

7th Houston Hospital, Outpatient Facilities & Medical Office Buildings Summit June 27, 2023

Healthcare Hits the Reset Button

Planning, Real Estate, Design, Construction, and Operation of

Hospitals | Clinics | ASCs | MOBs | Retail | Tele-Health | Hospital @ Home | Mobil Care | Non-Clinical
Academic & Research Facilities



This In-person Education and Networking Event is Presented by
Corporate Realty, Design & Management Institute
Association of Medical Facility Professionals - Houston
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Agenda

- How the Future of Healthcare Delivery is Rewriting Today's Capital Spending Plans
- The Clinic of the Future: Redesigning Care Delivery
- Money Saving Solutions You Can Use Tomorrow
- Spotting Healthcare & Life Science Real Estate Opportunities
- Future Proof: Creating Market Responsive Spaces
- Adaptive Reuse & Reconstruction Opportunities for Healthcare & Life Science Facilities
- Designing for Security in an Era of Increased Violence
- Snapshot: Integrating Security, Technology, and Hardware
- Holistic Approach to FF&E Solutions
- Managing Complex, Mega Projects

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Reported by Michelle L. Smith, a Houston based freelance journalist, mediaaware@aol.com

How the Future of Healthcare Delivery is Rewriting Today's Capital Spending Plans

Deb Sheehan, Healthcare, Market Strategy Leader, DPR Construction

- **The macroeconomic view** - The Federal Reserve announced after its mid-June meeting that it would pause raising interest rates, ending its streak of 10 consecutive rate hikes. Rates are projected to drop to 4.1% by the end of 2024, 3.1% at the end of 2025, and down to 2.5% over the long run.
- Focused Investments: S&P and Fitch anticipate downgrades to outpace upgrades in 2023, following negative sector views. Business investments remain robust in technology, with private equity and venture capital continuing to invest in this sector
- With a labor workforce that is under duress, forecasts of sustained labor shortages in the coming year project a shortage of 200,000 professional nurses and 50,000 physicians. The rise in contract labor from 2019 through 2022 led to a 37% increase in labor expenses per patient.
- Hospitals are breaking even, with volumes down while lengths of stay have increased as availability of secondary discharge locations remain unavailable.
- The impact of Medicaid disenrollment could signal providers will be facing bad debt and increased volume of charity care.
- Increase in self-referrals, more insurance steerage of providers and the emergence of meaningful alternatives has impacted healthcare consumerism.
- Undercurrent of the dominant growth of 70+ age group over next 5 years, which has shown a 13% growth in those over 65 in Harris County. Important to note, approx. 10,000 people in the U.S. turn 65 each day, which is a challenge for many health providers given the dominance of CMS payors for this market segment.
- Competition remains high for the commercial payor market, given the challenge of managing to CMS margins. In comparison to commercial rates, Medicare typically pays an average of 86 cents on the dollar while Medicaid typically averages 68-cent reimbursement
- In reducing information asymmetry, transparency of cost and quality measures aids consumers in evaluating providers and selecting site of care. Example is the use of Turquoise Health as a cost search engine to research cost of care by healthcare service (procedure, diagnostic, etc.).
- Increased influence of social media reviews has resulted in a focus on satisfaction and quality in consumer site of care selections.
- CMS continues to reward performance via the Hospital Value-Based Purchasing (VBP) Program allowing hospitals to earn back a value-based incentive payment% predicated on their HCHAP scores.
- Kaufman Hall Flash report identified of 600 rural hospitals across US, 30% are at risk of closing. Texas has 166 rural hospitals and 63% or 105 locations have experienced loss in service. By 2030; Silents will be 85+
- By 2030, Baby boomers - 66-84; Gen X will be 50-65; Millennials will be 34-49; Gen Z will be 18-33 and Gen Alpha will be 0-17 by 2030)

- Length of stay impacts healthcare, with no place to put patients, and no downstream capacity for care. Longer stays come with no additional reimbursement and when hospitals have to pay for staff and other services, it creates a perfect storm.
- Must reconcile cost of operations with cost per square foot and the value per square foot for the healthcare work force and the communities.
- Sheehan cites a strong growth forecast, with a 19% increase in acute rehab; 15.1 % increase in neurosurgery; 9.2% increase in ophthalmology; 8% up in trauma and 7.4% up in neurology.
- The adoption of co-located services and home-based care models and telehealth must also be factored in. Walmart and CVS are putting pressure on healthcare, taking away staff from hospitals and pushing them into retail sites.

