



RESEARCH IN A SNAP

OVERVIEW

We're keeping you updated on citations added to The Center's Knowledge Repository.

The Knowledge Repository is a collaborative effort between The Center for Health Design and our partners

Academy of
Architecture for Health
an AIA Knowledge Community



Design for Aging
an AIA Knowledge Community



Additional key point summaries provided by



RESEARCH DESIGN
CONNECTIONS

Knowledge Repository News

Among the 75 new entries in the Knowledge Repository, several papers focus on design for aging, and specifically, supportive design for people with dementia. You will notice citations that span the last two decades in this Snap! Sometimes research on a particular topic will lead us to an author who is frequently cited for foundational research that has informed the newer studies. The older studies reveal how design for dementia has evolved over the years towards more supportive and healing environments. Check the citations listed in the Care across the Lifespan: Cognitive Impairment & Dementia category.

(Papers published ahead of print "in press" will be updated as volume and page information becomes available.)

July - August 2019

Experience

Perceived Quality of Care (Noise, Communication, Waiting, etc.)

1. MacAllister, L., Bellanti, D., & Sakallaris, B. R. (2016). Exploring inpatients' experiences of healing and healing spaces: A mixed methods study. *Journal of Patient Experience*, 3(4), 119-130. <https://doi.org/10.1177/2374373516676182>
2. Robinson, J., Gott, M., Gardiner, C., & Ingleton, C. (2018). The impact of the environment on patient experiences of hospital admissions in palliative care. *BMJ Supportive & Palliative Care*, 8(4), 485-492. <https://doi.org/10.1136/bmjspcare-2015-000891>
3. Simons, K. S., van den Boogaard, M., & de Jager, C. P. C. (2019). Impact of intensive care unit light and noise exposure on critically ill patients. *Netherlands Journal of Critical Care*, 27(4), 145-149.
4. Zijlstra, E., Hagedoorn, M., Krijnen, W. P., van der Schans, C. P., & Mobach, M. P. (2019). The effect of a non-talking rule on the sound level and perception of patients in an outpatient infusion center. *PLOS ONE*, 14(2), 1-15. <https://doi.org/10.1371/journal.pone.0212804>

Supportive Design (Social Support, Distractions, Nature, etc.)

5. Duarte, E., Gambera, D. A., & Riccò, D. (2019). Beyond the Five Senses: A synaesthetic-design approach to humanize healthcare environments. In T. P. Cotrim, F. Serranheira, P. Sousa, S. Hignett, S. Albolino, & R. Tartaglia (Eds.), *Health and Social Care Systems of the Future: Demographic Changes, Digital Age and Human Factors* (pp. 16-22). Springer International Publishing.



6. Fisk, M. J., & Raynham, P. (2014). Assistive lighting for people with sight loss. *Disability and Rehabilitation: Assistive Technology*, 9(2), 128–135. <https://doi.org/10.3109/17483107.2013.781235>
7. Tan, G., & Rao, S. S. C. (2019). Part I: How to ergonomically design a modern endoscopic suite. *Techniques in Gastrointestinal Endoscopy*, in press. <https://doi.org/10.1016/j.tgie.2019.07.001>
8. Tanaka, S., & Raju, G. S. (2019). Part II: Optimizing endoscopy unit design: Lessons from a modern endoscopy suite in Japan. *Techniques in Gastrointestinal Endoscopy*. <https://doi.org/10.1016/j.tgie.2019.07.005>
9. Ulrich, R. S., Cordoza, M., Gardiner, S. K., Manulik, B. J., Fitzpatrick, P. S., Hazen, T. M., & Perkins, R. S. (2019). ICU patient family stress recovery during breaks in a hospital garden and indoor environments. *HERD: Health Environments Research & Design Journal*, in press. <https://doi.org/10.1177/1937586719867157>
10. Wiler, J. L., Ozkaynak, M., Bookman, K., Koehler, A., Leeret, R., Chua-Tuan, J., ... Zane, R. (2016). Implementation of a front-end split-flow model to promote performance in an urban academic emergency department. *The Joint Commission Journal on Quality and Patient Safety*, 42(6), 271–280. [https://doi.org/10.1016/S1553-7250\(16\)42036-2](https://doi.org/10.1016/S1553-7250(16)42036-2)

