Excerpts from Media outlet

RE: Designing Exam Rooms

From Scott Grove:

S+A uses a "program" approach when starting any design; this is a complete list and understanding of how a particular area will be use. It is gathering all the pieces of a puzzle, considering all the parts, the size of the parts, and relationships of the parts. A program incorporates staff interviews, patient and work flow observations , compiling all the potential functional requirements, a complete list of ALL the items that will need to be stored in the room and how often they will need to be accessed, so my answers relate to our expertise in healthcare design, using this "program" approach.

First, your story is timely as there is a fast moving shift in healthcare design that incorporates a patient's as well as the caregiver's, physiological and psychological needs. Healthcare design now incorporates Evidence Based Design (EBD) whenever possible to address these issues.

According to the Center for Health Design, Evidence-Based Design is the process of making decisions about the built environment on credible research to achieve the best possible outcomes. We at S+A commonly refer to this as "designing with your eyes open," which means truly understanding the physical and mental needs of all parties that will use a facility, including patients, caregivers, visiting family members and even janitors.

More specifically, here are answers to your questions:

Room layout: In a perfect world with construction budgets aside, it is most efficient for every exam room (in an office with multiple exam rooms) to be laid out exactly the same. This consistent format allows for a more effective work flow as caregivers (nurses, doctors) will inherently learn that equipment and supplies are in the same place for every room. A frequent design yield is that adjacent rooms are laid out mirrored to each other, based on a common wall that contains plumbing access. Hence, two adjacent exam rooms are left and right handed in every other room, which can be confusing for staff.

The size of the room should correspond directly to the type of examination that is taking place. For example, a hand doctor will need access only to a sitting patient's hand, as opposed to a general practitioner who may need to have access to both sides of a patient. Many times exam rooms are under or oversized for their specific function.

Regarding plumbing, in this day and age, many exam rooms do not need a sink. The primary function is to wash the caregiver's hands, which is an obvious and practical necessity, but the action also gives the patient a peace of mind. To reduce construction costs and still address this issue, a simple hand sanitizing dispenser can suffice which reduces costs and allows more floor space for design layout options.

The orientation of a sink can also have a subtle effect on a patient. The majority of sinks are orientated like most kitchen sinks, where the caregiver stands with his or her back to the patient. If the sink is turned 45 or 90 degrees and placed at the end of the counter, the caregiver can maintain eye contact

and continue to politely engage the patient, which saves time and gives a subtle personal level of comfort.

Door entrance orientation to the room is critical for privacy's sake. A natural instinct might be to design the door swing in a direction where one can directly enter and see into a room, which is a common mistake. It is best to allow the door to swing towards the patient and act as a visual barrier while entering which maintains privacy.

ADA (American Disability Act) compliant bathrooms are now common place, but we have found this is not always accommodating for healthcare providers. For example, the ADA recommendation is that a toilet should be 18" from a side wall with a grab bar. However, this does not allow enough room for nurse(s) to stand on both sides for assistance, if needed. By moving the fixture further away from the wall and adding a drop down grab bar, the room is still ADA compliant and function with both patients' AND caregivers' needs in mind. Also, the orientation of towel dispensers should be near the sink; we have seen them placed on the other side of the room closer to the door. Consider a patient in an orthopedist's office who is on crutches...washing their hands at the sink and using their crutches with wet hands to access a towel on the other side of the large bathroom can be impractical and dangerous.

Bariatric assistance in today times is becoming more of a concern. Installing an overhead lift system in at least one exam room, or having a mobile lift mechanism available (with a planned storage area), is essential in good exam room design.

Correct storage cabinetry is very important to house commonly used supplies, and starting with a well defined program is critical for the successful design of any healthcare room. Often we see cabinets incorrectly sized and note labeled for the type of equipment or supply boxes they are holding, or over building with too many empty cabinets. Of, course staying flexible for growth or change of use is an important consideration too.

Infection control is a major concern and simple design changes to the cabinetry can help reduce this. Many wall cabinets are often simply hung on the wall without a soffit above it (a soffit is an enclosed box above the cabinet that continues up to the ceiling). This soffit will eliminate the horizontal top from being exposed to dust collection, a surface that does not often get regularly cleaned. To reduce cost, this soffit is best be included in the cabinetry and not built into the walls and/or ceilings.

Durability is often overlooked in an attempt to reduce costs. Healthcare facilities test the limits of many materials due to high volume usage. Foot traffic, equipment cart movement, and maintenance all take a toll on the environment. Saving money upfront on inferior materials will only cost in the long run for repair and/or replacement.

Considering new technologies and their placement is very important, as the industry shifts into digital health information systems. Many exam rooms require computers and monitors to enter charting information, to use as visual aids, and to write prescriptions. Eliminating hand written prescriptions alone reduces errors and saves time. Although, the industry is changing so quickly that hand held tablets are becoming the way of the future. Again, creating a flexible environment is key.

Acoustical separation from adjoining rooms is important for privacy; HIPAA (The Health Insurance Portability and Accountability Act) enforces the protection of individuals from identifiable health information and provides confidentiality. Proper acoustical insulation between adjoining walls should

be installed, including the wall above a drop ceiling if there is one. Orientation of HVAC (heating ventilation air conditioning) ductwork should also be considered. Many general HVAC engineers and/or contractors do not consider the HIPAA requirements when designing.

Patient comfort has been proven to increase recover rates and general health. Having the obvious magazine rack available is a start and TV monitors are becoming common place for longer stay environments. TV monitors even in short term locations can help educate the patient with pertinent health tips in-lue of a day time talk show. In addition, accommodating a family member can help ease the stress that a patient may be under, especially in environments such as in a pediatric exam room. For longer stay rooms, recliners with side tables for family members are important and having free Wi-Fi can help make the waiting more tolerable. Often a family member will be the judge of how well the healthcare service is, and keeping them comfortable is a key factor in the design.

With the possible occupancy of a family member in an exam room, privacy will then need to be addressed with the addition of a privacy curtain, although there are some fundamental paradigm shifts in this area. Privacy curtains can house bacteria and require cleaning, all raising construction and maintenance costs. We are seeing physician and management requests for the elimination of these curtains. The answer is to change: the health care providers must change their patient / family interaction and simply request that the family member(s) leave the room during intimate exam procedures.

Color and art application can have a measurable effect on patients; they can help reduce anxiety and improve healthfulness. Traditionally, healthcare facilities have been sterile white environments, both physically and aesthetically. Patients and visitors alike enter these institutions, typically in a vulnerable and sensitive state, when they are experiencing an intimate human condition. Patients are easily affected by a hospital's or doctor's office ambiance and these antiseptic surroundings can add psychological and physiological stress. These perceptions are amplified in the healthcare environment.

Studies have shown that artistically enhanced environments have a direct impact on stress, anxiety and pain perception in both patients and healthcare providers. Implementing art in architecture through a variety of means, as fundamental as color and form to displays of fine art such as paintings, photographs and sculpture, can improve the health and well being of patients, family members and staff.

Selection of artwork is a sensitive issue and needs to be carefully designed into the space with a full understanding of the program (the specific use of the space). Studies have shown that contemporary artwork that is not easily understood can add stress. A scene of nature has been discovered to calm patients. However, subtleties need to be considered for each application (for example a blissful stream photograph is not appropriate in an urologist exam room and sunsets negatively effect the elderly or terminally ill).