

# 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



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Money Saving Solutions You Can Use Tomorrow: Allegion AD Systems

Creating Jobs: Social Equity and Access to Care in Underserved Communities

Closing Out Projects: I Love It, It's Perfect, Now Change It

Building & Supporting an Agile Design & Construction Team

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

*Michelle Mader, Managing Director, Ankura*

- Health care capital projects must grow revenue, provide capacity, boost recruitment and create loyalty. They must reduce costs, leverage economies of scale, increased productivity and incorporate technology. And they must create value for patients, staff on the balance sheet.
- Major sources of ROI funding are operating margins (approximately half of U.S. hospitals finished 2022 with a negative margin), private equity (84% bankruptcy increase from 2021 and '22), bonds (inflation is in short Kryptonite for bonds), philanthropy (tied to portfolios) and portfolios (worst since 2008).
- Hospitals broke even in April but have very little wiggle room. Volumes are dropping while ALOS is increasing for a double whammy. Impact of Medicaid disenrollment is starting to be seen in bad debt and charity care hikes. Inflation continues to be problem and “throttle hospital expenses.”
- Forces collide: Declining capital market (inflation, supply chain, cost of capital, locked up credit), unstable labor (quiet quitting, layoffs, retirements, realignment), technophile consumers (convenience, value, where when and how I need it), rising acuity (margin eroding, root cause=multivariable) and slow reform CMS (2.6% increase) vs. actual costs of (6.5% inflation), Medicare Advantage.
- Structural changes to healthcare's Delivery Model include shifts to lower cost sites of care, shift from IP to OP, shift from in-person to virtual, shift of legacy market share to retail giants, shift of traditional staffing tasks to automation and technology.
- Capital planning is focused on near-term challenges. They're playing Whack-a-Mole, and looking for short-term returns.
- “Fill it or kill it” is all about utilization. Most health care capital projects don't meet/exceed their ROI expectations. Capital plans that define what we need based on what we can afford.
- What does this mean for future planning? Increased due diligence, pause or abandon projects, increased right-sizing pressure, higher revenue per square foot expectations, consolidation plus economies of scale. We'll get back to institutionalized standard-size facilities. We can't afford to build for volumes 10 to 20 years out.
- We have to stop talking about costs per square footage, but instead talk about revenue per square foot. Everybody is looking for M&A, and Mader

- believes we will get to 200 health systems in the U.S. within the course of her career, which she expects has 10 years left.
- Impacts to PDC Community: Maximization of Flexibility. Pre-Con Scoping, Budgeting (high demand staff). Construction Led Projects (based on budgeting and cost control), Standardization (continuous and consistent), 1-2 vs. Business Occupancy (size of rooms, offices), Repurposing vs. New. How can we repurpose, how can we continue to live and not go out of business and serve this community?
  - How to Help Clients Plan Their Capital Well. Challenge teams to identify what they can afford first, and use data-driven planning and design metrics, develop financial thresholds and milestone checks, look for ways to reduce costs and leverage economies of scale, see new building as last resort solution plus infrastructure monetization.
  - The labor shortage and other costs are making hospitals a bad place to be. As we're able to do more things on an ambulatory basis, patient care will get better. We're now learning what's best is us going into the home and providing better care.

## Future of Ambulatory Care Facilities

*Tyler Bauer, LCPC, Senior Vice President of System Ambulatory Operations, University of Chicago Medicine, former Senior VP of Clinical Operations, NorthShore University Healthcare.*

*Matthew A. Bluette, AIA, ACHA, AICP, NCARB, LEED AP, Principal, CUBE 3*

### **Tyler Bauer:**

- Payers are demanding we move to ambulatory, and to shared risk. We need to make sure patients stay in the system, so we can control the procedures, how long they stay in the hospital. We need to provide care where patients want it and how they want it.
- If we don't provide convenience for the patient, they will leave us.
- E-check in provides opportunity in health care. Will our patients adopt that? Maybe, but does the interaction at the front desk have to happen? Most patients can do their own check-in. Use a concierge with a tablet roving around to patients who can't do it on their own.
- We need to think about larger buildings, the efficiency of our staff especially as we talk about labor costs. How many steps does the staff member need to take to get her job done?
- As we move away from a central hospital to facilities further out, we have to think about inventory systems that are not manual and get supplies out from central stores efficiently.
- With team-based care, those employees on teams need to sit together, and move together, so they can communicate with each other easily about what they are seeing.

