



# 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  
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## Knowledge Repository News

Infection prevention & control is a top priority right now in the healthcare industry, and among the 34 new entries in the Knowledge Repository, there are several papers focused on this important topic. In this edition you will find research on a range of design strategies, products and materials designed to mitigate healthcare associated infections. Check out the citations below listed in Safety: Infection Prevention/Control and Design & Evaluation.

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

January - February 2020

### Experience

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

1. Davis, R. G., McCunn, L. J., Wilkerson, A., & Safranek, S. (2020). Nurses' satisfaction with patient room lighting conditions: A study of nurses in four hospitals with differences in the environment of care. *HERD: Health Environments Research & Design Journal*, in press. <https://doi.org/10.1177/1937586719890940>
2. Hesselink, G., Smits, M., Doedens, M., Nijenhuis, S. M., van Bavel, D., van Goor, H., & van de Belt, T. H. (2020). Environmental needs, barriers, and facilitators for optimal healing in the postoperative process: A qualitative study of patients' lived experiences and perceptions. *HERD: Health Environments Research & Design Journal*, in press. <https://doi.org/10.1177/1937586719900885>
3. Liddicoat, S. (2020). The therapeutic waiting room: Therapist and service user perspectives on the psychologically supportive dimensions of architectural space. *HERD: Health Environments Research & Design Journal*, in press. <https://doi.org/10.1177/1937586720904805>
4. Loupa, G. (2020). Influence of noise on patient recovery. *Current Pollution Reports*, in press. <https://doi.org/10.1007/s40726-019-00134-3>
5. Salehi, R., Kariminia, S., & Salehi, M. (2019). The role of acoustics in architectural design of medical centers: A review. *Creative City Design*, in press.
6. Ukegjini, K., Kastiunig, T., Widmann, B., Warschkow, R., & Steffen, T. (2020). Impact of intraoperative noise measurement on the surgeon stress and patient outcomes. A prospective, controlled, single-center clinical trial with 664 patients. *Surgery*, in press. <https://doi.org/10.1016/j.surg.2019.12.010>



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

7. Berry, L. L., Crane, J., Deming, K. A., & Barach, P. (2020). Using evidence to design cancer care facilities. *American Journal of Medical Quality*. <https://doi.org/10.1177/1062860619897406>
8. Gaminiesfahani, H., Lozanovska, M., & Tucker, R. (2020). A scoping review of the impact on children of the built environment design characteristics of healing spaces. *HERD: Health Environments Research & Design Journal*, in press. <https://doi.org/10.1177/1937586720903845>
9. Khalid, N. A. M., Latif, L. A., & Hussein, H. (2019). Understanding therapeutic sensory stimulation garden (TSSG) as a rehabilitation garden in a healthcare centre. *International Journal of Innovative Technology and Exploring Engineering*, 8(12S2), 452–458. <https://doi.org/10.35940/ijitee.L1087.10812S219>
10. McCunn, L., & Frey, C. (2020). Impacts of large-scale interior murals on hospital employees: A pharmacy department case study. *Journal of Facilities Management*, 18(1), 53–70. <https://doi.org/10.1108/JFM-10-2019-0053>
11. Pink, S., Duque, M., Sumartojo, S., & Vaughan, L. (2020). Making spaces for staff breaks: A design anthropology approach. *HERD: Health Environments Research & Design Journal*, in press. <https://doi.org/10.1177/1937586719900954>

### Safety

12. Fallah-Aliabadi, S., Ostadtaghizadeh, A., Ardalan, A., Fatemi, F., Khazai, B., & Mirjalili, M. R. (2020). Towards developing a model for the evaluation of hospital disaster resilience: A systematic review. *BMC Health Services Research*, 20(1), 64. <https://doi.org/10.1186/s12913-020-4915-2>

Infection Prevention/Control

13. Aranega-Bou, P., George, R. P., Verlander, N. Q., Paton, S., Bennett, A., Moore, G., Aiken, Z., Akinremi, O., Ali, A., Cawthorne, J., Cleary, P., Crook, D. W., Decraene, V., Dodgson, A., Doumith, M., Ellington, M., Eyre, D. W., George, R. P., Grimshaw, J., ... Woodford, N. (2019). Carbapenem-resistant Enterobacteriaceae dispersal from sinks is linked to drain position and drainage rates in a laboratory model system. *Journal of Hospital Infection*, 102(1), 63–69. <https://doi.org/10.1016/j.jhin.2018.12.007>
14. Brons, J. A., Bierman, A., White, R., Benner, K., Deng, L., & Rea, M. S. (2020). An assessment of a hybrid lighting system that employs ultraviolet-A for mitigating healthcare-associated infections in a newborn intensive care unit. *Lighting Research & Technology*, in press. <https://doi.org/10.1177/1477153520904107>
15. Ereth, M. H., Hess, D. H., Driscoll, A., Hernandez, M., & Stamatatos, F. (2020). Particle control reduces fine and ultrafine particles greater than HEPA filtration in live operating rooms and kills biological warfare surrogate. *American Journal of Infection Control*. <https://doi.org/10.1016/j.ajic.2019.11.017>



