


# What Will Drive Future Hospitals?

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## Keywords

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Apparently, COVID-19 virus will remain a health threat longer than we expected. Hospitals were forced to implement a strategy anticipating disruption versus reacting to disruption to stay operational and help those in need of medical care. They needed to undertake urgent measures to redesign hospitals' physical environment, adapt communication models to respond to social distancing requirements, apply virtual health solutions, and enforce new clinical protocols.

But what they hoped would be a transition phase has become their future reality. Pandemic accelerated actions that many of us thought would take decades to take hold. Lessons learned during the crises are urging hospitals to reinvent strategies if they want to retain and upgrade their sustainability and competitiveness on the market. Read on 4 main trends that will drive future hospitals:

## Hybrid Hospital Models

Positive experiences of the use of digital technology in medical care during the pandemic (screening or monitoring or e-visits) have put light on patients' preferences for prevention and medical care from the comfort of their home. Several innovative ideas meet those patient expectations among which hospitals at home, virtual hospitals or hubs, and spoke model of hospitals. Apparently, most advanced hospitals are moving towards narrowing and redesigning of their physical environment with focus on critical care, specialized procedures, and increased virtual service offerings. Few years ago, John Hopkins Hospital (1) has launched a program Hospital at home for elderly people remaining at their homes remotely monitored through telemedicine and occasionally visited by physician. Patients' experienced better clinical results, lower average length of stay, and operational cost savings of 19% to 30% compared to traditional inpatient care. In the future, care might go entirely virtual. In 2015, Mercy Virtual (2) has launched its promo no-bed virtual hospital that provides telemedicine care for patients through video calls and monitor their vital signs in real time through devices connected to a tablet (eg, oximeter). Excellent network connection and massive data gathered from the devices are analyzed through virtual intensive care unit

center at Mercy Health ensuring timely delivery of right information for both physicians and patients. Hub and spokes network model is organized with one central building as health hub (diagnostic, urgent, and complex care) and spokes distributed around to support local community needs. Hospitals offerings will also include services to support patient social needs (food security, utility access, housing) as well as care treatments to support mental and emotional health for patients. This model is aligned with the new patients' mentality for timely scheduled and accessible medical service at patients' homes or neighborhood. Hub and spoke model prioritize prevention and follow-up care before treating illness, thus improves patient experience and reduces the costs. Eye hospital Sistina Ophthalmology (3) from Skopje reports on 64.3% growth in new patients in the first 8 months of 2021, due to opening of 4 spokes throughout the country. Obviously, technology and science especially in terms of personalized medicine and genetic engineering will shift most of the delivery of medical care outside of hospitals' physical environments, in organized hybrid hospital structures.

## Virtual Health, Digital Solutions, and Regulations

The Cleveland Clinic has reported that during the crises, 80% of all their patients' visits were done via telehealth technology (4). According to an estimation in Lancet, number of virtual patients consultations since the pandemic has reached a 10-fold increase (5). Patients have shown that they feel quite comfortable and safe having medical procedures outside of hospital. Transformation of communication toward virtual care becomes future "must" and the pace of its execution is critical for medical business and patient experiences, especially with

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the new disrupters that are not typically healthcare providers, such as integrated delivery networks or payers. Therefore, hospitals' new innovative approach should typically involve Artificial Intelligence (AI), robotics, personal engagement tools and other cognitive technologies to improve patient experiences, medical outcomes, and benefit cost of care. For example, with a purpose to improve patient experience, a patient-facing virtual assistant device powered by natural language processing and AI control center will be installed in each room. This virtual device will take patients' verbal requests and then by using AI will assign them to the most suitable person or robot based upon efficiency. Additional efforts should be invested in ensuring an effective regulatory environment for digital health along with official country policies and strategies to open the market for public reimbursements in digital health and protection. General Data Protection Regulation as Europe's new legal framework that has come into force in the United Kingdom in May 2018, is a positive example of government policy for data protection regulation.

### Focus on Well-Being of Medical Staff

Physicians' needs, attitudes, and suggestions about the way they practice medicine in the new circumstances are becoming extremely important to ensure high quality care and delivery of excellent patient experiences. Medical profession is one of the most educated and experienced with "licensed authority" over humans' health and lives; it is also the most needed and was the most vulnerable profession during the COVID-19 pandemic. Even before pandemic, results from a survey of 50 veterans health administration community hospitals across United States, showed that chronic stress at work influences medical staff behavior. Namely, survey showed that 49% of doctors and high 86% of nurses reported witnessing colleagues' outbursts which were harmful not only for staff relationship but was detrimental to patient care as well. Situation has worsened even more with digitalization of medical services when physicians started to spend 1 to 2 h on administrative work for every hour spent in direct contact with patients. A survey founded by American Medical Association (6) indicated many sources of dissatisfaction for physicians that results with their lower professional moral, perception that medicine is not a rewarding profession anymore and possible burnout.

Therefore, future hospitals should urgently allocate financial and human resources to organize workflows and apply new technologies in a way to better staff satisfaction and patient care they deliver. To fight burnout, hospitals should invest in continuous physical and mental trainings for their medical staff. It typically means mindfulness and meditation trainings (7) and self-care practices (role-play scenarios or Schwartz Rounds) for the medical staff, to overcome personal difficulties, foster their emphatical behavior, and to increase their attentiveness in communication with patients. Recent study published in *Journal of Business Research* (8) finds that strong emotional commitment from management

and medical staff to build a caring emphatical environment, reduces patients' psychological stress, and adds great value to prosocial interpersonal interactions and patient experiences.

### Further Research to Improve Patient Experiences

In order to succeed, hospitals need to put even more focus on what their patients are experiencing; what are they thinking and feeling. In the new digital era, traditional rating surveys and Net Promoter Score are not any more reliable source of information for understanding patient experiences. New service alliances between prestigious universities and leading businesses are needed to design holistic models that will integrate physical, social, and digital elements of customer experiences and deliver tailor-made future services (9). An interdisciplinary approach that draws from academic research in consumer experiences, healthcare, IT, and translate into novel hospital policies, new types of medical services, virtual care strategies, and digital marketing tools, should be implemented. HBR (10) finds that research in AI-driven models creates a 360° view of consumer experiences and improves companies' responsiveness, consumer loyalty, and long-term companies' growth. Future research advancements should answer questions related to types of diagnoses and services suitable to be digitalized, skills and staff's ability to adapt to a digital reality, and patients' experiences on digital care. Because, contrary to prevalent belief, innovation in digital transformation is less about technology and more about the people and their positive experiences.


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