### Evidence-Based Design Furniture Checklist v2Dec2010

Findings Scale: Present (+), Absent (-), More Information Needed (?), Not Applicable (N/A)

<table>
<thead>
<tr>
<th>Findings</th>
<th>EBD Goals and Furniture Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reduce surface contamination linked to healthcare associated infections</td>
<td>Surfaces are easily cleaned, with no surface joints and seams</td>
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<tr>
<td></td>
<td>Materials for upholstery are impervious (nonporous)</td>
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<tr>
<td></td>
<td>Surfaces that are nonporous and smooth</td>
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<tr>
<td>2. Reduce patient falls and associated injuries</td>
<td>Chair seat height is adjustable</td>
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<tr>
<td></td>
<td>Chair has armrests</td>
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<tr>
<td></td>
<td>Space beneath the chair to support foot position changes</td>
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<td></td>
<td>Chair seat posterior tilt angle and seat back recline to facilitate patient egress</td>
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<tr>
<td></td>
<td>Chairs are sturdy, stable, and cannot be easily tipped over</td>
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<tr>
<td></td>
<td>Rolling furniture includes locking rollers or casters</td>
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<tr>
<td></td>
<td>Chairs have no sharp or hard edges that can injure patients who fall or trip</td>
</tr>
<tr>
<td>3. Decrease medication errors</td>
<td>Lighting fixtures provide 90-150 foot candle illumination and adjustable 50 watt high intensity task lamp for furniture with built in lighting that is</td>
</tr>
</tbody>
</table>
used in a medication safety zone

| Furniture is configurable to create a sense of privacy to minimize distractions and interruptions from sound and noise during medication transcription, preparation, dispensing, and administration activities |

### 4. Improve communication and social support for patients and family members

- Furniture can be configured in small flexible groupings, which are easily adjusted to accommodate a varying number of individuals, in a variety of healthcare settings
- Wide-size and age variations are supported
- Acoustic and visual patient privacy are supported

### 5. Decrease patient, family member and staff stress and fatigue

- Materials suggest a link to nature
- Appearance is attractive and noninstitutional
- Furniture is tested for safe and comfortable use by all, including morbidly obese individuals

### 6. Improve staff effectiveness, efficiency, and communication

- Furniture is easily adjustable to individual worker’s ergonomic needs
- Design enables care coordination and information sharing
- Materials are sound-absorbing

### 7. Improve environmental safety
<table>
<thead>
<tr>
<th><strong>Materials do not contain volatile organic compounds (VOC), including formaldehyde and benzene</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>8. Represent the best investment</strong></td>
</tr>
<tr>
<td>Reflects and reinforces the organizational mission, strategic goals, and brand</td>
</tr>
<tr>
<td>Integrates with existing furniture and objects for facility renovation projects</td>
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<tr>
<td>Pieces can be flexibly reconfigured and moved to support changing and emerging missions</td>
</tr>
<tr>
<td>Provide casters or glides to reduce floor damage</td>
</tr>
<tr>
<td>Check that there are no protuberances that may damage walls; check chair rail heights</td>
</tr>
<tr>
<td>Manufacturer provides results of safety and durability testing</td>
</tr>
<tr>
<td>Manufacturer describes the specific evidence that has been used to design the product</td>
</tr>
<tr>
<td>Manufacturer includes a warranty appropriate to use, such as furniture used all day, every day</td>
</tr>
<tr>
<td>Replacement parts are available</td>
</tr>
<tr>
<td>Repairs can be done in the healthcare facility</td>
</tr>
<tr>
<td>Manufacturer or local dealer can assist with furniture repair and refurbishment</td>
</tr>
<tr>
<td>Can be easily maintained by environmental services (housekeeping) staff</td>
</tr>
</tbody>
</table>
A Group Purchasing Organization (GPO) can be used when purchasing furniture

Product: ________________________________ _____________________
Manufacturer ________________________________ _________________
Cost: __________________________  Date _________________________
Notes: ________________________________ _______________________

The purpose of the Evidence-Based Design (EBD) Furniture Checklist is to provide healthcare leaders and the designers who support them with an evidence-based tool that assists them in making the best furniture investments in order to help improve targeted healthcare outcomes. Furniture generally includes chairs, sofas, tables, systems and built-in furniture and does not include the patient bed or carts that support medical procedures. The checklist is divided into eight sections that correspond to common EBD goals for which furniture has been shown to play a role. Each section includes recommended furniture features based on cited research and standards found in the References Appendix.

