

The Future of Healthcare:



A NEW FOCUS ON WELLNESS, INTEGRATION AND COMMUNITY EMBEDDEDNESS

“There’s so much uncertainty right now, but there’s one thing for sure and that’s doing more with less.”

CEO, HEALTHCARE PROVIDER

Introduction

Healthcare in the United States is currently undergoing the most extreme transformational paradigm shift in a century. As a builder of healthcare facilities, DPR Construction conducted a research initiative to better understand the long-term trends that its healthcare customers will have to manage and asked owners, designers and management consultants: Where is the industry heading? How will healthcare be delivered? What will the physical campus of the future look like?

Forty-two leaders shared their insights into what the future holds for the healthcare industry and for their own systems. CEO’s and senior executives, vice presidents, design and construction directors, design professionals, developers and hospital consultants joined the conversation. It should be no surprise that everyone agrees that uncertainty is one of the biggest challenges facing the healthcare industry today. The unknowns of reform, reimbursements and regulations are greatly affecting health systems and their planning for the future. As one participant noted, “there’s so much uncertainty right now, but there’s one thing for sure and that’s doing more with less.”

While the healthcare industry is being continually tasked with change and doing more for less, there is an underlying optimism in the new focus on wellness, integration and community embeddedness. Here is what we learned:

1 Hospitals will be smaller and more integrated at many levels

Hospitals will be used for the highest acuity patients. Integrated care around the patient, an emphasis on prevention and wellness, less invasive procedures and advancements in research ultimately will reduce the demand for hospitalizations. Systems will reach further into the neighborhoods with different models. Redundancy will be eliminated by having specialty areas of medicine available within a certain radius, but not necessarily at each campus within a system.

“Today, the hospital is the cost center. It should be the last place for it to be. The focus needs to be on home health, primary care and outpatient care.” -CEO

“Organizations are starting to offer more than just health-care; they’re bringing in more amenities that support the principles of wellness, such as farmer’s markets, par courses, bike paths.” -Architect

“It’s becoming less about the boundaries of the hospital campus as things start to become more virtual and more disseminated into the community. Next, we need to incorporate healthcare into our daily thinking.” -Healthcare Consultant, Strategic Planning

“Environments will be created that are much more supportive of team-based care, where it’s much more collaborative. The physicians will lead, but not dominate.” -Healthcare Consultant, Strategic Planning

“Healthcare will be vertically integrated and not all in one place. It may be delivered at home, at a retail store, at your workplace, just about everywhere.” -Architect

2 Systems will be changing

Size is power. Systems will be consolidating, community hospitals may cease to exist and systems will be vertically integrated. For-profits and not-for-profits are becoming more and more alike, they may partner or merge, and not-for-profits could lose their tax-exempt status.

“More systems are trying to get into the \$4 billion plus category because your bond rating is better, your portfolio of patients is more diverse, and your physician base is more diverse.” -CEO

With the Supreme Court ruling on The Patient Protection and Affordable Care Act, much discussion is happening at the state, local and institution level of how to deliver healthcare in the future.

“I don’t think we’ll have a nationalized system. I think it will be more pluralistic. One size won’t fit all. It’ll be like a progressive tax system.” -CEO

“We’ve set up a matrix structure with the Centers of Excellence, Clinical Integration Teams, Radiology/Imaging, Laboratory and Primary Care and that’s going to drive our delivery strategy and our growth strategy.” -CEO

“There will certainly be a focus on wellness. It’s obviously cheaper to keep a person well, than to attend to him/her when they’re sick.” -Director, Support Services

Hospitals are currently acquiring physician groups and bringing services back within the auspices of the health system.

“The resurgence of the physician-hospital alignment relationship is a big opportunity for systems...strictly speaking, hospitals don’t have patients, doctors do.” -CEO

“Doctors are once again wanting to be employed by hospitals. It’s a tremendous opportunity for the systems.” -VP, Facilities

3

Outpatient services will be the focal point for growth

Patient-centered continuum of care is the future of healthcare, and it is the cornerstone between treating disease and illness and prevention and wellness. Medical Homes and ACO's are a few models that will start this transition. The million-dollar question is...what will it look like? Current MOB space is clearly not the answer.