Safety

Infection Prevention/Control

11. Ai, Z. T., Huang, T., & Melikov, A. K. (2019). Airborne transmission of exhaled droplet nuclei between occupants in a room with horizontal air distribution. *Building and Environment*, 163, in press. <https://doi.org/10.1016/j.buildenv.2019.106328>
12. Arendsen, L. P., Thakar, R., & Sultan, A. H. (2019). The use of copper as an antimicrobial agent in health care, including obstetrics and gynecology. *Clinical Microbiology Reviews*, 32(4), in press. <https://doi.org/10.1128/CMR.00125-18>
13. Brown, N. G. F., Buse, C., Lewis, A., Martin, D., & Nettleton, S. J. (2019). Pathways, practices and architectures: Containing anti-microbial resistance (AMR) in the cystic fibrosis clinic. *Health: An Interdisciplinary Journal for the Social Study of Health, Illness, and Medicine*, 19, in press.
14. Campbell, J., Lee, E., Vakharia, A., & McGinty, K. (2019). Keeping Clean in the Reading Room: An initiative to improve workstation hygiene. *Journal of the American College of Radiology*, in press. <https://doi.org/10.1016/j.jacr.2019.05.049>
15. McDonald, E. G., Dendukuri, N., Frenette, C., & Lee, T. C. (2019). Time-series analysis of health care-associated infections in a new hospital with all private rooms. *JAMA Internal Medicine*. <https://doi.org/10.1001/jamainternmed.2019.2798>
16. Murrell, L. J., Hamilton, E. K., Johnson, H. B., & Spencer, M. (2019). Influence of a visible-light continuous environmental disinfection system on microbial contamination and surgical site infections in an orthopedic operating room. *American Journal of Infection Control*, 47(7), 804–810. <https://doi.org/10.1016/j.ajic.2018.12.002>



17. Novosad, S. A., Lake, J., Nguyen, D., Soda, E., Moulton-Meissner, H., Pho, M. T., ... Patel, P. R. (2019). Multicenter outbreak of gram-negative bloodstream infections in hemodialysis patients. *American Journal of Kidney Diseases*, in press. <https://doi.org/10.1053/j.ajkd.2019.05.012>
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19. Stockwell, R. E., Ballard, E. L., O'Rourke, P., Knibbs, L. D., Morawska, L., & Bell, S. C. (2019). Indoor hospital air and the impact of ventilation on bioaerosols: A systematic review. *Journal of Hospital Infection*, in press. <https://doi.org/10.1016/j.jhin.2019.06.016>
20. Xiao, S., Jones, R. M., Zhao, P., & Li, Y. (2019). The dynamic fomite transmission of Methicillin-resistant *Staphylococcus aureus* in hospitals and the possible improved intervention methods. *Building and Environment*, 161, in press. <https://doi.org/10.1016/j.buildenv.2019.106246>

Care across the Lifespan

Therapeutic Environments: Behavioral/Mental Health

21. Liszka, L., Smith, J., Mathur, A., Schlaggar, B. L., Colditz, G., & Pineda, R. (2019). Differences in early auditory exposure across neonatal environments. *Early Human Development*, 136, 27–32. <https://doi.org/10.1016/j.earlhumdev.2019.07.001>
22. Sachs, N. A., Shepley, M. M., Peditto, K., Hankinson, M. T., Smith, K., Giebink, B., & Thompson, T. (2019). Evaluation of a Veterans Administration mental and behavioral health patient room mockup. *HERD: Health Environments Research & Design Journal*, in press. <https://doi.org/10.1177/1937586719856349>

Labor & Delivery

23. Canazei, M., Pohl, W., Weninger, J., Bliem, H., Weiss, E. M., Koch, C., ... Marth, C. (2019). Effects of adjustable dynamic bedroom lighting in a maternity ward. *Journal of Environmental Psychology*, 62, 59–66. <https://doi.org/10.1016/j.jenvp.2019.01.010>

