Research Based Design Practices in Memory Care

Wednesday, May 15, 2019 – 10:30 AM
Introductions

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President and Chief Executive Officer

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Vice President

Westminster Canterbury
Kahler Slater
OF THE BLUE RIDGE
Agenda

Introductions
Demographics/The Need
WCBR Overview
Research Findings
WCBR Design
Q & A
Research Shows

More than 30% of people over 70 have some form of memory loss

EVERY 65 SECONDS someone in the United States develops some form of dementia

Marquardt, 2014; Ziesel, Silverstein, Hyde, Levkoff, 2013; Pati, 2011; Stichler, 2010
How this is impacting WCBR

CCRC not-for-profit

Currently a 12 bed unit

As a lifecare provider, provide what is needed in best way possible

Create the best outcomes for people we serve

How do we know what we’re designing is correlating to positive outcomes, not just a pretty picture?

Turned to Research and Evidence Based Design
There is **SOLID EVIDENCE** that the built environment impacts the psychosocial/emotional wellbeing

Environment modifications positively impact

- Behavior
- Cognitive Performance
- Function
- Well-being
- Social Abilities
- Orientation
- Care Outcomes

Marquardt, 2014; Ziesel, Silverstein, Hyde, Levkoff, 2013; Pati, 2011; Stichler, 2010
<table>
<thead>
<tr>
<th>Interior Design Solutions/Outcomes</th>
<th>Lighting</th>
<th>Noise</th>
<th>Temperature/ Air Quality</th>
<th>Color Contrast/ Patterns</th>
<th>Furniture Arrangement</th>
<th>Personalized/ Humane Environments</th>
<th>Environmental Cues</th>
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</thead>
<tbody>
<tr>
<td>Behavior, e.g. agitation, eating</td>
<td>Positive correlation between bright light and negative behavioral outcomes (9 studies)</td>
<td>High levels of noise were associated with increased wandering and agitation and disruptive behavior and agitation (9 studies)</td>
<td>Comfortable room temperature/humidity was associated with less unsettled behavior, such as agitation or disruptive behavior (2 studies)</td>
<td>Changing the seating arrangements and mealtime routines in dining rooms to be less institutional and more conducive to conversation resulted in improved eating behavior (3 studies)</td>
<td>Correlation between non-institutional, personalized environments and behavior (9 studies)</td>
<td>End doors carved out through cloth barriers or with solid materials that manipulated views through window panels in the doors, and grid patterns on mirrors placed in front of doors eating behavior reduced (9 studies)</td>
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<tr>
<td>Cognition, e.g. attention, cognitive performance</td>
<td>Positive impact between bright light exposure and functional performance (6 studies)</td>
<td>Higher overall light levels led to improved function (1 study)</td>
<td>Benefit from enhanced color contrast for residents, lower contrast and small fonts on signs were found to be beneficial for walking performance (3 studies)</td>
<td>Positively linked to improved quality of life (5 studies)</td>
<td>Ability to perform activities of daily living improved when labels were placed on drawers and closet doors, objects were visible, and distracting items were removed from workspaces (2 studies)</td>
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<td>Function, e.g. activities of daily living</td>
<td>Exposure to bright light improves mood, reduction of depressive symptoms seen (5 studies)</td>
<td>Positive correlation between reduced noise and quality of life (1 study)</td>
<td>Conflicting: residents to be more engaged with moderate levels of sound (1 study) / less social interaction in residents when sound levels were high (1 study)</td>
<td>Homely dining atmosphere with a small number of people eating together led to more resident-directed conversations; a therapeutic kitchen can become the center of activity (2 studies)</td>
<td>Personal cues, such as written names, personal tie photographs of residents as young adults, and personal memorabilia, were positively correlated with the residents’ ability to locate their room or identify belongings (4 studies)</td>
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<td>Well being, e.g. depressive symptoms, mood, quality of life</td>
<td>Social abilities, e.g. engagement, social interaction</td>
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Related references:
- Brush et al., 2002; Perret, McCune, & McCune, 2005.
- Charness et al., 2010; Garcia et al., 2012; Gundersen, Robinson, Sudbury, & Didschke, 1992; Wickers, Wickers, & Rotherby, 1992; Campus, & Clancy, 2012; Miller, Back, Smith, & Lofas, 2000; Marciniak, Heister, & Cadieux, 2001; Roberts, 2011.