"We ran a two-year test (on an ACO-like pilot) where we shared common records and bundled payments. At the end of the first year, we had not only maintained the premium levels, we had saved an additional \$15.5 million and had an improved patient experience. Patient readmits were down almost 20%, and the average length of patient stay was reduced by .7 of a day. So, the concept works, but it's very complicated to implement." -VP, Real Estate

"Today, revenue is split 50% inpatient/50% outpatient. In the future, revenue likely will drop to 15% inpatient/85% outpatient." -VP, Real Estate

"There's an interesting transition happening: things that used to be in the hospital are moving into outpatient clinics and things that were in the outpatient clinics are moving to the home environment." -Director, Design and Construction

"There will be more healthcare at places like Wal-Mart. They have 130 million shoppers a year. They will be a part of the retail healthcare model and a referral power." -Architect

"The MOB will be 'mapped' to the hospital, so that outpatient services are on the same floor as inpatient services and the transition can truly be seamless." -VP, Strategic Planning

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Specialty areas will focus on those that are the most profitable

These include cancer, heart and neuroscience, reflective of the aging baby boomers.

"Cardiac care will continue, today and in the future, as long as there is 'fried food.' Oncology services are increasing everyday at our institution." -Senior VP

"The population is aging and facilities are not prepared for this 'tsunami' of patients. The service lines that will continue to be prevalent are related to the aging population—cardiovascular, arthritis, and sports injuries, as the boomers stay active longer." -VP, Strategic Planning

BY THE NUMBERS

Aging Population

Based on estimates from the Census Bureau, Pew Research Center and Social Security Administration, approximately 79 million people will turn 65 between 2011 and 2029 (one every eight seconds).

79 million

5

Technology/data intensity will be crucial

IT is seen as “the enabler.” Telemedicine, home monitoring systems, point of care testing, EMR, and data management will all impact the infrastructure and physical space. It also takes capital that might otherwise have gone to facilities.

“In 10 years, telemedicine will be much more integrated into routine care, at the doctor’s office, the clinic and the hospital. It’s not a matter of if, but when. We have to get there to survive fiscally.” -Director, Research

“Information technology will now always be a major capital expense, along with facilities.” -VP, Real Estate

“Technology will be integrated into the buildings themselves (smart buildings), and connectivity will happen throughout the facility as well as outside of the facility.” -Architect

“Facilities are not yet as IT friendly as they will need to be. There will be more telemedicine and home care. Smart homes will be connected to the healthcare providers for monitoring blood sugar, heart rates and emergency alerts.” -VP, Strategic Planning

CASE STUDY

Palomar Medical Center West

Dubbed the “Hospital of the Future,” Palomar Medical Center West, completed by DPR Construction, is designed and built with telemedicine and continuous technological advancements in mind.



Palomar Medical Center West

The facility is wired with 57 miles of Ethernet Category 6e (Cat 6e) cable laid out to accommodate the ever-changing medical technology landscape, as well as meet current system needs. For example, Palomar’s Distance Antenna System (DAS) will allow cell phone reception throughout the facility and enables easy communication for visitors and emergency responders. The hospital also features Wireless Access Points (WAP), allowing people (including patients’ families) to connect to the internet. In the future, WAP will allow medical professionals to have patient information at their fingertips through this network.



Wiring Palomar with 57 miles of cable

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The economy and availability of capital will be limiting

We are moving into a cash-constrained period. There will not be nearly as many “big spends” as have occurred in the last 10 years. Access to capital is diminishing, and even when it is available, there is concern about being able to re-pay. As a result, institutions are delaying capital projects and reprioritizing them.

“There are growth needs and plans, but we don’t have the dollars to spend.” -VP, Support Services

“Limited capital is affecting us greatly. As a not-for-profit whose current revenues are 75% from Medicaid, we are now doing a lot of fundraising.” -CEO

“With the current tight capital, mergers and acquisitions will continue. The onesies/twosies are just not going to make it—the lone rangers will be the dead rangers.” -VP, Real Estate

“From a facilities perspective, making every single square foot be revenue-generating is the biggest challenge.” -Healthcare Consultant, Real Estate

“Institutions perceive facilities as a means to an end vs. a strategic investment. We’re trying to change that perspective toward one of viewing buildings as a business tool instead of a liability.” -Architect

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Renovation and adaptive reuse will increase

Projects within hospitals will become more sophisticated and mission critical, and so, a lot of re-purposing of existing facilities is occurring. Under the proposed reimbursement rules, patient satisfaction will factor into reimbursement rates, and so, facilities directors of older facilities are concerned about making sure to provide a state-of-the-art patient experience to avoid getting bad ratings. Under the current economic conditions, if a system finds a building with the right “bones,” it is much cheaper to renovate than to build new.