### **Matthew Bluette:**

- I have to get involved in the actual business deal, and talk to vendors. We go in and try to partner with the client and push back gently. I will get into scrubs and shadow.
- The savvier clients doing well right now will staff a local hotel and do it there, to find ways to keep it out of the hospital. We're now doing four to six urgent cares for hospitals at a time.
- People are savvier now, they're younger, healthier, they're consumers of health care now, they won't be dictated to. Less architecture, and more bringing all people who are going to be involved to the table.
- The idea of the hospitality has been going on for 15 years, but the dealmaking and the joint ventures and the like have really taken off since Covid. You're not just saving lives anymore. You have to be thinking of business.

## Money Saving Solutions You Can Use Tomorrow

### 5 Ways ICRA 2.0 Impacts Your Temporary Construction Wall Choices

*Johanna Welsh, CSI, National Accounts, STARC Systems, Inc.*

- 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.

### Clean Air

*Marc Johnson, Healthcare Segment Manager, Camfil*

- ASHRAE Standard 170 requires non-degrading filters, meaning filters that have a MERV A rating.
- MERV vs MERV A. While both filters have same reported efficiency of MERV 13 but only one filter has a MERV 13A rating.
- 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.

## Strategic Planning For Sustainability

*Christian Banks, CHC, LEED AP BD+C Project Manager Planning and Construction, Project Director, Energy Efficiency/Sustainability Program, Northwestern Medicine*

*Michael Fiore, Assistant Vice President of Clinical Operations/ Environment Health & Safety, NorthShore University Health System*

*Ian Hughes, Sustainability Manager, Rush University Medical Center*

*Justin Jay Macadangdang, JD, CEM, GEMS, Program Manager, Facility Sustainability Officer, Jesse Brown VA Medical Center*

### What are your primary goals?

**Fiore:** We do a good job at treating the sick, but we want to do a better job keeping people well. In line with sustainability comes efficiency and waste reduction.

**Hughes:** We need to think upstream and downstream to think of our full footprint, not just our four walls. Goals: Minimize chemicals of concern in furniture and flooring, be net zero by 2050 on carbon emissions.

**Macadangdang:** Sustainability, climate mitigation, environmental justice, sustainable procurement. We aim at progress through partnerships.

### Money Drives Action: What are the negative financial impacts of not reaching your goals?

**Banks:** What can we do to come off the grid and decrease our energy costs? Be more efficient with our mechanical and electrical; if not we'll just be adding to our costs.

**Fiore:** A 5- or 10-year return is not a bad overarching goal. We know energy will not get cheaper. We know sustainability is a recruiting tool.

**Hughes:** Climate change is a human health issue. So if we're not doing this work, and contributing to climate change, we're not helping human health.

**Macadangdang:** When it comes to cost, we're very careful about what we choose. If we make a mistake and have to

pay more for mitigation you will have to pay because we're the government.

### **What are the obstacles to what you're trying to accomplish?**

Hughes: We're only three years old, and struggling to get noticed. There's a lot of good community work being done at Rush. There's a lot to our mission. So, we need to make enough noise to get noticed, and it ultimately comes down to funding and how do we get creative about explaining cost?

Fiore: We don't want to be the first. We love to have proof a couple other people are doing this, and that there is value that can be documented.

Banks: Capturing data and justifying it can be a hurdle. You don't know what you don't know, it's constantly evolving. We want to collaborate with our industry peers.

### **What are your long-term objectives?**

Fiore: Sustainability is kind of like where safety was 20 years ago. The question is how to integrate that into our day-to-day operations? We try to cherry pick where we'll get the best value. We're competing against a lot of other priorities. Having case studies and partnering with us on pilots are a couple of the ways partners can help.

Hughes: Data is incredibly important to us because that's where we find opportunities. Storytelling: if you have products that have a sustainability component, we want to tell that story to show huge wins for sustainability. Attending the CleanMed Conference and cheerleading great products and practices are important steps. How do we build in resilience? That's an important issue we ask ourselves.

If sustainability can be an integrated tool in terms of maximizing efficiency and resiliency and minimizing waste, the cost can be justified.



