often considered a recession-proof sector, health care is poised to be a steady market over the next few years, and will include additional opportunities coming out of the COVID-19 pandemic as clients plan for operational, behavioral, and physical changes to facilities. The $46 billion annual design and construction health care market (according to FMI) collectively wants to “future-proof” itself against future pandemics and unknown contagions. The following are the most impactful seven trends expected in the health care market.

1. **The outpatient and “retail-ization” trend continues.** Outpatient-focused facilities, including urgent care centers and micro-hospitals, will continue growing considerably faster than traditional hospitals. Health care systems and providers increasingly want to be closer to patients and are occupying space at the neighborhood level, including in retail-type locations. According to a 2020 analysis by Deloitte, aggregate outpatient shares of total hospital revenue grew to 48 percent in 2018 from 28 percent in 1994. Outpatient facility growth will be particularly strong in areas that are growing in population—particularly aging baby boomers.

2. **Telehealth leaps forward.** The need to social distance during the pandemic created a huge and sudden market for telehealth patients during 2020. Long embraced by health care systems and doctors—who saw telehealth as a way to reach underserved and rural patients—it is also a cost-effective practice. Suddenly patients were quick to embrace telehealth out of necessity. According to a recent Centers for Disease Control and Prevention report, during the period of June 26, 2020, to Nov. 6, 2020, 30.2 percent of weekly health care visits occurred via telehealth. Data from the Centers for Medicare & Medicaid Services found that pre-COVID-19, only 14,000 beneficiaries received telehealth service in a week, but between mid-March and early July 2020, more than 10.1 million beneficiaries had telehealth appointments. This growth of telehealth was steady from 2010–2017, according to the American Hospital Association (see chart), but is now expected to leap forward as patients and providers in 2020 grew comfortable with platforms.

3. **Space design becomes more flexible.** Flexibility in design has become increasingly critical as health care clients look to future-proof facilities to be adaptive to both present and future crises, including those requiring isolation of contagions. This includes rethinking waiting rooms and other public spaces with potential design solutions including patient screening in advance, having people wait in individual patient rooms—which may have external doors that lead directly to parking lots—

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**Use of telehealth in hospitals has grown rapidly.**
Percent of hospitals fully or partially implementing computerized telehealth system, 2010–2017

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Source: ANA IT Supplemental Survey
and developing check-in processes enabled by a smartphone. Flexible design solutions would also give facilities the ability to isolate certain spaces and even create features like open staircases—which encourage walking and keep people out of elevators and other tight spaces.

4. HVAC design strategies are critical. Post-COVID-19, health care clients are focusing on ventilation, as well as power and plumbing, in how to address future infection control and pandemic responses. Facilities will be looking to HVAC design strategies for contagion control, improved air quality, and building controls allowing the partitioning of air flow into specific spaces, all with an eye on overall facility resilience.

5. Tech goes hands-free and smart. Health care facilities will look beyond sliding doors and touchless thermometers for hands-free technology to aid in stopping infection spread. This may include touchless check-in kiosks, wayfinding displays, and real-time locating systems, which use sensors to provide immediate tracking and management of medical equipment, staff, and patients. In addition, design solutions may include disinfectant lighting and the use of materials proven to be antimicrobial, including paint.

6. Increased focus on energy use. Hospitals typically use three times the energy of other commercial buildings and, according to Energy Star, health care organizations spend over $6.5 billion on energy each year—and that number is rising. By adopting energy-efficient strategies, health care facilities can save money, meet carbon emission goals, and improve the air quality of communities—furthering their commitment to public health.

7. Alternative delivery and modular construction are considered. With health care projects becoming increasingly complex, clients are looking to put all options on the table, including alternative delivery methods, that enable early full-team collaboration, such as construction manager at risk, integrated project delivery, progressive design-build, and modular design and construction. Often cited as a game-changer in this regard is EIR Healthcare’s MedModular, described as the first application of prefabrication and modular technology for hospital rooms that can be delivered 90 percent complete. The “hospital room in a box” (pictured on the previous page) was one of Fast Company’s 22 Innovation by Design award winners in 2019—which span all kinds of products and industries.

The Private Side is a regular department of Engineering Inc., focusing on the private-sector markets listed above, and information and insights on public-private partnerships and economic data relevant to the industry. For more on these topics, subscribe to ACEC’s bimonthly Private Industry Briefs: https://programs.acec.org/industrybrief/.

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### Solar and Wind Are Powering Electricity

Renewable energy—specifically from solar and wind—is expected to outperform other energy sectors, according to recent reports by the U.S. Energy Information Administration (EIA). Solar and wind combined will make up 70 percent of new commercial electric-generating installations this year, with utility-scale solar photovoltaic accounting for 39 percent, followed by wind at 31 percent. This also tracks with EIA’s long-term analysis, released in its Annual Energy Outlook 2021 at the Bipartisan Policy Center in February. Renewable energy incentives and falling technology costs support robust competition. Overall, EIA notes that the COVID-19 recession had a significant impact on the United States’ energy usage, and a return to 2019 levels of energy consumption will take years.

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**Renewables Make Up Most New Commercial Electric-Generating Installations in 2021**

- **Solar**: 15.4 GW (39%)
- **Wind**: 12.2 GW (31%)
- **Total**: 39.7 GW
- **Batteries**: 4.3 GW (11%)
- **Natural Gas**: 6.6 GW (16%)
- **Other**: 0.2 GW (3%)
- **Nuclear**: 1.1 GW (3%)

*Source: EIA*