“Creative use of existing assets will be highly valued. Things like zoned mechanical systems to isolate different areas of the facility will be advantageous.” -Director, Real Estate

“In today’s market, we’re taking advantage of the good buys out there and buying buildings and renovating them.” -Director, Facilities

“Renovation work will dominate on our aged campus as we invest in providing an optimal patient experience, since reimbursement will be tied to patient satisfaction. It will be more about perception than about clinical investment.” -Director, Facilities

A CLOSER LOOK

Top 5 Concerns

In addition to cost cutting and tight schedules, here are the top design and planning issues:

- Flexibility
- Universal Design
- Standardization
- Energy Conservation
- Sustainability

Top 5 Successes

The areas being addressed well in survey participants’ hospitals today:

- Electronic Medical Records
- Accessibility
- Durable Finishes
- Efficient Use of Space
- Good Logistics System

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New delivery methodologies and best practices are being embraced

Successful projects are universally described as collaborative and best when the C-Suite is engaged. Creativity, transparency, and follow-through on promises made regarding cost and schedule are highly prized. Design-build is being primarily used for simple project types such as parking garages. Owners don't want to lose control. Integrated Project Delivery (IPD) is more used and accepted in the West than in the East and is being enthusiastically greeted from the design community.

"IPD and BIM let us be more collaborative. I think that's the right direction." -Director, Facilities

"Design-build will continue to ramp up. It has some real benefit, especially for organizations that don't have strong internal infrastructures." -Director, Design & Construction

"I'd call our process 'Inspired Project Delivery.' It wasn't a contract, it was a mindset." -Director, Architectural Services

"BIM is just the price of admission at this point. It is the game changer, if we can figure out how to tie everyone to it." -VP, Real Estate

"Design and construction are going into a Renaissance period. The industries are realizing that they are philosophically in this together. Now, the contractor can get into the architect's head and vice versa to really understand how things will come together." -Architect

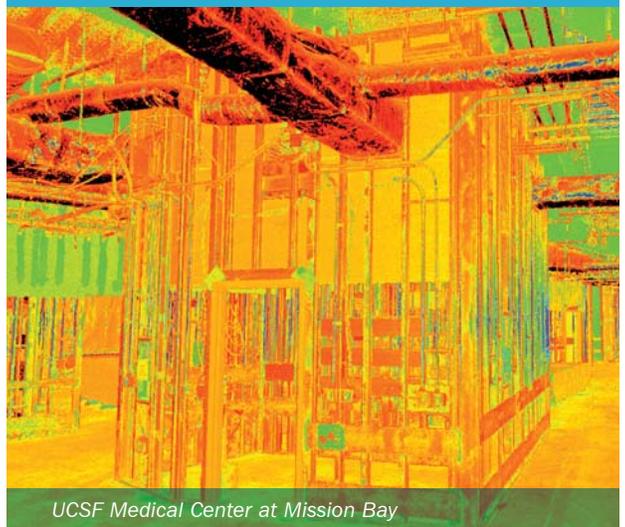
A CLOSER LOOK

Delivery Methodologies

Since 2005, DPR has been involved in more than 20 different projects with integrated, multi-party team contracts that include shared savings and performance incentives for successful implementation and use of Lean construction practices and building information modeling (BIM).



Working with progressive owners, such as Sutter Health, Lucile Packard Children's Hospital, UCSF Medical Center and Universal Health Systems, DPR has helped integrated teams establish the right strategies and processes for providing more predictable outcomes around cost, quality and schedule for a wide range of projects.



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Demographics are a top concern, both for maintaining qualified staff and for the skewed aging patient population

Systems are not prepared for the different care expectations between those under and those over 45 years old. The growing numbers of the aging population are staggering. And, when healthcare reform gets implemented, with 32 million more insured U.S. citizens, demand will skyrocket, and the numbers of doctors coming out of medical school won't be anywhere near what will be needed.