## Get Smart: How Technologies Are Changing How You Can Manage Healthcare Facilities

*Braheem Santos, Healthcare Strategic Account Executive, Schneider Electric*

*Corey Gaarde, FHIMSS, CPHIMS, associate principal, project executive, IMEG Group*

- We all have our own definitions of what smart buildings are. By having different definitions, we get different results. We need a building that thinks, adapts to its conditions, that is a smart building.
- The requirement to have cameras in the room: They can detect patient movement for fall risk, change the lights and the airflow. You can apply a lot of these technologies into a digital patient room.
- We're trying to influence the role of technology in the future. The opposite of doom and gloom is that technology can be your friend and improve the patient experience.
- We establish use cases to determine what is wanted in the building. And then we work backwards to create the building that allows these uses to be possible within the building.
- If I can incorporate more technology and make my space more efficient, so fewer mundane tasks need to be performed, it benefits the patient and the health care environment, and improves ROI.
- Making a building cleaner and safer is more paramount these days. Get technology involved from the beginning. If we get there too late it results in multimillion-dollar change orders. Technology can play a role in the design process and contribute to better patient and staff experiences. Bringing people in early can save you money.
- You need a multidisciplinary team determining what goes into a smart patient room. Unless you're a greenfield hospital, you can probably pilot a lot of these technologies. You have to think out of the box, and you can't get different results doing things the same way.
- If you enter this process thinking of what you can't have and how much it will cost, you will not achieve the best result. Think differently, embrace subject matter experts outside your lane.

## Delivering Care: Social Equity and Access to Care In Underserved Communities

*Marvin Daniels, Vice President, Project Manager, Hammes Healthcare*

*Walter Jones, Senior Vice President of Campus Transformation, Glick Center Hospital, MetroHealth Campus*

*Steve Nargang, Regional Vice President, Hammes Healthcare*

MetroHealth is a 182-year-old institution in Cleveland. It is based on social equity and access to care. It is very mission driven by its very nature and is intending to continue that mission for the foreseeable future.

The completion of the Glick Center represents a long-needed substitution of the existing campus structures, the oldest of which was 100 years old. The Polar Vortex in 2014 showed the existing facility was inadequate.

Glick Center opened November 5<sup>th</sup> of last year. It's still on its initial shakedown cruise. That facility is promoting the access and equity on the near West Side of Cleveland that had not seen any kind of investment. Diversity, inclusion and equity with minority and women-owned businesses was essential in the development project.

We set the tone from the start on how we would communicate with one another as team members. We wanted to demonstrate to the community financial equity through inclusion, ensuring the signal was loud and clear to the community. We wanted to make sure there was opportunity for financial growth.

A good measurement of how successful you are in extending opportunities to companies who deserved to be at the table. We wanted to show true evidence of benefit in experience and financial stability.

For a project of this type in Cleveland, there are other health systems that do large projects but are not as well known for significant involvement of the community.

Our goals weren't just involving Hispanic, African-American and women-owned firms, but others, and they were not just met but exceeded. The reason it's a campus transformation, you wouldn't have seen a single acre of green space on the entire pre-existing 52-acre campus. The goal was to turn half that acreage into green space or open space.

The value is there is no other green space in the entire Clark-Fulton enclave; there are no other areas of green recreation as part of a health and wellness initiative. We are the first hospital eco-district in the country.

We have a high school in our hospital. Students come to classes in the hospital, that is where they learn, and they are tied to mentors. Not just mentors on medicine, but everything from being an electrician to a physician, because we have all those people as part of the campus.

All of this was accomplished in the course of building a new hospital. The Institute of Hope will continue on with objectives.

We ended up with 368 beds in the Glick Center (all rooms are universal for greater flexibility and can change in an instant). 725,000 square feet, 11 stories, all inpatient services. We wound up with a \$60 million budget surplus. I can do just about everything in any room; we may change the modalities based on whatever may come along in the future. "Let's make it incredibly adaptive, to whatever the future is."