The Clinic of the Future: Redesigning Care Delivery

Jeff Carr, Vice President, Operations and Strategic Initiatives, Houston Methodist

- Security is the big issue. Every other day there are calls about in clinic thefts, thefts in the parking lots as we put up larger facilities, we are looking to have a dedicated security person. We're retrofitting clinics with mag locks, panic buttons, pro? Locks. Houston Methodist Cypress, its 9th hospital, will open in 2025 off Hwy. 290 in Cypress, the group's first smart hospital, tagged "the Hospital of the Future."
- Methodist considers what can be done to make it the smartest hospital? There will be cameras in the ORs to see how to make the OR more efficient. Robots will deliver food. Our physicians occupy 60% of the space. What can we do from the clinic of the future standpoint to make the exam rooms more engaging?
- Healthcare of the future begins before a patient even walks into the clinic, with 100% electronic check-ins and online payments, pre-lab orders and virtual medical assistants. Within Methodist Care's redesign, the patient feels welcomed, known and doesn't have to wait to receive care after arrival. A concierge is expecting and welcomes the patient. Because the pre-appointment tasks are complete, the patient doesn't have to wait – they can go directly to their exam room, saving them time.
- Taking away private offices and making huddle rooms. With an eye to reducing wait times, we're not far enough along here. In the beginning, each physician had 3 exam rooms; so, we've shifted down to 2.5 then 2, shrinking the number of rooms each physician will need.
- Methodist Care redesign interjects more thought to pre-arrival, arrival, visit and post visit to truly make engagement more efficient for the staff and more enjoyable for the patient. We looked at competitors like Kelsey-Seybold, One Medical, the Minute Clinics to see what can we learn to help us do our job better? We've engaged with Dewberry to see what can we do differently, whether it's through a kiosk check in upon arrival and waiting benches with a big check-in station the team working together in exam rooms or having smaller waiting rooms. The technology is there to use geo arrival. Our waiting rooms will have a very different look and feel, smart boards in the rooms, special consults with real time specialists.
- Healthcare of the future continues long after the patient leaves the clinic, hopefully with a clearer understanding. They can easily move through the next steps. The care team can monitor them remotely by putting wearables on the patient and this helps keep plans on track.
- We can optimize floorplans to maximize square footage dedicated to caring for patients, cross training staff and creating the most efficient work flow. We are continuously testing technology that can help us achieve goals.
- We now have seven same day clinics – in Baytown, Bellaire, Brooks Street, El Camino, W. Houston, Willowbrook and The Woodlands that offer same day appointments. These are open M-F, 9 a.m. to 6 pm and these are not urgent care. It's for a quick fix.
- We've put old processes and mindsets that no longer serve us behind us and we are re-imagining a system that can fit into our modern world.
- There are 1,200 physicians within Methodist, with another 3,000 who utilize our hospitals.

Money Saving Solutions You Can Use Tomorrow

Clean Air

Kyle Petersen, Camfil USA

- ASHRAE Standard 170 requires non-degrading filters, meaning filters that shall have a MERV A rating.
- MERV vs MERV A. While both filters have same initial reported efficiency of MERV 13 but only one filter has a MERV 13A rating and maintains its ability to filter air over a significantly longer service life.
- Only 20% of the life-cycle cost of an air filter is the price of the air filter!
- For every \$1 spent on a filter \$8+ is spent on the energy to push air through the filter. Considerations to contemplate: lowest pressure drop = energy savings.
- Longest filter life means fewer filters, with lower labor and disposal costs, most sustainable option, most effective use of labor.