**Interior Design Solutions/Outcomes**

**Behavior**, e.g., agitation, eating behavior, psychiatric symptoms, violence, wandering

- Positive correlation between bright light and negative behavioral outcomes (9 studies); controlled daylight and improved behavior correlation (1 study); increasing the lighting level at the dining table and enhancing the visual contrast of tableware resulted in decreased disruptive behavior (2 studies)

**Lighting**

- Positive correlation between bright light and negative behavioral outcomes (9 studies); controlled daylight and improved behavior correlation (1 study); increasing the lighting level at the dining table and enhancing the visual contrast of tableware resulted in decreased disruptive behavior (2 studies)

**Noise**

- High levels of noise were associated with increased wandering and aggressive and disruptive behavior and agitation (5 studies)

**Temperature/Air Quality**

- Comfortable room temperature and humidity was associated with less unwanted behavior, such as agitation or disruptive behavior (2 studies)

**Furniture Arrangement**

- Correlation between non-institutional, personalized environments and behavior (2 studies)

**Personalized/Homelike Environments**

- Changing the seating arrangements and mealtime routines in dining rooms to be less institutional and more conducive to conversation resulted in improved eating behavior (3 studies)

**Environmental Cues**

- Smell doors camouflaged through cloth barriers or with wall mats that manipulated views through window panels in the doactivity, and grid patterns on mirrors placed in front of doors eating behavior reduced (9 studies)
Environmental Cues

Lighting

Sound

Air Quality

Environmental Cues

Wayfinding

Garden

Homelike/View

Color Contrast/Patterns

10 Design Guidelines for People with Dementia

1. Unobtrusively reduce risk
2. Provide a human scale
3. Allow people to see and be seen
4. Minimize unhelpful stimulation
5. Optimize helpful stimulation
6. Support movement and engagement
7. Create a familiar space
8. Provide opportunities to be alone or with others
9. Provide links to the community
10. Respond to a vision for way of life
Kahler Slater

Westminster Canterbury
OF THE BLUE RIDGE

Memory Care Center and
Campus Improvements
Partnered with an Expert

John Zeisel, PhD Hon D.Sc.
President

Hearthstone Alzheimer Care
& The I'm Still Here Foundation
Hopeful Aging with Dementia – The "Hope" Model

Embracing the Present

Better relationships
Less aggressive
Less agitated
Less anxious
Less depressed
Less apathy
Feel less lonely
Do things together
Appreciate abilities
See the person
Be sad but live with it
Be in the present
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<tr>
<td>1. Camouflage &amp; control dangerous exits (reduces “elopement”)</td>
<td>5. Provide a safe therapeutic garden (reduces sundowning)</td>
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<td>2. Provide “walking” paths with destinations (reduces “wandering”)</td>
<td>6. Keep scale residential &amp; like extended family (decreases agitation)</td>
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<td>3. Provide private &amp; personal places (increases sense of self)</td>
<td>7. Maximize autonomy &amp; independence (increases identity)</td>
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<td>4. Decorate distinct common spaces (increases appropriate behavior)</td>
<td>8. Make sure sensory input is understandable (reduces anxiety)</td>
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(Keisel, Hearthstone Alzheimer Care)
Project Vision

Engaged Residents
Hopeful Aging with Dementia
John Zeisel PhD
Developed Ideal Experiences
Prioritized Project Drivers & Scored Where We are Today
Ideal Experiences
<table>
<thead>
<tr>
<th>Scoring Project Drivers</th>
<th>1</th>
<th>2</th>
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<th>4</th>
<th>5</th>
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<td>Recruit, Train, and Retain the Best</td>
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<td>A Great Place to Work</td>
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<td>Therapeutic Garden</td>
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<td>Compass</td>
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<td>3.25</td>
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<td>Resident Engagement</td>
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<td>Dignity and Respect</td>
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<td>Evidence Based Design</td>
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<td>Operational Efficiency</td>
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<td>Hope and Joy</td>
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<td>Connecting with Nature</td>
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<td>Homelike</td>
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<td>On Schedule &amp; Within Budget</td>
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DESIGN – VIRTUAL REALITY
Collaborating with top research leaders on the design will make this a top national benchmark facility for Memory Care.
Research Based Design Practices in Memory Care

Q & A
Contact Information

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Appendix

WestMinsterCanterbury.org/about/
ImStillHere.org/About/Dr-John-Zeisel
TheHearth.org/About/Leadership/