

The new emergency department at Baylor University Medical Center

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Founded as a Christian ministry of healing, Baylor Health Care System exists to serve all people through exemplary health care, education, research, and community service. Nowhere in our system is this mission better served than in the emergency department (ED) of Baylor University Medical Center (BUMC). Thirty years ago we served the community from a small area in the basement of Jonsson Hospital. Soon, the ED will occupy 75,000 square feet of Roberts Hospital (*Figure 1*).

Over the same 30 years, the practice of emergency medicine has changed significantly. One must now thoroughly work up and evaluate all who come through our doors. There must be objective evidence to admit a patient; judgment is no longer enough. Short-stay hospital admissions have become prolonged ED stays. Twenty-five percent of all Texans have no health care insurance. A much larger percentage has no medical home. There is little opportunity for insured workers to visit their physician without taking time off work, and for many, no work means no pay. Added to this great number of people are those who have emergent medical conditions or trauma, leading to an ever-increasing number of ED patients.

The ED at BUMC has been at capacity for nearly 10 years. To perform efficiently, an ED can be at capacity for no more than 10% of any day. Our ED is at capacity consistently (*Figure 2*). This mismatch of need and capacity has led to declining service and loss of referrals from our medical staff. Quality metrics are more difficult to maintain, and staff morale suffers. Yet, the ED continues to be one of the most efficient areas of our hospital and certainly the place to be when one is seriously sick or injured.

A number of years ago, BUMC's board of trustees acknowledged this situation and declared that it must be resolved. Planning began well over 2 years ago, and construction will be finished by January 2008. The total capacity of BUMC's ED will increase from 34 beds to approximately 80 patient rooms, almost all of them private. In addition, a large trauma area will be available to hold up to eight severely injured persons. Technology will keep pace, with a completely computerized patient record, digital radiology, and two computed tomography scanners, one a 64-slice scanner and one a 32-slice scanner.

Our patients were foremost in the planning of the new ED. The first thing one notices in our new department is "the quiet."



Figure 1. Artist's rendition of the expanded emergency department at Baylor University Medical Center.

Sound itself leads to stress, and a quiet environment helps patients and staff alike. Computers in every room allow the staff to spend more time with each patient and be more efficient. The medical professionals will be geographically placed, maintaining our small team atmosphere and working relationships. A separate ambulatory entrance will be available for patients referred by the Baylor medical staff. Communication will be enhanced with a call center that already receives over 450 calls a day. All staff will carry cell phones so that they are quickly available. A classroom large enough to hold one third of our staff at one time will also soon be available, along with an enlarged locker room and break areas. These areas were made possible by generous private donations.

Each patient room has enough chairs for family members. Each is also equipped with a television and a phone. The lighting is dimmable for comfort. Privacy curtains have been eliminated in favor of electrostatic glass, which turns opaque with a flip of a switch. The floors do not need waxing; therefore, stripping,

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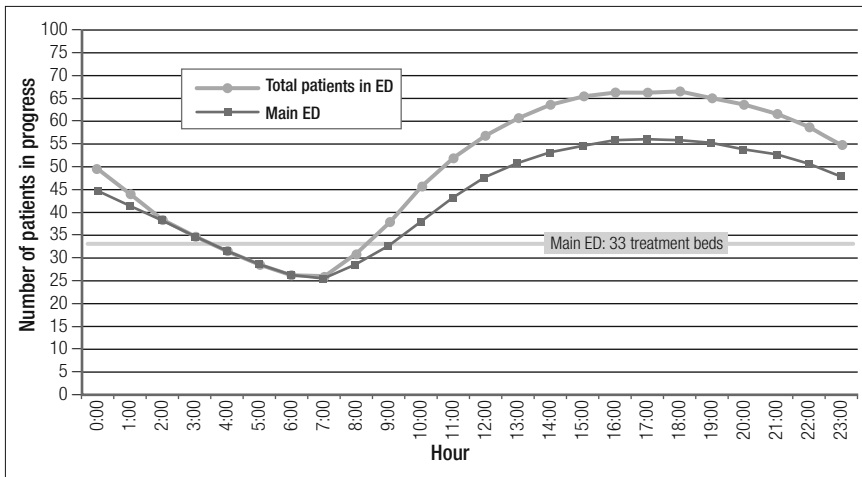


Figure 2. Bed capacity analysis: patients in progress by hour of the day in the emergency department at Baylor University Medical Center. Data were averaged for the year 2006. The current capacity of the department is 33 beds (as represented by the horizontal line); twice that number of patients are being seen during the peak hours of 4:00 to 6:00 PM.

buffing, noisy machinery, and foul odors are avoided. Trauma has its own area, a large bay with private rooms nearby. There are smaller waiting areas throughout the ED for family comfort and proximity. Our monitors will now be watched by technical assistants, and any problem will be immediately called to the treating nurse, decreasing alarm fatigue.

Disaster medicine has also been considered in the new ED. A large new decontamination room has been added, and multiple negative pressure rooms are in place for respiratory isolation. Aesthetics have been considered, with artwork inside and out. The exterior will soon receive special attention, with the knowledge that this area of the campus will become more populated and utilized as the years progress.

The completion of our new ED ensures that our mission to our patients and our community will be well served for many years to come.

Acknowledgments

I would like to thank the ED staff who gave countless hours of their time in planning and implementing these plans; staff of the architectural firm of Freeman White, who worked as well with us medical people as humanly possible; and staff of MEDCO, who have constructed such a beautiful and workable facility while maintaining patient safety.