work right, the dosages for medications are set right, and the patients with manual pumps are aware of the dangers of dosing themselves too much. Health-care providers also need to maintain contact throughout the treatment and monitoring process, and contact patients for the slightest glitch in data received.

Popular Connected Medical Devices

The most well-known devices are blood pressure cuffs, scales, glucometers, and CPAP and BiPAP machines (positive airway pressure machines). Providers offer these devices as outpatient/ in-home monitoring and care for chronic conditions. Other devices such as pumps that dose insulin, intravenous medications, and pain medications require metering and logging to measure and adjust dosages and analyze the effectiveness of treatments. Devices programmed wirelessly by health care providers are pacemakers and cardiac defibrillators. These devices are popular because they allow patients to live life outside of a hospital or clinic and enable patients to maintain a good quality of life. Connected medical devices are integrated telemedicine at their best, but they must be monitored for effectiveness all the time.

References

1. [FDA – U.S. Food and Drug Administration – Connected Health](#)
2. [Connected Medical Devices](#)
3. [Information Week – FDA Scrutinizes Networked Medical Device Security](#)
4. [Monthly Prescribing Reference](#)

Pediatrics: Consultation and Treatments

Doctor Today provides the best child health care consultations and treatments. Our certified pediatricians provide care for children who are acutely and chronically ill. They also work with preventative health care in mind for children of all ages. In addition, our pediatricians manage the physical, mental, and emotional well-being their patients throughout every stage of their lives.

Our In-House Staff

Our in-house staff is well trained and familiar with all of the pediatric medical concerns including privacy rights and required immunizations. As an organization, we provide quality consultations and treatments to ensure our young patients receive the best healthcare possible, and we respect the legal privacy rights of adolescents.

Even with the legal health-care rights of adolescents, our in-house staff goes out of its way to provide a welcoming environment for patients and families. They also maintain open communication between families, patients, and staff as it is critical to the success of treatments. Our pediatricians offer specialized consultations that facilitate opportunities for private, in-depth discussions of diagnoses and treatments as well. They and we at *Doctor Today* see family participation as integral to the healing process.

Our Pediatric Care

In pediatric medicine, it's important to keep in mind the age of the child, the size of the child's body, and maturation changes over time. Our pediatricians focus their preventative measures on these variables before prescribing any treatments. Other characteristics they check for are developmental anomalies, genetic variances, and congenital defects that may affect or exacerbate conditions or cause disease.

Our pediatricians diagnose and treat many conditions in children including the following:

- injuries
- infections
- genetic and congenital conditions
- cancers
- organ diseases and dysfunctions

Other issues symptomatic of underlying illness in children are of concern to our pediatricians as well. These include:

- developmental delays and disorders
- behavioral problems
- functional disabilities
- social stresses
- mental disorders including depression and anxiety disorders

Our pediatricians offer care and concern for the immediate needs of their patients and any lasting effects that illnesses may cause. They are also in consult with other health care professionals because the many variables that cause illness in children require constant collaboration for accurate diagnoses and treatment.

Our Staff Motivation

What motivates our pediatricians is their compassion for children and their need to help decrease child mortality rates. They do this through preventative treatments, managed care, professional collaborations, family consultations, and quality record-keeping.

The most important quality of our pediatricians at *Doctor Today* is their approachability. They make their patients feel at ease right from the first visit. Our pediatricians offer a sincere presence of kindness, and our in-house staff provides a warm, comfortable atmosphere where those who come in nervous, leave less anxious.

Quality health care in a caring environment is what we at *Doctor Today* provide.