Elders/Aging

24. Ariza-Vega, P., Shu, H., Amarasekera, R., Y. Edwards, N., Filipski, M., Langford, D., ... 10 School of Psychology, The University of Adelaide, Australia. (2019). Older adults' activity on a geriatric hospital unit: A behavioral mapping study. *AIMS Medical Science*, 6(1), 33–48. <https://doi.org/10.3934/medsci.2019.1.33>
25. Calkins, M. P. (2018). Memory care and Alzheimer's units. In A. S. Devlin (Ed.), *Environmental Psychology and Human Well-Being* (pp. 365–386). <https://doi.org/10.1016/B978-0-12-811481-0.00014-7>
26. Chun, S., & Nam, K. (2019). User-centred design approaches for planning inpatient room of geriatric long-term care hospitals: Design factors with practical suggestions. *The Design Journal*, 22(4), 413. <https://doi.org/10.1080/14606925.2019.1609802>



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32. Orrell, A., McKee, K., Torrington, J., Barnes, S., Darton, R., Netten, A., & Lewis, A. (2013). The relationship between building design and residents' quality of life in extra care housing schemes. *Health & Place*, 21, 52–64. <https://doi.org/10.1016/j.healthplace.2012.12.004>
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Cognitive Impairment & Dementia

34. Barrick, A. L., Sloane, P. D., Williams, C. S., Mitchell, C. M., Connell, B. R., Wood, W., ... Zimmerman, S. (2010). Impact of ambient bright light on agitation in dementia. *International Journal of Geriatric Psychiatry*, 25(10), 1013–1021. <https://doi.org/10.1002/gps.2453>
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38. Day, K., Carreon, D., & Stump, C. (2000). The therapeutic design of environments for people with dementia: A review of the empirical research. *The Gerontologist*, 40(4), 397–416.



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Aging in Place/Healthcare at Home

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Building Systems & Technology

60. Cao, G., Nilssen, A. M., Cheng, Z., Stenstad, L.-I., Radtke, A., & Skogås, J. G. (2019). Laminar airflow and mixing ventilation: Which is better for operating room airflow distribution near an orthopedic surgical patient? *American Journal of Infection Control*, 47(7), 737–743. <https://doi.org/10.1016/j.ajic.2018.11.023>
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64. Ramdani, N., Panayides, A., Karamousadakis, M., Mellado, M., Lopez, R., Christophorou, C., ... Koutsouris, D. (2019). A Safe, Efficient and Integrated Indoor Robotic Fleet for Logistic Applications in Healthcare and Commercial Spaces: The ENDORSE Concept. *2019 20th IEEE International Conference on Mobile Data Management (MDM)*, 425–430. <https://doi.org/10.1109/MDM.2019.000-8>
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Design & Evaluation (e.g., Process, Methods, Simulation Modeling)

66. Aguilera, L. S., Dickey, E. K., & Guzman, K. (2019). Using interdisciplinary dress rehearsal events to ensure staff readiness when opening a new healthcare facility. *HERD: Health Environments Research & Design Journal*, in press. <https://doi.org/10.1177/1937586719861553>
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69. Gómez-Vélez, P. A., Rivera-Vega, M. P., Galeano-Upegui, B. J., & Escobar-Mora, N. J. (2019). Technological innovation in the design process of an acoustic panel to the hospital environment. *Journal of Physics: Conference Series*, 1257, 1–8. <https://doi.org/10.1088/1742-6596/1257/1/012012>
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73. Schaumann, D., Putievsky Pilosof, N., Sopher, H., Yahav, J., & Kalay, Y. E. (2019). Simulating multi-agent narratives for pre-occupancy evaluation of architectural designs. *Automation in Construction*, 106, in press. <https://doi.org/10.1016/j.autcon.2019.102896>
74. Tegegne, T. K., Chojenta, C., Getachew, T., Smith, R., & Loxton, D. (2019). Service environment link and false discovery rate correction: Methodological considerations in population and health facility surveys. *PLOS ONE*, 14(7), in press. <https://doi.org/10.1371/journal.pone.0219860>

Other

75. Zilm, F., Atchley, R. A., Gregersen, S., & Conrad, M. A. (2019). The creative healthcare architect. *HERD: Health Environments Research & Design Journal*, in press. <https://doi.org/10.1177/1937586719858761>