## Money Saving Solutions You Can Use Tomorrow

*Thomas Barnard, Allegion AD Systems*

### Using Sliding Doors to Achieve Privacy

- Optimize Patient Privacy
  - Privacy glazing used for natural light transmission
  - Achieves soothing spa-like exam space
- Acoustical Goals
  - FGI Guidelines for Acoustical Privacy achieved with NIC 39

### Using Sliding Doors to Save Money

- Optimize Exam Rooms
  - Increase useable space within each room
  - More exam rooms, 1 for every 11 planned
- Standardize Door and Hardware Configurations
  - Better budgeting, consistent pricing, inventory, maintenance
- Doors can meet all code requirements, reduces possibility of redoing door specification, and compliance issues

## Creating Jobs: Social Equity and Access to Care in Underserved Communities

*Joan Archie, Executive Director, Business Diversity and Compliance, University of Chicago Medicine*

*Guy Medaglia, President and CEO, Saint Anthony Hospital and Chicago Southwest Development Corp.*

Joan Archie: Comer Children's Hospital was built by certified minority-owned firms which installed the siding, roof, floor, and handled the painting. That is the power of our work at University of Chicago Medicine.

In building the University of Chicago Medicine's new cancer center, our goal is 41 percent of all construction dollars to be awarded to diverse building sources.

Guy Medaglia has been at St. Anthony for 16 years. The hospital has worked with many other systems. University of Chicago Medicine accepts our patients, never questions their insurance, doesn't turn anyone away.

Archie: We have a process and the success we've had in using minority and women-owned firms is not by accident it is part of the medical center's processes. One of the things that had to be done at the outset is establish goals. Our goals increased from 25 to 40 percent, and not just on new projects but on renovation. As we move into the cancer center project, I'm asked if we can do the same thing on the cancer hospital. My response is I don't know but we will try.

We don't go to contract unless the diverse representation is solid, and unless it is written into the construction manager's contracts. Many have continued to use their diverse business partners they used on our projects on other projects around the Chicago area. That's how we do business and how we will continue to do business on the Cancer Center project.

When you are changing the way things have always been done, that's not easy. Not every contractor was on board with using diversity. Those were the challenging years. Now when firms are interested in working with us, they know our processes, our numbers and our outcomes. Firms don't self-report, we have a very strong compliance department to ensure these meaningful goals are met.

Start by setting diversity goals within your firm, ask what you are doing within your firm to make diversity a priority, not just in hires but in who you do business with and who is achieving economic benefit through your work. Take a mirror and put it in front of their face and ask what is it that we value. There has to be intention, and it has to be from the top.

### **St. Anthony Hospital Campus.**

Medaglia: We make sure that as we do renovation or new projects, the community is fully engaged. Some 500 people were at a recent event with elected officials calling for more money for St. Anthony. We believe the ZIP codes we serve deserve our campus. On this campus, we are staying with a 151-bed hospital, and it may shrink it a bit. I'm not a believer beds are the answer. We have to push our patients into more home care. When the board asks if I need to spend all this money, I say I need more money. What you take for granted in suburbs you can't take for granted in Little Village or North Lawndale. It's a different world.

Our goal is to take younger community residents away from their second families, the gangs, and spend more time on campus, in places like our multi-purpose athletic field and the fitness center.

Part of our incubator and accelerator program is to bring these people off the street, and enable them to learn about bookkeeping, handling labor and growing their businesses. The hospitality bridge is a place for members from the community to have weddings, functions and *quinceanaras*.

So it starts with a hospital, and the only way we could get this model to work is to create a 501c development company. The Chicago Community Trust offered to help us out so we could give grant dollars back to the community organizations. When it all opens, I'll stay for another six months. You need an engine that can support the community's needs and put money back in. I'm hoping communities like this will play an important role going forward, not just in Chicago but in other states and Canada.

We break ground first quarter of 2024, and according to the city the first thing we have to put up is the hospital. And the actual opening of the facility will be in late 2026 or early 2027. Once we got the land we started to move forward.

We're not trying to create a fortress. We're trying to create an environment – a safe environment. Whatever it is they do outside the campus, within the campus it's going to be a respectful interaction.

