ANALYZING DESIGN AND PLANNING TRENDS IN MEDICAL RESEARCH LABORATORIES AND WORKPLACE ENVIRONMENTS:

A benchmarking study

The evolving design of medical research facilities requires a comprehensive understanding of new priorities and paradigms in interdisciplinary research spaces. This study analyzes three modern medical research facilities to identify critical trends in space allocation, lab module size, and support areas. The findings highlight the importance of optimizing floor plans for productivity, flexibility, and collaboration, emphasizing the need for a balanced distribution of open and enclosed workspaces.

What is the implication, and what should change now?

The study underscores the trend toward modular lab layouts with increased lab support spaces, reflecting the growing demand for adaptable and specialized research environments.

These 6 findings demonstrate a trend towards laboratory spaces that maximize collaboration, flexibility, and efficiency:

Optimizing Floor Plans for Productivity and Collaboration: As science and technology advance, research facility designs must prioritize productivity, collaboration, and user experience with efficient floor plans for laboratories and support areas.

Modular Lab Layouts: The rising popularity of modular lab layouts with ample support spaces is a practical solution, offering flexibility for various research needs. A closer ratio between lab spaces and support areas enhances this approach's practicality.

Increased Lab Support Spaces: There is a significant increase in the number and size of lab support rooms, highlighting the adaptability of medical research facilities. This trend reflects the need for specialized areas to meet diverse research requirements, enhancing overall functionality.

Enhanced Connectivity and Visibility: The organization of open laboratory spaces and corridors greatly impacts facility connectivity and visibility. Higher connectivity values show a preference for well-connected open labs, promoting spontaneous interactions and collaboration.

Balancing Open and Enclosed Spaces: A balanced distribution of open and enclosed spaces is strategic, meeting diverse work requirements. Enclosed offices offer personalization, autonomy, and control, benefiting dry lab and computational tasks.

Smaller Lab Modules with Increased Utility: There is a trend towards smaller lab modules with increased utility. Lab benches with sinks and the relocation of workstation benches outside the laboratory improve productivity and safety.

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