16. Lewis, S. S., Smith, B. A., Sickbert-Bennett, E. E., & Weber, D. J. (2018). Water as a source for colonization and infection with multidrug-resistant pathogens: Focus on sinks. *Infection Control & Hospital Epidemiology*, 39(12), 1463–1466. <https://doi.org/10.1017/ice.2018.273>
17. Marik, P. E., Shankaran, S., & King, L. (2020). The effect of Copper-Oxide treated soft and hard surfaces on the incidence of Healthcare Associated Infections: A two-phase study. *Journal of Hospital Infection*, in press. <https://doi.org/10.1016/j.jhin.2020.02.006>
18. Sen, P. K., & Sen, P. (2020). Hospital indoor air quality in respect to transmission of infection. In A. Sharma, R. Goyal, & R. Mittal (Eds.), *Indoor Environmental Quality* (pp. 53–66). Springer. [https://doi.org/10.1007/978-981-15-1334-3\\_7](https://doi.org/10.1007/978-981-15-1334-3_7)
19. Wilson, G., Jackson, V., Boyken, L., Puig-Asensio, M., Marra, A. R., Perencevich, E., Schweizer, M. L., Diekema, D., Breheny, P., & Petersen, C. (2020). A randomized control trial evaluating efficacy of antimicrobial impregnated hospital privacy curtains in an intensive care setting. *American Journal of Infection Control*. <https://doi.org/10.1016/j.ajic.2019.12.024>

## Care across the Lifespan

### Therapeutic Environments: Behavioral/Mental Health

20. Lipson-Smith, R., Zeeman, H., & Bernhardt, J. (2020). What's in a building?: A descriptive survey of adult inpatient rehabilitation facility buildings in Victoria, Australia. *Archives of Rehabilitation Research and Clinical Translation*, in press. <https://doi.org/10.1016/j.arrct.2020.100040>

### Pediatric

21. Jiang, S. (2020). Positive distractions and play in the public spaces of pediatric healthcare environments: A literature review. *HERD: Health Environments Research & Design Journal*, in press. <https://doi.org/10.1177/1937586720901707>

### Labor & Delivery

22. Nilsson, C., Wijk, H., Höglund, L., Sjöblom, H., Hessman, E., & Berg, M. (2020). Effects of birthing room design on maternal and neonate outcomes: A systematic review. *HERD: Health Environments Research & Design Journal*, in press. <https://doi.org/10.1177/1937586720903689>

### Elders/Aging

23. Su, S.-W., Lee, S.-J., Tsai, M.-W., & Luo, H.-J. (2020). Exploring managers' opinions on planning and designing adult day care centers. *HERD: Health Environments Research & Design Journal*, in press. <https://doi.org/10.1177/1937586720906824>
24. Tao, Y., Gou, Z., Yu, Z., Fu, J., & Chen, X. (2020). The challenge of creating age-friendly indoor environments in a high-density city: Case study of Hong Kong's care and attention homes. *Journal of Building Engineering*, 30, 101280. <https://doi.org/10.1016/j.job.2020.101280>



## Cognitive Impairment & Dementia

25. Chau, H.-W., Newton, C., Woo, C. M. M., & Wang, J. (2018). Comparative design evaluation of Dementia support facilities in Victoria from the perspectives of carers. *Engaging Architectural Science: Meeting the Challenges of Higher Density*, 321–329.

## Building Systems & Technology

26. Baracat, T. M., da Silva, C. A., Lofrano, F. C., & Kurokawa, F. A. (2019). Assessment of the performance of airflow in an operating rooms using ceiling supply and sidewall inlet systems. *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, 42(1), 41. <https://doi.org/10.1007/s40430-019-2117-9>
27. Villafruela, J. M., San José, J. F., Castro, F., & Zarzuelo, A. (2016). Airflow patterns through a sliding door during opening and foot traffic in operating rooms. *Building and Environment*, 109, 190–198. <https://doi.org/10.1016/j.buildenv.2016.09.025>

## Design & Evaluation (e.g., Process, Methods, Simulation Modeling)

28. Alhonsuo, M., & Colley, A. (2019). Designing new hospitals—Who cares about the patients? *Proceedings of Mensch Und Computer 2019 on - MuC'19*, 725–729. <https://doi.org/10.1145/3340764.3344898>
29. Browning, M. H. E. M., Saeidi-Rizi, F., McAnirlin, O., Yoon, H., & Pei, Y. (2020). The role of methodological choices in the effects of experimental exposure to simulated natural landscapes on human health and cognitive performance: A systematic review. *Environment and Behavior*, in press. <https://doi.org/10.1177/0013916520906481>
30. Busatto, N., Mora, T. D., Peron, F., & Romagnoni, P. (2020). Application of different circadian lighting metrics in a health residence. *Journal of Daylighting*, 7(1), 13–24. <https://doi.org/10.15627/jd.2020.2>
31. Durosaiye, I. O., Hadjri, K., Liyanage, C. L., & Chrysikou, E. (2020). Developing, validating and testing a Ward Environment Assessment Tool: WEAT. *Journal of Nursing Management*, in press. <https://doi.org/10.1111/jonm.12956>
32. Parsia, Y., & Sorooshian, S. (2020). A decision-making algorithm for rearchitecting of healthcare facilities to minimize nosocomial infections risks. *International Journal of Environmental Research and Public Health*, 17(3), 1–21. <https://doi.org/10.3390/ijerph17030855>
33. Shannon, M. M., Nordin, S., Bernhardt, J., & Elf, M. (2020). Application of theory in studies of healthcare built environment research. *HERD: Health Environments Research & Design Journal*, in press. <https://doi.org/10.1177/1937586719901108>
34. Sze, R. W., Hagerty, N. M., Sassano, C., & Kazmi, P. (2020). The business case for evidence-based design in radiology departments. *Journal of the American College of Radiology*, 17(1, Part B), 152–156. <https://doi.org/10.1016/j.jacr.2019.08.006>