5 Ways ICRA 2.0 Impacts Your Temporary Construction Wall Choices

Craig Fairbetter, STARC Systems

- Setting up Class IV temporary walls should be dustless, affixed to ground or ceiling, secure from movement, with sealed gaps.
- In a Class IV or Class V setting you need to be working in a dustless environment.
- Class IV and NFPA 241 ICRA 2.0 reinforces existing fire safety standards for temporary separation walls.
- Class V Anterooms a Must. Dustiest projects near the most sensitive patients call for extra precautions.

Using Sliding Doors to Save Money

Thomas Barnard, Allegion | AD Systems

- Using sliding doors allows you to optimize the number of exam rooms by increasing useable space within each room
- Get more exam rooms in the same square footage – one exam room for every 11 planned
- Sliding doors can now achieve acoustical goals & fire rating
- Standardize door and hardware configurations
 - Better budgeting, consistent pricing, inventory and maintenance
 - Ensure doors can meet all code requirements, reduces possibility of redoing door spaces and compliance issues

Spotting Healthcare & Life Science Real Estate Opportunities

Lisa Bovermann, Senior Vice President, Healthcare & Life Science Advisory Services, Transwestern

Ken Henry, Senior Vice President, Development, PMB

Yvonne Nagy, AIA, LEED AP, Managing Principal, HDR

Moderated by B. Alan Whitson, RPA, President, Corporate Realty, Design & Management Institute – Squarefootage.net

shared views on working in the 9,444 square mile Houston Metro area, that is slightly smaller than the state of Massachusetts and larger than New Jersey, housing the largest medical center in the world.

- The for-profits are out performing the not-for-profits
- Look at how to make this easier so the growth from 10 to 15% in physician headcount will
- HMPO physician growth of 162%
- 1,200 to 2,400 in future
- We'll need 1 million more SF to house physician enterprise. We are continuing to lease space; we see this as a growth market. In our free-standing investments, comprehensive care s.... smaller locations with 5,000 o 6,000 SF within 18 to 24 months, will be at capacity. Could not keep up with the growth.
- 200 primary care providers – we look at how to include GI, endocrinology, cardiology, etc. so outpatients can have all services within one location, as well as physical therapy, Xray.
- More life science opportunities are emerging, with the highest quality researchers housed here. Other factors are Secret, a cancer prevention research firm that has \$3B now our a \$6B fund. They award money quarterly and gave out \$73M to those relocation here, it's the largest fund in Texas and second largest in the world.
- At the Bio International conference, the line to talk to people about relocation to Texas was consistently 15-20 people long.
- Financing is an obstacle in behavioral health, reflected where the head of real estate for Baylor Scott & White mentioned how hard it is to get projects financed. Seeing fewer large projects, with focus is on serving the patient population.
- More clients want to repurpose what they already have, either by renovating or taking the building they own and repurposing it, both of which are expected to be long term solutions. It's important to have all the information before beginning construction.
- Alan Whitson noted that architecture is cheap compared to construction.
- It's essential to avoid overbuilding so as not to oversaturate the market, which is especially tight for younger companies. Transwestern will deliver 900,000 SF in 2023. They are building and outsourcing wet labs for a collaborative building in the Helix in the new TMC3 campus, as well as a co-working space, where fledgling companies can get established and get seed \$ to spin out to bigger spaces.

Future Proof: Creating Market Responsive Spaces

Annabella Koloskov, AIA, LEED AP, BD+C Principal/Lead Healthcare Planner, Page

Allison Muth, Regional Director of Construction, Medxcel which supports Ascension Texas Market.

