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Creating an Evidence-Based Design Healthcare Furniture Checklist — Questions & Answers with authors Eileen B. Malone and Barbara A. Dellinger – PART 2

Eileen B. Malone, RN, MSN, MS, EDAC, senior partner with Mercury Healthcare Consulting LLC and Barbara A. Dellinger, MA, AAHID, IIDA, CID, EDAC, associate vice president and director of healthcare interiors-East Coast at HDR Architecture recently teamed up to create an “Evidence-based Design Checklist” for furniture in healthcare settings.

The checklist has just been published in two forums – a white paper entitled, Furniture Features and Healthcare Outcomes, found on The Center for Health Design’s website, as well as a feature story in the June issue of HealthCare Design Magazine.

Michael Pflughoeft from the Steelcase Health blog talked with the authors about the project, the response so far and next steps for the authors and the industry as a whole. Here’s the second and final part of that interview.

Steelcase Health: So were there any surprises along the way as you were developing the checklist? You mentioned that there just wasn’t a lot of pointed literature – that you had to do a deep dive – but even as far as doing the research and development or in the reaction you got from people – any big surprises?

BD: One of the big ones I think was the lack of standards for bariatric furniture. We specify waiting room furniture all the time. It is confusing because one manufacturer might say that a chair will hold 400 pounds another would say 700 or 1,000 pounds maximum. As we looked deeper, we realized that with no standards, each manufacturer could say whatever they wanted. That was really surprising.

Steelcase Health: The bariatric question has actually come up for us at Steelcase Health a number of times.

EM: Here is the practical reality, Michael, one third of Americans are medically obese and another third of Americans are overweight. So, that is two thirds of Americans who are something more than “normal size” which has enormous implications with regard to its safety and comfort for the patient. Patients should not have to worry about whether or not they can fit in a chair and if it will break when they do so. They’re already anxious about being in a healthcare setting. But larger furniture has profound implications for the space that is needed to accommodate it. Barbara tells me that the industry as a whole generally uses about a 10 percent factor to plan for the seating for larger patients. Obviously this planning figure is clearly at odds with reality.

Steelcase Health: Any other surprises along the way?

EM: Well, to tell you honestly, as a nurse and healthcare leader, the whole development of the checklist and the research that it is based on was a surprise. I think most clinicians do not think about the furniture very much at all, other than as something you need to deliver care that you want to look 'nice' and be comfortable. I was really sort of gob-smacked how little I had known about healthcare furniture. I remembered furniture purchases that I had approved over time and recalled that the decisions were made based on my personal preferences and the recommendations of my staff – all without the benefit of an objective investment framework. Furniture is an expensive investment that can represent 2-4 percent for a capital budget for a new healthcare facility. We would just not make any other major purchases like this without using some objective methods to evaluate the purchase. We hope that checklist will help in healthcare leaders make more informed furniture purchases.

BD: I have found that the furniture reviewers on the client side (whether they are clinicians or facilities management,) often don't scrutinize the furniture specifications and plans in the same manner that they review plans from other disciplines — such as mechanical or electrical — now it is clear why….

With the lack of guidelines and standards (other than some regarding construction for commercially sold furniture), what would they be scrutinized for? Comfort is impossible to assess until one actually sits in a chair. Looks? Yes, but that is so subjective. Safety and cleanability are hard to assess too, unless the item is in front of you.

EM: To that end, we were very clear about the first three checklist goals, all of which are directly tied to the patient safety – healthcare-associated infections, patient falls and medication errors. This is a real area of interest for me. Although we have made some progress during the last decade or so since Institute of Medicine released "To Err Is Human" followed by "Crossing the Quality Chasm," we still have not solved these basic safety problems. We think that James Reason' s theory about the vulnerability of healthcare systems explains why we have not been more successful. In order to solve tough safety issues, you must consider all of the variables that play a role- and things like furniture represent an important and unconsidered variable, which we explain in the white paper.

I recently attended a meeting about the patient experience, a topic of key concern because Medicare patient satisfaction will drive some portion of hospital reimbursement. Many strategies to improve the patient experience were discussed during the first couple of days – none of them really included variables in the physical environment – even though the CMS patient satisfaction survey includes two specific questions about the environment of care with regard to cleanliness and noise at night. It wasn't until the third day when the panel I was on began to discuss the role of the physical environment and its impact on care delivery processes and patient experiences that the light went on for some of the participants.

So this tells me it's not just all about the "buy in." Barbara and I are comfortable with the concept of evidence-based design and the role it plays in shaping care delivery and patient experiences. I do not think that the vast majority of healthcare practitioners do. So it is up to us to help them understand the research and provide practical tools so that they can appropriately consider the role of the environment and all of the objects found in it, to include furniture. Barbara can tell you about her use of the checklist – it's been a powerful communication tool that really facilitates a meaningful dialogue between multi-disciplinary project team members.

BD: Interior designers who have seen it are excited about it. They realize it does limit what can be specified and there is an adjustment period while they remind themselves that hospitals are not hotels… It's a whole new way of thinking about evaluating product, especially for say, a cancer patient versus a psychiatric patient.

Steelcase Health: Would you consider that to be a barrier or hurdle in terms of acceptance of this in that it's going to force people to change the paradigm that they have been using not only from the end user healthcare folks but from the A&D and designer community are going to have to reconfigure their mindset and how they specify and choose products?