**EBD Furniture Checklist Instructions and Summary Information about Variables**

Information about furniture features can be gleaned from numerous sources to include: manufacturer product brochures, websites and catalogs; furniture manufacturer and dealer representatives; and furniture trade publications. Use the checklist to guide inquiry and product evaluation, facilitate team and client communication about desired furniture features, to compare furniture options and evaluate existing furniture.

A scale is provided to indicate whether the degree to which the furniture being reviewed has the recommended features:

(+ ) Present – The furniture has the feature
(- ) Absent – The furniture feature is absent
(? ) More information needed – Cannot determine if the feature is present. Need more information from the manufacturer.
(N/A) Not applicable – Some features will only apply to certain types of furniture.

**Additional information about each checklist variable:**

1a - Joints and seams complicate effective cleaning, creating organism reservoirs that can further the spread of contact transmitted healthcare associated infections. A space between the chair back and seat can facilitate cleaning.

1b - Contaminated body fluids soak into porous upholstered furniture complicating effective cleaning

1c - Nonporous, smooth solid surfaces such as laminate or poly resin products facilitate effective cleaning. Note: Hard metal surfaces like copper and surface antimicrobial treatment claims presently lack sufficient evidence for efficacy.

2a/b/c/d – Chair seat heights sized to individual needs, armrests and space beneath a chair to support posterior foot placement facilitate safer sit-to-stand movements.

2e - Increased chair posterior seat tilt and increased chair back recline interferes with egress, especially in older adults.

2f - Tipped-over-furniture caused injuries for children are increasing

2g - Locking rollers and casters prevent unwanted furniture movement

2h - Sharp furniture edges, such as wooden chair arms with corners, can injure vulnerable patients who strike them

3a – For systems and built-in furniture used in an area where medications are prescribed, medication orders are entered into a computer or onto paper documents and where medications are prepared and administered includes lighting, brighter illumination results in fewer visual medication errors

3b - Distractions and interruptions are associated with more medication errors

4a - Smaller, more intimate furniture groupings foster communication

4b/c - Systems furniture should include acoustical panels with a minimum noise reduction coefficient of 0.65

5a - Humans have a genetic propensity to positively respond to nature

5b - Perception of quality, service and waiting time are linked to physical environment attractiveness. Non-institutional appearing environments are associated with less patient stress

5c - 68% of Americans are either overweight or obese and require furniture safely designed for their comfort

6a - OSHA recommends furniture that can be tailored to worker ergonomic requirements

6b - Quality healthcare delivery depends on informal interactions by the healthcare team, facilitated by furniture design

6c - Noise distracts and stresses staff, resulting in more time needed to complete procedures and staff burn-out
7a - Furniture made with VOCs is a source of indoor air pollution
8a - Furniture provides important visual cues about the healthcare organization
8b - Furniture color, material, and style contribute to an image
8c - Emergency preparedness and response situations require furniture that can be easily moved and reconfigured
8d - Some soft flooring products used to reduce noise, fatigue and injury are more vulnerable to furniture-caused damage
8e - Hard furniture protuberances can damage walls
8f - Manufacturer conducted furniture testing for safety and durability is required - ask for the results
8g - Manufacturers engage in significant product design and research - ask for the results
8h - Some furniture is used 24 hours a day, every day
8i - The availability of replacement furniture parts, especially for those components exposed to more wear and tear can prolong the life of the object
8j - Furniture that can be repaired in the healthcare facility will be potentially out of use for a shorter period of time
8k - Manufacturer or dealer supported furniture repair and refurbishment will prolong the life of the object
8l - The environmental services team must be able to easily clean, disinfect and maintain the furniture - involve them!
8m - Group purchasing organizations are used to lower costs

References Appendix:


