



Stanford University Medical Center

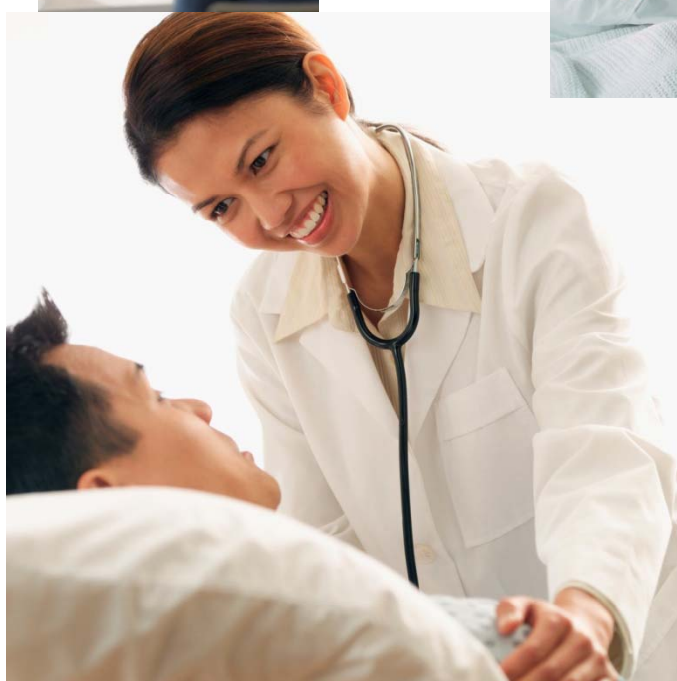
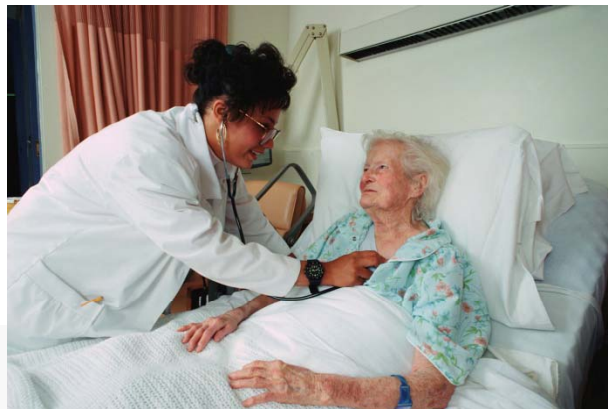


Blood & Marrow Transplant ICU Utilization Project

Stanford BMT

April 27th, 2010

Communication



Defining the problem

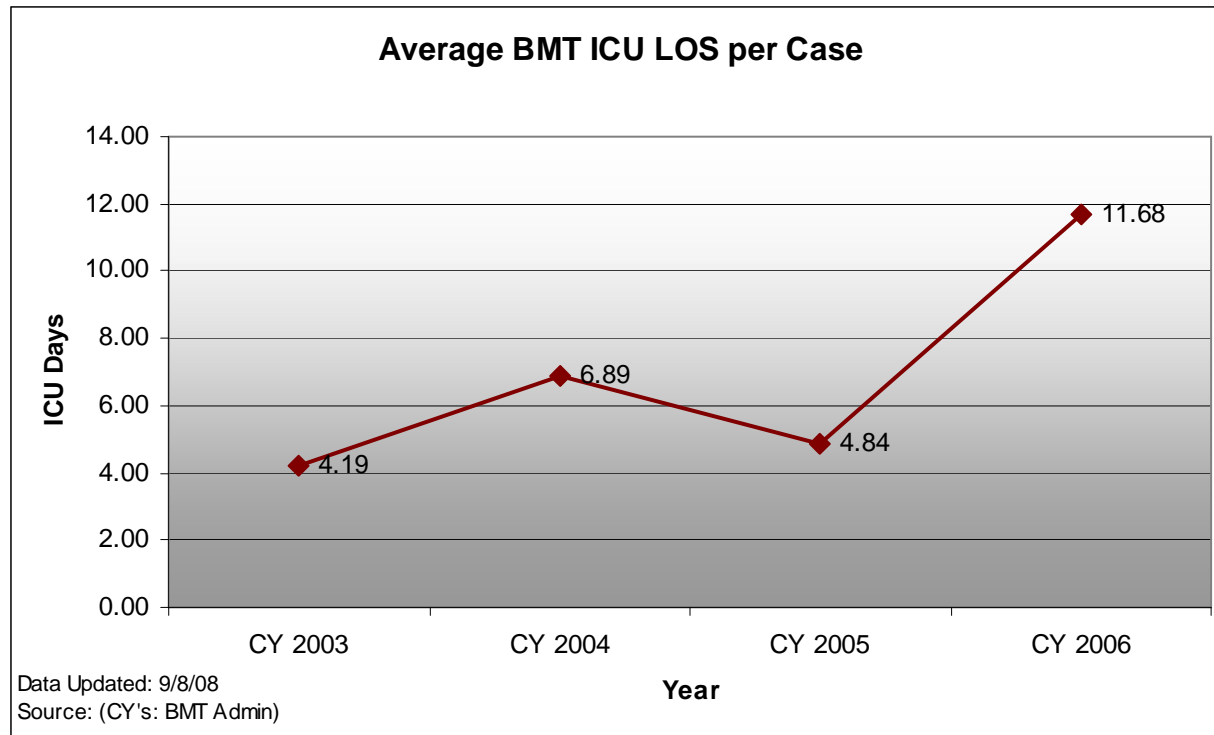
- ▶ Appropriate resource utilization is critical with increased costs and scarcity of ICU Beds
- ▶ Communication between medical teams is often fragmented resulting in conflicting information to patients and families
- ▶ Unclear communication makes it difficult for patients and families to make educated decisions
- ▶ These factors can result in over utilization of the ICU for non-beneficial care

Major Findings from Stanford Study

- ▶ A desire for improved communication between caregivers, patients, and families
- ▶ 47% of families felt they received contradictory messages
- ▶ 23% felt they received conflicting recommendations

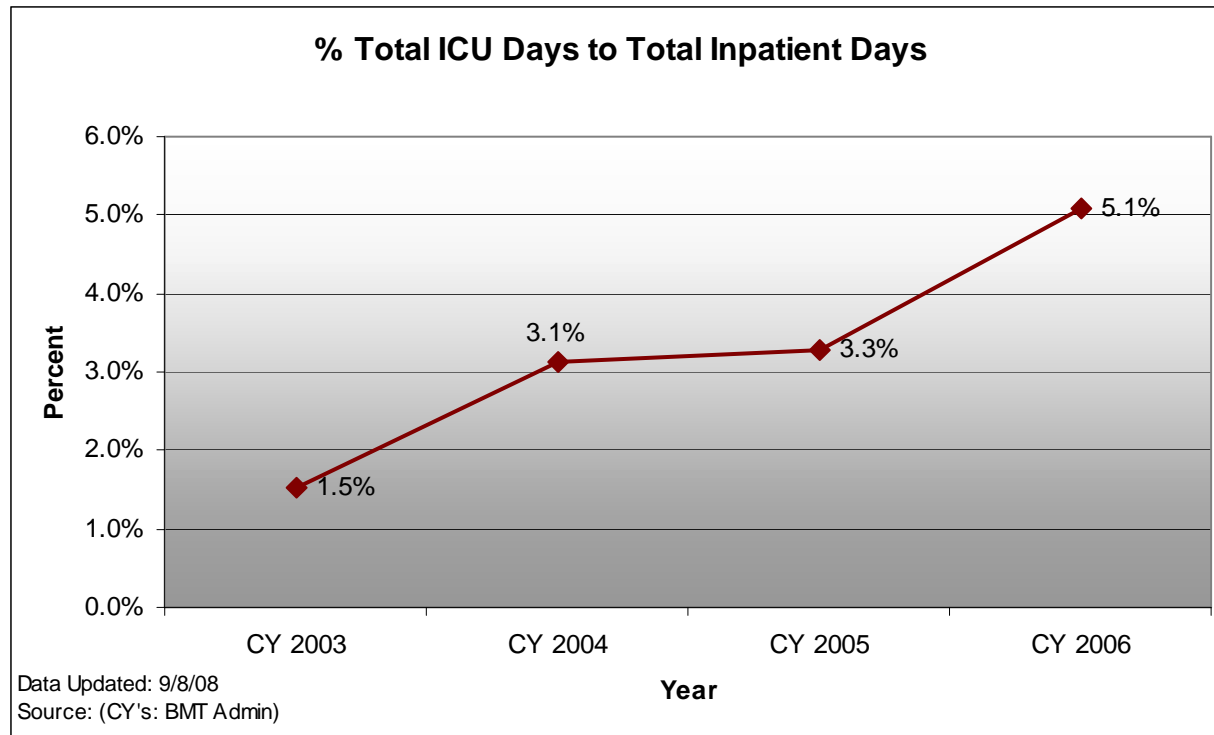
Source: 1998 Stanford End of Life survey- Family Interviews.

Measure & Analyze the problem



Upward trend in BMT ICU LOS over the past four years

Measure & Analyze the problem



Upward trend in BMT ICU Days over the past four years

Improve: Project goals and benefits

<p>PROJECT GOALS</p>	<ul style="list-style-type: none"> ▶ Develop criteria to help determine when ICU admission and reevaluation is necessary ▶ Decrease average ICU LOS without negatively impacting mortality ▶ Decrease number of patients admitted to ICU when “No Stay Recommended” (using new criteria)
<p>PROJECT BENEFITS</p>	<ul style="list-style-type: none"> ▶ Improved patient, family and staff satisfaction ▶ Consistent evidence-based guidelines and tools for appropriate admission of BMT patients into ICU ▶ Clarity of information and communication to patients and families enabling them to make educated decisions regarding care options ▶ Appropriate utilization of ICU beds for BMT patients, thereby improving ICU throughput ▶ Appropriate Resource utilization ▶ Avoid treating futile conditions that can result in unnecessary treatments and painful deaths

IMPROVE

BMT ICU Clinical Admission Guidelines

- ▶ **Intensive BMT Care Recommended**
 - Veno-occlusive Disease (VOD)/Sinusoidal Obstructive Syndrome
 - Hypoxemia not requiring intubation especially if volume overload or transfusion related acute lung injury (TRALI)
 - Sepsis without hypotension
 - Hypotension
 - Diffuse Alveolar Hemorrhage (DAH)
 - Cardiac Event
 - Airway Protection

- ▶ **Limited ICU Recommended** – reevaluate within three days of ICU admission
 - Severe Sepsis requiring intubation or vasopressors
 - Respiratory Failure requiring intubation

- ▶ **No ICU Recommended**
 - Grade 3-4 Graft vs. Host Disease (GVHD) unresponsive to aggressive treatment with respiratory failure
 - Relapsed disease if recurrent treatment is not an option
 - Multi-organ Failure, requiring intubation (2 organs + mechanical ventilation)

IMPROVE

Prognostication in BMT Patients Requiring ICU Care

- ▶ **Counseling BMT pts with newer data now needs to be predicated on probabilities from recent literature**
 - ▶ Probability of survival in pts mechanically ventilated ~15-30%
 - ▶ Probability of survival in pts mechanically ventilated who require pressors is most commonly <10% and worsens with time
 - ▶ Probability of survival in pts mechanically ventilated with hepatic and renal failure is <5% and worsens with time
 - ▶ Risk factors: allograft, ICU course >30 days post transplant
 - ▶ Pts and/or families should be told ahead of time and informed that re-evaluation at 3-4 days will be important

- ▶ **Best references from 2003 onwards:**
 - J Clin Oncol 24:643, 2006
 - Biol Blood Marrow Tx 12:301, 2006
 - Chest 126:1604, 2004
 - Crit Care Med 31:1715, 2003

Prognosis: Physicians

- ▶ **dislike and tend to avoid it***
- ▶ **Difficult to do**
 - are overly optimistic
- ▶ **Fear patient will lose hope**

- ▶ **Study of Physicians**

- ▶ **60% found it stressful and difficult to make predictions**
- ▶ **44% wait to be asked by patients**
- ▶ **90% said they should avoid being specific**