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- From the strategic view of the future of healthcare, it's about creating clinical spaces, hospitality that the consumer seeks. Every square inch matters. There's more focus on highest and best care and defining the hub & spoke model and finding where we can support patients both at home and in clinic.
- Central Texas and Austin market has grown very fast (150 people are moving into north Austin area each day).
- Architects are bringing more adaptive designs, rooms that can either be used for acute care or ICU by changing what's behind the walls. Again, what they don't want is overbuilding.
- Some clients do not have large healthcare groups, so we work with acquisition groups and partnership programs in Central Texas – many are eager to have a partner come in and help them manage projects.
- One goal is to implement standardization that relates best to the market and to the budget. What tools do we need to be able to work together most efficiently? Is it a wall system to make it happen more quickly? We must make sure environment is conducive. Sometimes it is asking what level is everyone working for? Take time up front to understand market goals. As soon as you think about something, tell the team so that all can be right-sized. Start slow and right size in the beginning – this will shape the way it's delivered.
- Define deliverables, get all in early, engage in the conversation upfront. Have all partners at the table early.
- As we prepare for future pandemics, does this mean more mechanical systems, IT, having Infrastructure in place so it can change moving forward. Technology is more important than ever. How big is the IT closet? In the clinic for all, this relates to tracking of patients, staff.
- Staying truly committed to standardization means continuing conversations about technology, tracking. Tech is evolving so that design is best you can have. The amount of cabling we put in now is exponentially so much larger, and its all-around tech.
- We have to be adaptive and look at how to take the level of care to the highest point.
- Remember those who need care aren't as tech savvy, so it's important to create pathways and develop different facility types that support a continuum of care. Keep focus on sustainability and getting to net zero.
- We want to start with what we think is the best solution – this incorporates security, technology. Keeping a working standard framework encourages efficiencies.

Adaptive Reuse & Reconstruction Opportunities for Healthcare & Life Science Facilities

Matt Elliott, CPC, Director of Healthcare, SpawGlass

Sunita Ganjoo, Senior Project Manager, Harris Health

Gaurav Khadse, Assistant VP, Facilities, Planning & Development, Texas Children's Hospital

Kenneth Olson, AIA, Partner, PhiloWilke

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- **What is the biggest advantage of adaptive use?** Speed to market and the ability to grab more of a market sector. The Ion did it, and capitalized on keeping costs down yet keeping speed to market. They converted a building to use it for current need.
- Gaurav Khadse suggests cost and speed in accessing a converted building makes sense if it feels like you can get speed, you go for it. It's important to look at all components before beginning renovation. He recalled an example where halfway through with a hospital built in the 70s, you realize it's not the best decision.
- Sunita Ganjoo explored what is the best way to reuse adaptive space. Upgrading Infrastructure can be a nightmare, especially if the mechanical usage is tremendously high. So, we consider, is a building outside of the facility better – we look at transportation, how do people commute, travel by bus and train. There are advantages in doing a large renovation space.
- **Stakeholder collaboration** - Matt Elliot helps clients assess infrastructure that is in place. Many times, it is not workable so we give them honest feedback. The sooner owners get on board, the better. We're partnering with our clients and that leads to productive investigation to understand if physical and environmental components meet up. We've learned over the years to ask "why?"

Ganjoo said they learned after doing due diligence and reviewing all the information about a medipaharmacy where the real estate team had picked a site, four months later it was handed to her. It was then a \$30M project. Ask, what is the ROI? Look at the use of the building and assess if it is sustainable. We realized it was not right. She suggests taking a step back and rethinking. We ended up picking up a different building type. There were many stores that went out of business during the pandemic, resulting in more inventory of buildings that could become for example, sports rehab facilities.