BD: I don't know if I'd call it a hurdle but I would say that there will be a learning curve for healthcare designers. I think it's a step towards opening our eyes in terms of the impact that designers can have on the environment, especially when it comes to infection control and safety with regard to furniture.

Beyond specifiying the right product for each client population, we must also be cognizant about how each product is to be cleaned, and which products are to be used for cleaning. Couple this with the fact that in many institutions only certain cleaning products are purchased and they are oftentimes not the ones that the manufacturers say should be used to thoroughly clean their products. And it gets even more complicated with LEED projects and green cleaning products because many of the newer green cleaning agents haven't been tested on the furniture.

I do think it's a whole new era for healthcare interior designers and only the ones that are truly serious about this will stick with it now. If they can't communicate with the CEO that the products they have specified meet certain criteria, (eg. this checklist) they won't be back for the next project.

EM: I agree with Barbara. I think it is an opportunity. But you know, real change is hard to achieve. We are advocating a new way of thinking about the role of furniture across the life of the building, which is why we spent some portion of both the white paper and the article talking about what we term as the 'furniture life cycle'. We've identified the furniture activities that correspond to the facility lifecycle and suggested how the checklist might be used to improve decision and activities that occur in each phase.

One of the biggest opportunities is the use of the checklist during the strategic and business planning phase – a time when furniture is almost never considered. Typically furniture does not get thought about until the design phase. And by that time, you've already made a whole series of decisions that are going to constrain your furniture options. If you use the checklist during the strategic and business planning phase, to help you get a better handle of the demographics of the patients that you will serve –i.e. specific to our bariatric conversation – you will have a much better sense of what percentage of your furniture should be ordered to accommodate that group of patients – that will have an impact on the size of the facility and may even have an impact on your budget for furniture as a whole.

Using the checklist across the furniture lifecycle provides an objective, research-based framework for investment decision-making. I can tell you, as a former hospital commander (CEO) that if I would have had this checklist, I would have asked for very different information from my facility management team members.

Steelcase Health: So what has the feedback and reaction been to this point? Prior to publication you had people clamoring for it so what about now?

BD: It's overwhelming. Everywhere I go people comment on it. I had several people send me emails recently noting that our checklist has even been posted on the ASHE website. Also, the Military Health System, (MHS) has a complex evidence based design checklist for developing World Class healthcare projects and when they saw our furniture checklist several months ago, they added it to their checklist. It's amazing.

EM: Barbara and I will be presenting the checklist again at Healthcare Design 2011. We are really looking forward to sharing experiences about use of the checklist during the past year. We received feedback that some of the checklist criteria don't apply to every single piece of furniture. Even though you can just note 'not applicable' on the checklist, we thought it might be helpful to create a checklist for a single furniture item, like the patient chair that so tortured me during my Dad's hospitalization! We have a colleague who modified the checklist to help select a patient chair, engaging patients and staff in the process. So, we are underway with the refinement of a patient chair checklist, one that incorporates the involvement of hospital staff as well as patients and their family members, which we will share during the presentation.

We are very grateful for the support of the Steelcase Health team members during the development of the checklist. Their genuine commitment to improving the patient experience and healthcare outcomes as a whole provides the basis for the design principles used in the development of each product.

However, there is an enormous opportunity for the Steelcase Health team to close the loop and complete the studies in the clinical settings and to validate whether or not that great review of the literature and furniture pre-design planning assumptions were validated in clinical practice. The joint Steelcase Health-Mayo Clinic research project shared in HERD provides a wonderful example of how to evaluate the impact of furniture features on healthcare processes and outcomes – one that the Steelcase Health team might build into the evaluation of every product.

I hope that the industry as a whole can figure out a way, perhaps with some federal assistance, to openly share product development research results in a way that allows competitors to remain viable. Patient safety affects us all and has profound implications for the cost of care in this country. I'm hoping that industry leaders like Steelcase Health and others who have clearly led the way, can help figure out how we can collectively, as a much broader community, the federal government, the furniture industry, the patient safety community and clinical organizations take advantage of all the great product development research that never makes it into the public domain in peer-reviewed literature.

BD: When the furniture manufacturer says they've done the research, but it can't be shared, and we just have to take their word that they did it and it's proprietary, I get really frustrated. So we are hoping this opens a lot of eyes about the importance of research and of documenting and sharing the research… good or bad. Also, it has been standard practice that architects typically don't share information or results either but with evidence-based design being so important now, I think we can all benefit from a lot more sharing.

So if our firm finds out something works (or it doesn't) and we share it, and then another firm uses it and builds upon it, and we can then use what they've discovered – it's like building blocks – once everybody starts sharing and we can all get further together.

EM: We have a unique opportunity and the timing is right. When you take a look at the work that [CMS Director] Dr. Berwick is leading with the implementation of the 2010 Healthcare Affordability Act , there is intense focus on not just performance improvement, but creating highly-reliable environments.

We have learned from other industries like, nuclear and aviation, that highly-reliable environments depend on understanding how the environment and the objects in the environment shape human behavior. Furniture is one of those objects. A great deal more research is needed with clinical and academic partners to better understand the role of furniture features and healthcare outcomes. We're never going to achieve the high levels of reliability that Dr. Berwick is advocating if we don't take into account all of the objects in the room, including furniture.

After the journey to create the EBD Furniture Checklist, Barbara and I have concluded that furniture represents an important piece in the quality healthcare puzzle.

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