- ▶ Christakis & Lamont BMJ 2000

Prognosis: Patient Perspective

- ▶ **False hope is no hope**
- ▶ **Often patients want to know**
- ▶ **Absent explicit discussions, patients must infer**

- ▶ **Information influences decisions**

We would all live our lives differently if we knew we had only one year to live

Improve:

Process Guidelines for BMT Patients Admitted to ICU

ICU Admission

- ▶ BMT Team utilizes the revised BMT Patient ICU Clinical Admission Guidelines for managing appropriate ICU Admissions.

ICU Rounding

- ▶ BMT and ICU Teams meet for daily rounds during the patient's stay in the ICU.

ICU Family Conferences

- ▶ BMT and ICU Teams meet with the patient or family every 2-3 days during ICU stay to clarify goals of care.

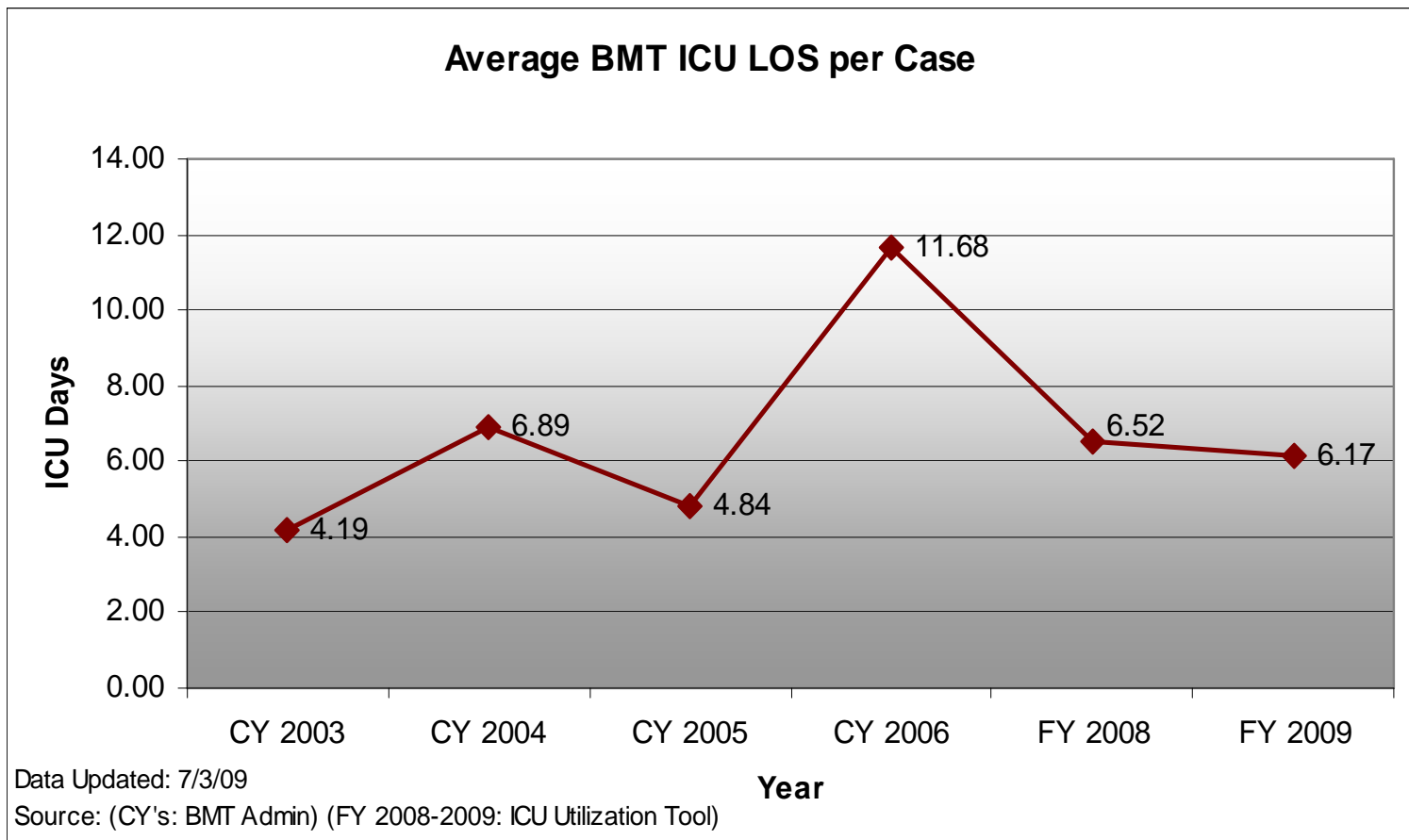
BMT Patient Review

- ▶ BMT Monitoring Tool utilized to monitor adherence to admission criteria.
- ▶ All ICU patients are reviewed monthly at the BMT Review meeting.

Patient and Family Conferences

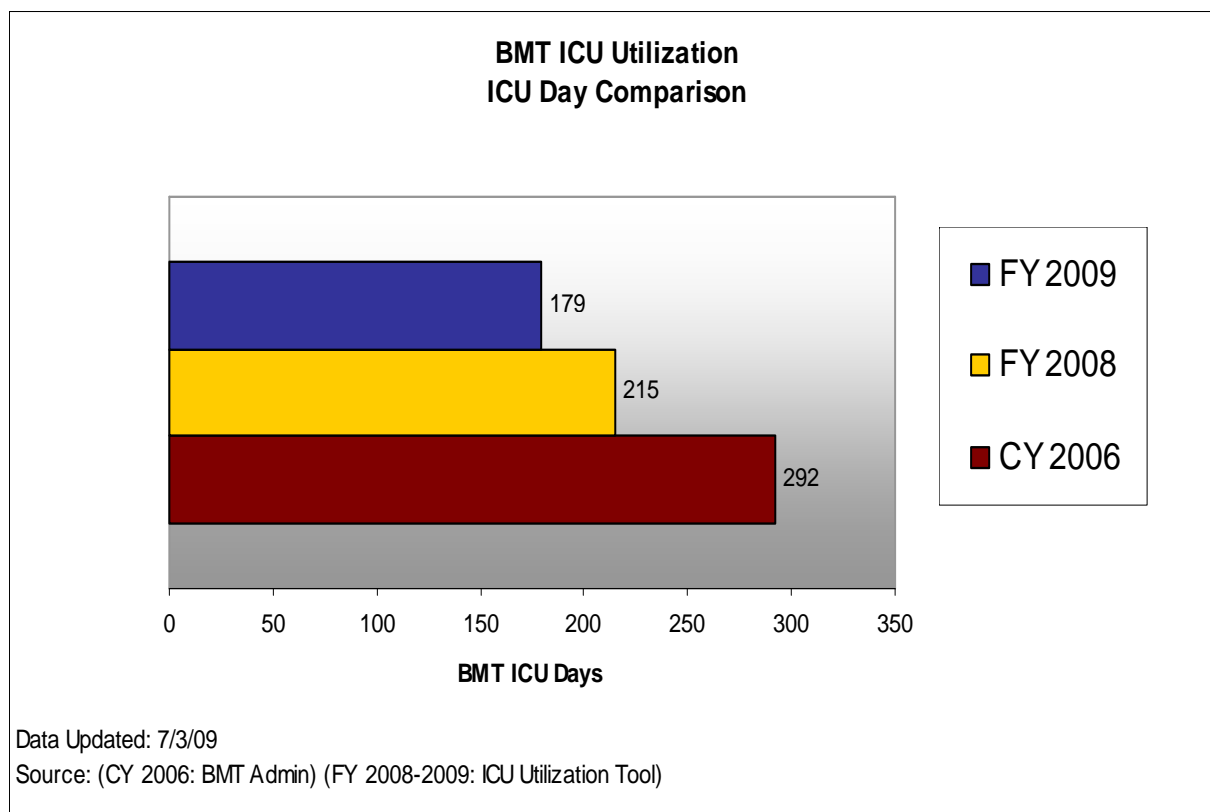
- ▶ *The perception of being listened to is one of the greatest predictors of Patient and Family satisfaction*