- **Avoiding putting a square peg in a round hole** – Performing due diligence, planning and partnering with the architect. Obviously, an inpatient facility won't work in a building with no windows. Khadse says for him, it goes back to occupancy, and understanding if adaptive use is cost effective. Parking is often a big need. Look at how does the building interface with the rest of the infrastructure? Whitson cited an example where Duke bought a Macy's in Raleigh where for 80% of the replacement cost of the parking garage alone. Often times, parking is neglected. Ganjoo agreed that parking can determine what you can build, so it's important to have understanding before construction. It's always about the bottom line within the 5-year master plan. We have to evaluate all of these issues.
- Elliott said it's critical to look at how much detention is in place and how utilities coming in will impact that – those are key factors to evaluate with industry partners – making what's unknown

known to the project team and putting in the work early. SpawGlass does much of this work with modeling. Texas Children's Hospital uses 3D scanning and Khadse says understanding the entire scope is key. "We've learned a lesson in converting to dialysis floors. From a technology standpoint, you have to understand the infrastructure.

Designing for Security in an Era of Increased Violence

*Denis M. Hyams, Jr. MA, CHPA, Director, Security Services, Memorial Hermann Southwest, IAHS
Houston Chapter Chair*

Roy Williams, Director of Police Tech/Administrative Support, MD Anderson, Past President IAHS

*Moderated by B. Alan Whitson, RPA, President, Corporate Realty, Design & Management Institute
– Squarefootage.net*

- Bring in security into the design process at the beginning. Having an open hospital from a security perspective means you have to look at patient and staff safety. We're there to help discuss security for healthcare standards,
- We're looking at re-entry now for vendors and employees not having to come in through a specific point to make workflow access more convenient. What's your camera system? Look at community standards, incident reporting, staff surveys and patient experiences. It all comes back to providing a safe environment.
- Much of what we've learned will keep people safer when the next pandemic hits.
- Crime prevention through environmental design – building in layers to delay and make it harder for someone to come in and commit a crime. Provide as much protection as possible, with weapons detectors, card access, refitting cameras or possibly an elevator renovation system. Critical to be willing to listen and have specs ahead of time. It's a collaboration across the professions.
- Bring in security team early - it's always less expensive to do assessments before building.

Snapshot: Integrating Security, Technology and Hardware

Melanie Wright, CFDAI, Manager Healthcare, ASSA ABLOY

- New tools such as wireless access control, integrated card readers can leverage existing WIFI on the network. Most traditional EAC hardware works in real time online. The hub gives you real time data transfer. There are also IP-enabled point-of-access controls that are more energy efficient.
- Intelligent keys and eCylinders allow administrator full control of access rights without visiting doors. These have easy to use software that can create access schedules, monitor audit data and manage lost keys.
- Consider the Security Continuum offering a range of solutions for every door and budget, from mechanical locks, to a stand-alone to intelligent keys, Data-on-Card, Intelligent WiFi, Real Time Wireless, Wired and Intelligent Opening options.
- A variety of options allows for lockdowns when needed.
- It's important to have a conversation with security team before Increasing integrating security, technology and hardware. Identify what security goals are and what options exist to reach goal. What are budgetary constraints?
- Consider how security goals will be achieved through design, technology and products. Once goals, design, and products are determined, the process must be coordinated from Design Development through installation with the end user, design team and security and hardware consultants.

Holistic Approach to FF&E Solutions

Introduction and moderated by Gary Longbotham, President, AMFP Houston

Don Hellem, Senior Associate, Senior Project Manager, CannonDesign

Shawn Morris, VP Healthcare, Arch-Con

Marissa Vasquez, Director Facilities and Construction Projects, Houston Methodist

