



KEY POINT SUMMARY

OBJECTIVES

The primary objective of the study was to understand patient preferences for the physical design of the PCMH within rural environments, and to understand the relationship between patient demographics and these preferences.

A regional survey on residents' preferences on patient-centered medical home design in rural areas

Cai, H., Spreckelmeyer, K., Mendenhall, A., Li, D., Holmes, C., Levy, M. 2019 | HERD: Health Environments Research & Design Journal, Volume 12, Issue 3, Page(s) 187-205

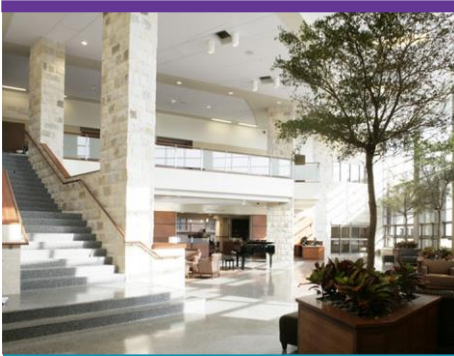
Key Concepts/Context

The patient-centered medical home (PCMH) is a delivery model for primary care that is characterized by the recognition of unique patient needs while providing accessible services, a focus on safety and quality, comprehensive care, and coordinated care. Previous research has found that the PCMH can improve patient outcomes and staff experiences, but research into how the physical design of the PCMH influences patient perspectives is limited, especially in the case of rural PCMH environments.

Methods

A survey to gauge rural residents' perception of the PCMH model was developed by a steering committee comprised of patients, healthcare providers, caregivers, administrators, and a regional funder. After feedback from a national advisory group and the local steering committee, as well as a pilot test, the final 67-item survey was approved by an appropriate review board.

Most of the survey questions were related to the five core principles of the PCMH model; five questions were related to comprehensive care, six questions related to coordinated care, 10 questions related to patient-centered care, eight questions related to care service accessibility, and eight questions related to the safety and quality of care. Twelve more questions focused on the challenges faced by patients in rural communities, and eight items related to the physical design of the PCMH (such as "availability of a play area in the waiting room"). While most of the survey used a 3- or 5-point Likert-type scale, three of these design-related questions were open-ended and allowed respondents to express approval, disapproval, and suggestions concerning PCMH designs.



The Center for Health Design: Moving Healthcare Forward

The Center for Health Design advances best practices and empowers healthcare leaders with quality research that demonstrates the value of design to improve health outcomes, patient experience of care, and provider/staff satisfaction and performance.

Learn more at
www.healthdesign.org

Over seven weeks, 362 PCMH residents from two different rural areas completed the survey. Quantitative data from the Likert-type scale-based questions were analyzed in three phases. First, descriptive statistics were used to identify the most important features of the physical environment. ANOVA and post hoc pairwise t-tests were used to examine the extent to which participant demographics influenced design preferences. Structural equation modeling was used to explore whether and how participant attitudes toward rural PCMH characteristics were reflected in their design preferences. Open-ended questions were analyzed through the lens of the definitions and key attributes of the PCMH model.

Findings

The most important aspects of the physical environment within the PCMH according to survey respondents were private spaces for the communication of personal information and conversation, the inclusion of additional chairs within exam rooms for family members, and spaces that accommodated communication between patients, family, and staff. The least important design element was secondary exits. Participant age had a significant impact on preferences for open space counters within reception areas as well as the inclusion of play spaces in waiting areas; age group 35-44 had a higher preference for open counters than age group 35-34, while the age group 25-34 placed significantly more importance on play areas than the 55-64 age group.

Statistical analysis found that the five PCMH principles and rural-specific preferences were correlated with certain design features. The most important design features by category were as follows:

- Patient-centered care: Open counter for speaking with the receptionist while ensuring privacy
- Accessible services: Improved communication spaces and additional chairs for families in examination rooms. Rural residents in need of walk-in or same-day appointments also valued play areas for children and second exits to bypass the front waiting area.
- Quality and safety: Space that supports communication.
- Comprehensive care: Open counters, natural lighting, educational materials, play areas, structures that support both privacy and effective communication, and extra chairs.
- Coordinated care: Space facilitating communication among patients, family, and caregivers, additional exam room chairs, educational materials, and protection of patient privacy.
- Rural-specific characteristics: Statistically, rural community-specific needs had very small effects on spatial preferences, but awareness of medication costs in respondents did correlate with more preference for additional exam room chairs.



Limitations

The authors note that a convenience sample was used as opposed to randomized samples; as a result, survey respondents were largely white females, which limits the study's general applicability to rural residents overall. Since there was no comparison data within this study or previous studies, the results could not be compared to the preferences of urban residents. The survey design and sampling method used did not collect in-depth layout and design information relevant to the buildings being utilized by the rural respondents.

Design Implications

This study suggests that layouts that allow for the private communication of personal information between patients and staff, as well as communication between patients, family, and healthcare staff, along with extra chairs for family members in exam rooms may appeal to the preferences of patients from rural communities while fulfilling core principles of the PCMH model.

The Knowledge Repository is a collaborative effort with our partners

Academy of
Architecture for Health
an AIA Knowledge Community



Additional key point summaries provided by:

NIHD | Nursing Institute for
Healthcare Design
LEADERSHIP • EDUCATION • ADVOCACY

RESEARCH DESIGN
CONNECTIONS