"What scares me the most is the demographic changes and how facilities need to be set up differently. Hospitals are not set up as geriatric hospitals, and reimbursements do not support this." -VP, Support Services

"The skilled high-level people are getting older, they're retiring, and there's a huge gap without enough people coming up to replace them." -Director, Facilities

Conclusion

Systems have already started to make the changes that will make them more competitive regardless of the impact of government-mandated reform. The consensus is that health-care, as it is practiced today, is not fiscally sustainable. There must be, and there certainly will be, transformative changes over the next 10 years.

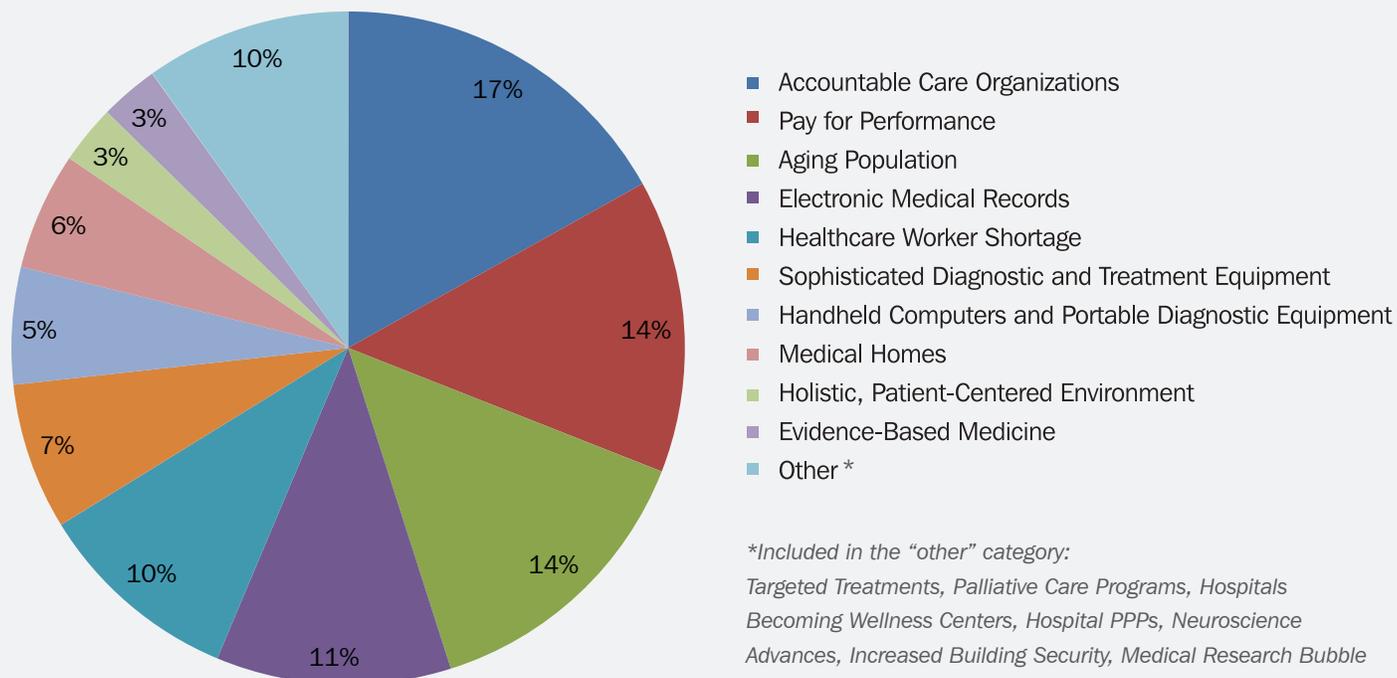
"Healthcare reform is an evolutionary event. It's coming and hospitals haven't seen anything like it before. Other industries have, and there is a lot to learn from them."
-Hospital Consultant, Real Estate

"There is a new appreciation of personal responsibility. It's my health, not yours. We have to get there. I see opportunity for communities to reinforce and foster wellness. I hope there are opportunities for courageous and innovative methodologies to be tried out, that can lead to best practices." -Director, Research

"The best thing we can do is have some no-regret strategies. Improving quality, safety and service and reducing cost is a winning strategy no matter what." -CEO

Issues with Great Impact

The following represents the issues identified by the respondents to the survey as the things that will have the most impact on healthcare centers over the next five years.