- If healthcare organizations are to survive, they must embrace new design/build partnerships, innovative products, integrate technology and initiate new design, procurement and building processes. Their health, operability, and even survival more than ever depends on cutting operating costs. This is driving the demand to think outside the box with cutting edge products and an innovative holistic approach. For example, owners and their design/build partners are looking at new options for FF&E, primarily “pre-manufactured” products such as modular casework vs traditional customer built millwork. Millwork requires detailed, costly and time-consuming design and shop drawings, long timelines for scheduling and fabrication, inconsistent quality and only 6 months to a maximum one year of limited warranty. It also carries a depreciation over a lengthy 39-year period. Modular pre-manufactured casework is much higher more consistent quality, shortens the construction timeline by weeks and sometimes months, is depreciated over 7 years, gets a first year 100% tax credit and has a 12-year unlimited warranty for all parts and labor. This produces not only significant up front project savings but a substantial return on investment by eliminating repairs and maintenance for 12 years. Many other pre-manufactured products such as restrooms in patient rooms, headwalls, and demountable wall systems further deliver substantial operating and financial returns with the new design/build partnerships and using the holistic approach.
- Holistic collaboration with the architects enables lower risk management.
- Having everyone sign on up front eliminates rework and creates a homogenous environment. Manufactures FF&E products have become much more componentized, modular, adaptable and are crossing over in application to blur the lines between architectural elements, technology tools, clinical equipment, and general furnishings. These products are all being “blended” for better work environments and optimizing the owner’s investment, not to mention the significant impact on lowering operating costs.
- After Covid, due to supply chain problems, costs are up 40%.
- Marissa Vasquez [Title] advocates for broad awareness of availability of products at the beginning for both timeline requirements and better budget forecasting. This has become even more important with supply chain uncertainties and the significant increases in costs of products. This need for awareness of products and their adaptive design and implementation is one of the major elements driving the change in how consultants and design/build partners are selected and how the products are purchased. Many of the FF&E manufacturers and their dealer partners are being pre-selected and added at the planning and schematic design stage of the project to work as a consulting/design partner with the architect, general contractor, and technology vendor.
- The once common formal bid process simply does not work in the current environment; now it’s more common to use one supplier (manufacturer/dealer partner), architect and designer, technology supplier and general contractor who can create the most functional and cost-efficient solutions for furniture, equipment, architectural elements, and technology to improve “speed-to-market” and contain project and operational costs. Ex. Instead of having a room take

a week to build, now it's possible to create it all in a day with a pre-manufactured fully functional product.

- Stage deliveries in strategic manner, stock in the evenings because space and time are short and there's not extra room to store excess.
- Review ROI after the initial project so there's better functionality, they find out 85% of costs come in later due to budget overruns, late deliveries – instead of an 8-10 week delivery, at times now it can be 20-25 weeks.

Managing Complex, Mega Projects

Patrick Casey, AIA, SVP Facilities Construction & Systems Engineering, Harris Health has a last-minute schedule conflict was unable to present.

Jim Seta, Program Manager, Jacobs

Earlier this year, Jacobs recently participated in a topping out ceremony for the \$650M Methodist Hospital in Cypress. The new facilities will provide important state-of-the-art patient healthcare and leverage innovative technology for medical treatment. This topping-out ceremony celebrates Houston Methodist's continued commitment in providing outstanding and award-winning patient care, and its more than 17-year project delivery relationship with Jacobs. Notably, this topping out ceremony signified the soon-to-open Cypress Campus, with its first patient planned in the first quarter of 2025.

Challenges

- Logistical:
 - Demolition of existing
 - Tight footprint
 - Outdated property lines & easements
 - Land transfers
 - Connectivity/adjacencies to existing facilities
- Authorities having Jurisdiction
- Working in the TMC:
 - Architectural Standards
 - Board approval
- “The train has left the station”
- Cause & effect (scope creep)

Opportunities

- Speed to Market
- Select CM at end of Schematic Design
- Procurement Strategies:
 - Bid Package Development:
 - Foundations & Enabling
 - Core & Shell
 - Build-Out
 - Bulk Procurement
 - Multi Subcontractors per Discipline

- Competition
- Better Pricing
- Design Assist
 - BIM, single model
 - Partnership with Design Team & Sub-Contractors
 - Periodic cost reconciliation
- Authorities having Jurisdiction
 - Explain how the building will be permitted, built, activated and occupied.

Best Practices

- Sprint Start (Interactive Planning Session)
- Permit the building by floor
- Phased opening of the building
- Prefabrication
- Culture of Caring
- Maintain the schedule –forecasts are imperative
- Maintain the budget –forecasts are imperative
- Hold Team Accountable
- Managing the Risk for life of the project