## Closing Out Projects: I Love It, It's Perfect, Now Change It. Transitioning to Stable Occupancy through Proactive Planning

*Eric Hoffman, Vice President, Project Management Advisors*

*Doug King, AIA, NCARB, ACHA, Vice President, Project Management Advisors*

- There is a difference between closing out “The Project” and managing the unavoidable transition of projects, operations and initiatives that overlap the close out and operations start up.
- Stable occupancy doesn't occur for some time. That takes a robust conversation, and needs to be done on the front end.
- There are five buckets: Project Overlap, Owner Driven, Planning, The Journey and Outside Forces.
- In Project Overlap, the big squeeze occurs between completing the construction activities and initiating the hospital revenue stream. In between these are project completion activities, including systems testing, move-in, regulatory review, training and more.
- In Owner Driven, considerations include program, leadership, care model, change of mind, budget status and evolution of business models and operations.
- In Planning, the planning was either incorrect or not planned at all; not timely enough to align with the project schedule; or the strategy and planning evolved as the project continued.
- First cost considerations can sometimes result in “costs ad nauseum” as when access card readers on the doors at Lurie Children's Hospital turned out to lack functionality.
- During The Journey, there are mockups, the physical space takes shape, there's the evolution of equipment design or new equipment and technology, evolution of operations in terms of projects and initiatives and finally, post-occupancy epiphanies.
- There's an outdoor deck on the fourth floor, or children's floor, of the Cleveland hospital, and there's a four-season room there. And on the side of the retractable door is an outdoor deck with a mound, there for play but also for pediatric rehab. And then we moved in, and we started to operate, and the people operating the space said you have to get rid of the mound. They were afraid the kids would throw things across the railing, and they came up with every dire circumstance you couldn't

imagine during the planning process. We eventually had to remove it.

- Outside forces can include AHJ changes, discontinued products, supply chain challenges, funding or payment models.
- Lessons: Set up the project for success. You have to accept that not everything will work, you have to budget for time and cost. When you do make the changes, have a robust communication plan that includes the impact to schedule, budget and operations.
- Make sure affected front line workers get the information. It is crucial to have a holistic, comprehensive communication plan with the right people to implement the plan.



## Building and Supporting an Agile Design & Construction Team

*Bryan Finnegan, AIA, LEED AP, CLGB – Senior Architect and Project Designer, Gresham Smith*

*Austin Holcomb, PE, LEED AP, Director of Corporate Construction Management, McClaren Health Care Corporation*

*David Jaeger, AIA, LEED AP, EDAC, Principal, Healthcare Studio Leader, HED*  
*Colin Martin, Project Director, Barton Malow*

The McLaren Greater Lansing Hospital required 32 months. On the design side, at one point there were 45 people included between two design firms. As the design was evolving, the building design changed from curtainwall to non-curtainwall, straight to curving, and changed in other ways. When our teams came together, one team may have experienced a situation while the other didn't. We learned from each other.

An environment of collaboration was created using LEED principles as our guide. We went out to four or five design-build partners. Program manager, A-Es, consultants and construction team early engaged equipment suppliers

Early onboarding of design-assist partners, which were chosen on the basis of value, not price.

Our theme was do what's best for the project, and we kept that philosophy throughout the lean implementation. We were able to drill into design details to get lean implementation.

Team health: Trust your partners, culture of trust, trust the process. This made the project successful. A team assessment report card graded the team on safety, team cohesion, information-sharing communication, team conflict, goal specification and trust. The overall team – 600 workers -- knew that if they made a mistake, they wouldn't be battered for that one miscue.

Prefabrication was a big part of the project, and would not have been possible without the design assist part. The quality of workmanship on the elements was beautiful. The cost and speed of construction was much improved. The owners got a great system for less money with faster construction.

The project started in late 2018 and ended in 2022. The project shut down for two months (in 2020). The design construction team had actually committed to delivering early, but then came the pandemic.

Lessons learned from bringing the firms together on the project:

- We will use the design-build approach again
- Not a forced marriage between parties
- Accountability and collaboration were essential
- No egos, even when we had 45 people together in the office
- Everyone's voice counted
- Takt's early emergence and utilization
- Embraced staff modifications on a team and leadership level

Traditional model of executives wasn't what was needed. The project required a doer model with active engagement throughout the project lifecycle. Alignment of cost management was needed between A/Es and the construction team.

Executing this on your future program, the takeaways:

- This program was unique, but the processes implemented were the benchmark against
- Focus on team's culture
- Be deliberate about the people engaged and what role they fulfill
- A high-functioning team is dependent on the owner
- It's not enough to just want it, you need to believe it

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