Results



Decrease in BMT ICU LOS

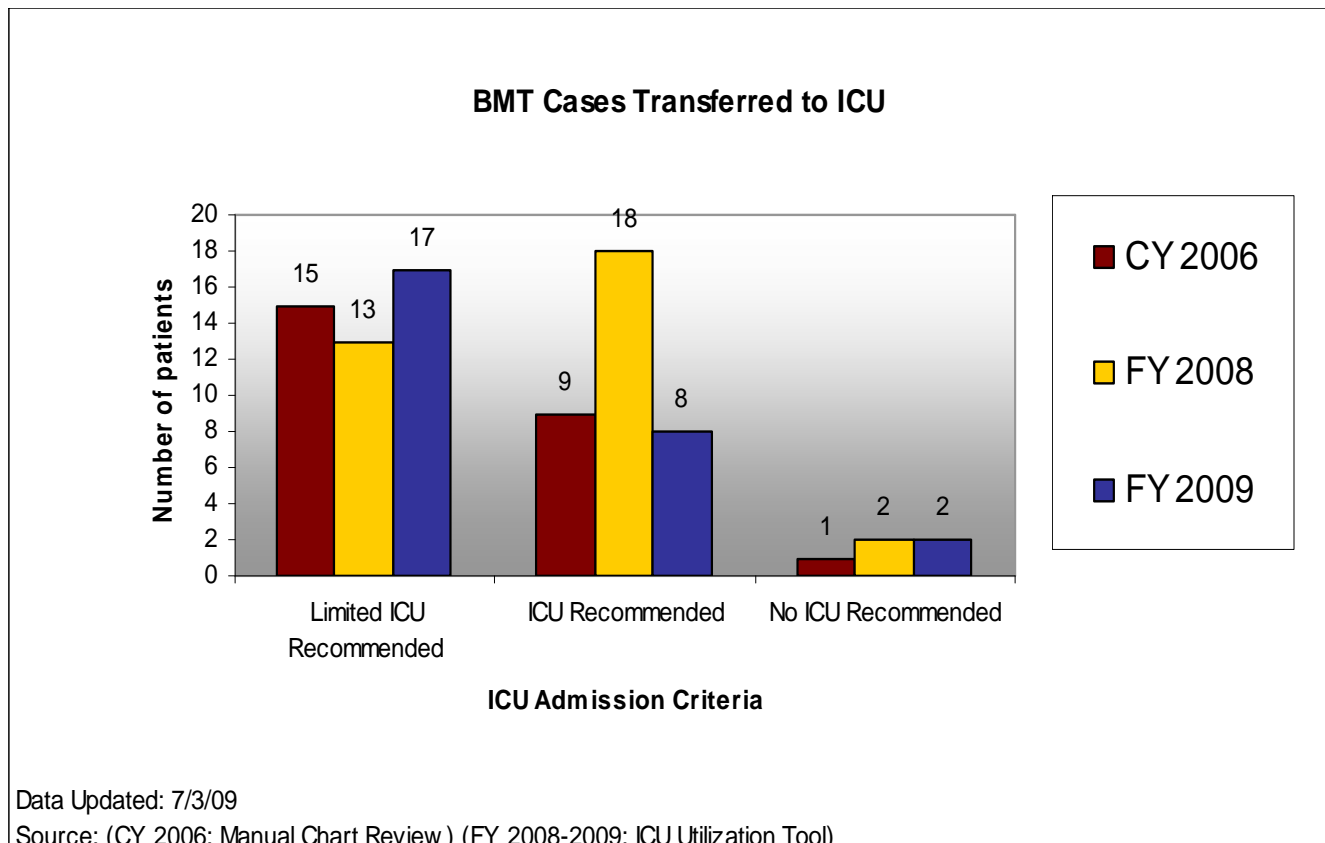
Results



ICU Days saved

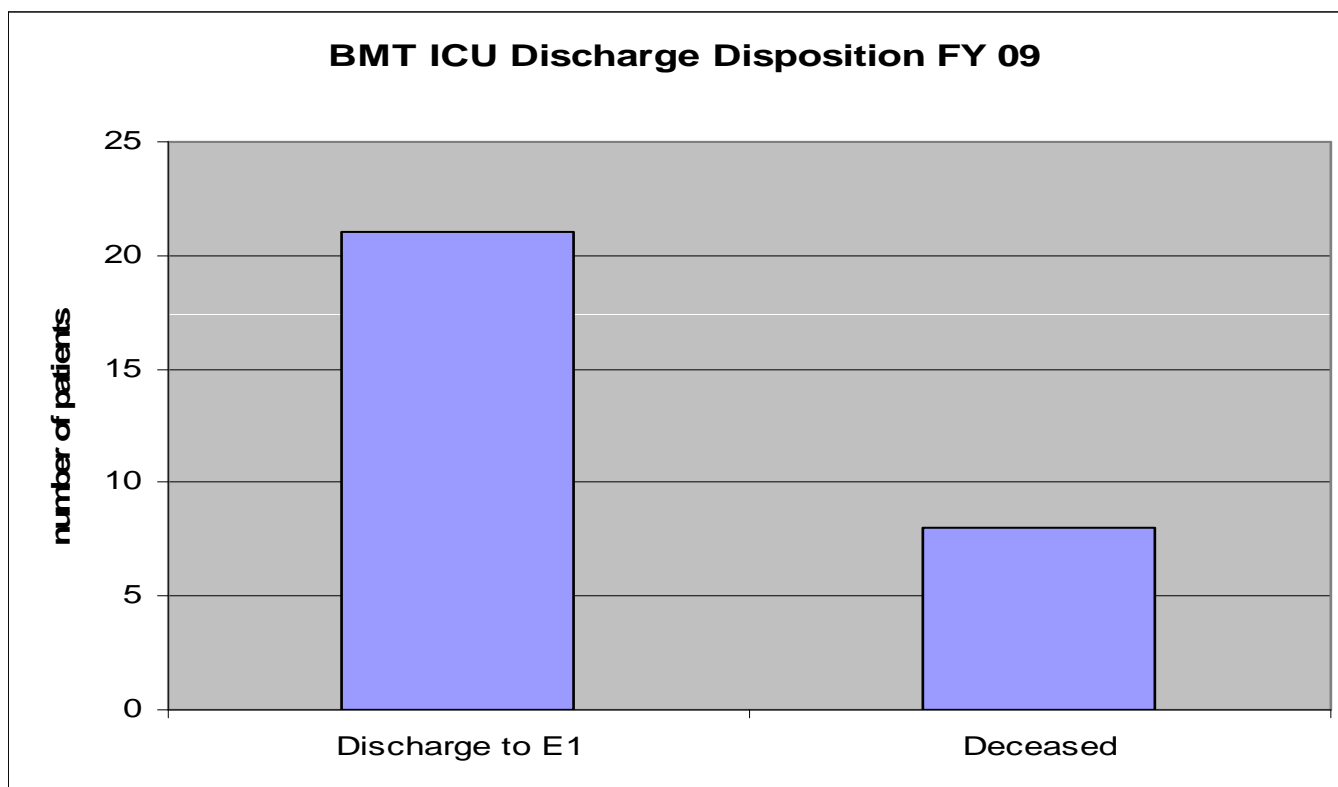
Results:

BMT Project Utilization Impact: FY 2009



More Patients that were recommended for the ICU went to the ICU

Results



**72% of patients admitted to ICU transferred back to E1,
an improvement from CY 2006**

Project Benefits

- ▶ Appropriate admission of BMT patients into the ICU based on criteria from recent literature and probability of survival
- ▶ Appropriate utilization of ICU beds for BMT patients which results in better resource utilization and avoiding futile care
- ▶ Consistent rounding between BMT and ICU facilitates communication among physicians, with the care teams involved, and with the family
- ▶ Consistent communication ensures accurate information to patients and families enabling them to make educated decisions regarding care
- ▶ Increased satisfaction for patients, families and staff

Summary

▶ Clear Communication

- Critical for making informed decisions
- Essential for managing valuable resources and the appropriate Utilization of the ICU