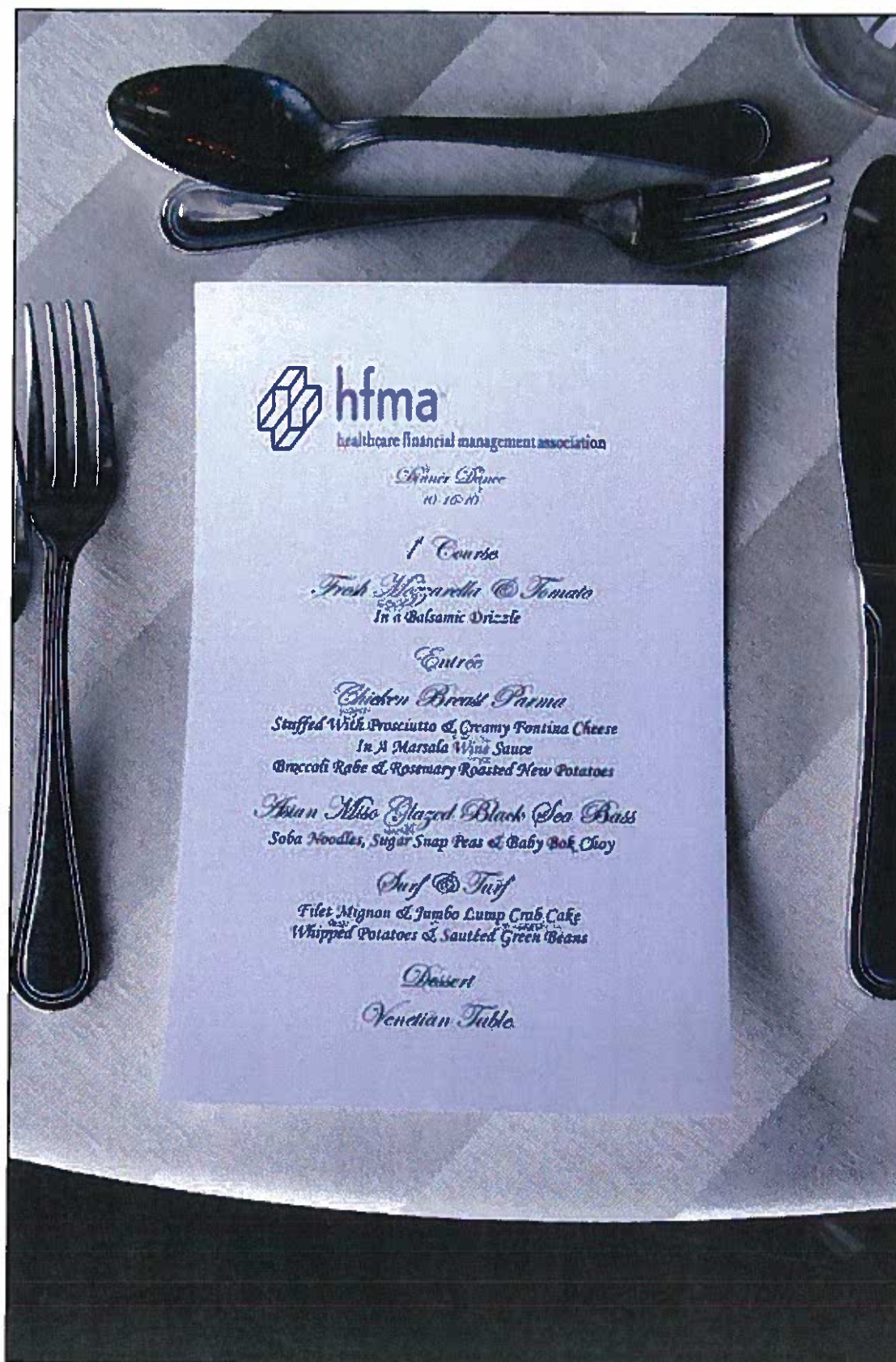


Newscaat

Volume 44

Issue 1

Winter 2011



Improving the Physical Environment of Care for Better Patient Outcomes



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To put it colloquially: energy expenditures don't get no respect. While they certainly claim a respectable share of a healthcare institution's utility costs — compared to such an institution's overall operating expenditures, the investment is miniscule.

Yet, the importance of energy expenditures — energy investments — is underscored in hundreds of studies cited by the Center for Health Design, which find that the ability of a facility to provide the proper physical environment has a direct impact on positive patient outcomes. Facility environment improvements — including energy-related projects such as modernizing heating, ventilating, and air conditioning (HVAC) technology — impact much more than just utility costs. They improve the institution's number one priority: patient quality of care.

The best proof lies in the Physical Environment of Care Study. This structured process includes all key stakeholders — from caregivers to professional staff to management to patients — in uncovering solutions to improve patient outcomes.

Structuring the Critical Steps

Experienced planners say the most successful studies often follow these steps:

1. Planning starts with initiating a relationship with an energy service company or ESCO. The ESCO will not only help plan but also conduct and analyze the study.
2. Information gathering starts at the top. Input is gathered from institution department and hospital units, from human resources and safety to the labs to quality and infection control.
3. Data gathering begins with patients and follows throughout the hospital operation — ranging from surveys to observation.
4. Effective solutions include considering options that will create a safer, more comfortable environment; improve the quality of patient care; reduce costs; and boost efficiency. Planners should examine airflow, lighting, humidity, temperature, and HVAC changes. Implementing such measures can impact the hospital's "green" profile — as well as its employee productivity.

Providing a Positive Example

Recently, a 93-bed nonprofit community healthcare facility located in the Midwest teamed with an ESCO to undertake a Physical Environment of Care Study. The study would evaluate the relationship between the facility's physical environment and its quality of patient care.

Following a series of top-level meetings, with research and analysis of staff activities as well as operations and site data, the team agreed that three critical environmental areas were negatively impacting the institution's quality of care. The three areas of concern: temperature, noise level, and aging plant/equipment.

The team undertook an investment-grade systems audit, to estimate and reconcile the required expenditures for infrastructure improvements with the anticipated savings in energy and operational costs. The audit also focused on quality outcomes as well as financial results, including quality of care, patient satisfaction, and staff impact and performance. The study incorporated the input of — and its results were shared with — the professional staff.

The audit found that the recommended improvements, including upgrades in the HVAC system, would result in positive financial and quality of care outcomes. Improving the environment in terms of temperature meant increased comfort for patients and staff — and less staff involvement in temperature-control issues. A reduction in noise also improved both comfort and the quality of caregiver communications. Air-quality improvements again directly impacted comfort — as well as patient and staff health.

The result of the audit findings: board approval of \$2.3 million in capital improvements to upgrade the hospital's environment of care. The hospital utilized a customized performance contract with the ESCO to draw upon an

expected \$313,000 in anticipated annual energy savings to fund the improvements. The project is expected to pay for itself in just 6 ½ years.

Putting Patients First

A Physical Environment of Care Study is a critical tool that provides hospitals with the plan, process, and resources to achieve major improvements in its physical environment. While these improvements can include financial benefits such as reducing energy and cost savings, the more dramatic result is their direct impact on improving positive patient outcomes — the primary mission of every healthcare institution.

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