Definitions

Accountable Care Organizations – an organization of health care providers that agree to be accountable for the quality, cost, and overall care of those who are enrolled in the program; ties reimbursement to quality metrics and reductions in the total cost of care

Aging Population – based on estimates from the Census Bureau, the Pew Research Center and the Social Security Administration, about 79 million people will turn 65 between 2011 and 2029, which computes to one every 8 seconds

Electronic Medical Records – a computerized medical record created in an organization that delivers care

Evidence-Based Medicine – aims to apply the best available evidence gained from the scientific method to ensure the best prediction of outcomes in medical treatment

Handheld Computers and Portable Diagnostic Equipment – allows for more patient care at bedside and better faster communication between health care providers

Health Care Worker Shortage – shortages of between 10 and 20% are reported for various health care positions

Holistic, Patient-Centered Environment (Planetree concept) – health care delivery organized around the needs of the patient

Hospital Public Private Partnerships (PPP's) – a facility funded and operated through a partnership of government or non-profit entity and one or more private sector companies

Hospitals Becoming Wellness Centers – some hospitals are providing ways to help people improve their overall health and avoid getting sick in the first place

Increased Building Security – security concerns include protection of the hospital and its assets, protection of patients, control of unstable patients, and as a public building, a vulnerability to damage from terrorism

Increasingly Sophisticated Diagnostic and Treatment Equipment – allows for earlier and more targeted treatment

Medical Homes – a team-based model of care led by one physician who provides continuous and coordinated care of a patient

Medical Research Bubble – threat of an overbuilt research lab capacity in light of reduced government grants and spending

Neuroscience Advances – rapid development of new technologies is leading to increased emphasis on brain and nervous system

Palliative Care Program – in the 2000's, hospital-based palliative care grew by 125% increase

Pay for Performance – rewards healthcare providers for meeting certain performance measures for quality and efficiency

Targeted Treatments – drugs or other substances block the growth and spread of cancer by interfering with specific molecules involved in tumor growth

Credits:

DPR Construction appreciates the input from individuals from the following organizations:

HEALTH SYSTEMS

- Beaumont Hospital, Detroit, MI
- Broward General Medical Center, Fort Lauderdale, FL
- Children’s Hospital of LA, Los Angeles, CA
- Confidential California Healthcare System
- Dignity Health, San Francisco, CA
- Gwinnett Hospital System, Lawrenceville, GA
- Hoag Memorial Hospital, Orange County, CA
- MD Anderson Cancer Center, Houston, TX
- Methodist Hospital, Houston, TX
- Lucile Packard Children’s Hospital / Stanford Medical Center, Palo Alto, CA
- Piedmont Healthcare, Atlanta, GA
- Private MD, Phoenix, AZ
- Rex Healthcare, Raleigh, NC
- Translational Genomics Research Institute, Phoenix, AZ
- UCSF Medical Center, San Francisco, CA
- University of New Mexico Medical Center, Albuquerque, NM
- University of Arizona Healthcare, Tucson, AZ
- University of California, San Diego, CA
- Universal Health Services, King of Prussia, PA
- University of Pittsburgh Medical Center, Pittsburgh, PA

ARCHITECTS, PLANNERS, MANAGERS AND DEVELOPERS

- Cannon Design
- CO Architects
- Gresham Smith
- HKS
- HOK
- Hunton Brady
- Jensen Partners
- Jones Lang LaSalle
- KLMK
- KMD
- NBBJ
- Pacific Medical Buildings
- Perkins + Will
- RTKL
- Shepley Bulfinch
- SmithGroupJJR
- Stantec
- The Boyer Company
- Tsoi Kobus

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healthcare leaders,
including CEOs and
design professionals,
participated in the Future
of Healthcare study

DPR CONSTRUCTION is a unique technical builder with a passion for results. Consistently ranked in the top 50 general contractors in the country over the last 15 years, DPR is a national commercial contractor and construction manager specializing in technically challenging and sustainable projects—of all sizes and complexities—for the advanced technology, healthcare, life science and corporate office markets.

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