KEY POINT SUMMARY

OBJECTIVES

This exploratory study investigated how nursing station design (i.e., centralized and decentralized nursing station layouts) affected nurses' use of space, patient visibility, noise levels, and perceptions of the work environment.

DESIGN IMPLICATIONS

The hybrid nursing design model in which decentralized nursing stations are coupled with centralized meeting rooms for consultation between staff members may strike a balance between the increase in computer duties and the ongoing need for communication and consultation that addresses the conflicting demands of technology and direct patient care.

Centralized vs. Decentralized Nursing Stations: Effects on Nurses' Functional Use of Space and Work Environment

Zborowsky, T., Bunker Hellmich, L., Morelli, A., O'Neill, M.
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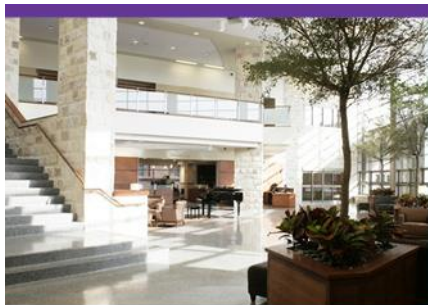
Key Concepts/Context

Information technology enables nurses to move away from traditional centralized paper-charting stations to smaller decentralized work stations and charting substations located closer to, or inside of, patient rooms. Understanding the tradeoffs presented by centralized and decentralized nursing station design could provide useful information for future design and the nurse environment "fit."

Methods

This exploratory study used both qualitative and quantitative methods. The researches collected qualitative data regarding the effects of nursing station design on nurses' health and work environment with focus group interviews. Quantitative data-gathering techniques included place- and person-centered space-use observations, patient visibility assessments, sound-level measurements, and an online questionnaire regarding perceptions of the work environment.

Findings

The observers found that the nurses on all units were most frequently performing telephone, computer, and administrative duties. However, the time the nurses spent using telephones, computers, and performing other administrative duties was significantly higher in the centralized nursing stations. Further, the researchers noted that consultations with medical staff and social interactions were significantly less frequent in decentralized nursing stations. Investigators found no indications that either centralized or decentralized nursing station designs resulted in superior visibility. Sound levels measured in all nursing stations exceeded recommended levels during all shifts. Finally, the authors note that no significant

differences were identified in nurses' perceptions of work control-demand-support in centralized and decentralized nursing station designs.

Limitations

The generalizability of this study is limited due to small sample size, a lack of longitudinal data, the unique clinical needs of each unit, and confounding variables (i.e., hospital size, type and age, organizational structure, nursing unit type, and nurse-patient ratio).

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