IMPACT OF A LEVEL TWO TRAUMA CENTER ON ORGAN DONATION RATES IN A COMMUNITY HOSPITAL

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INTRODUCTION: Organ donation and transplantation has been well known to extend lives and improve quality of life. Unfortunately the benefits of this practice are limited by the lack of availability of transplantable organs nationwide. The trauma patient population is a large subset of patients that make up the pool of potential candidates for organ donation. Successful organ donation and recovery cannot be achieved without the synergy and collaboration among healthcare providers and the Organ Procurement Organization (OPO).

In 2009, an increase in patients with non-survivable brain injuries was noted in this community, non-academic setting as the facility transitioned from a Level III to a Level II trauma facility. In conjunction with the facility OPO, a plan was formulated to evaluate processes and identify opportunities for improvement in organ donation. Barriers identified included untimely referrals where the OPO was notified when brain death was determined preventing successful organ preservation, lack of knowledge of the organ donation process among pre-hospital and Emergency Department providers, and inadequate strategies for patient management centered on organ preservation in appropriate patients.

PROCESS IMPROVEMENT METHODS/STRATEGIES: An extensive education plan was formulated and presented by the OPO Coordinator. The focus centered on the belief of identification and notification of potential donors must occur early in the process long before brain death has ensued. Therefore, education was targeted to all groups, not just the traditional approach of educating only the critical care units. An important aspect of the clinical education was modifying current clinical triggers, making the presence of paralytics and sedation no longer a barrier to notifying the OPO. This education took over a period of one year in order to reach across the entire spectrum of care-givers. This has resulted in a culture that supports donation across the entire continuum of care; from EMS providers, ED physicians, ED nurses, critical care intensivists, neurosurgeons, trauma surgeons and critical care nursing staff. The role of the OPO coordinator in this process cannot be understated. His ability to form collaborative relationships among all of the providers led to our program success.

The second strategy was to establish a clear path for preservation of organ function. This was achieved by the creation of a catastrophic brain injury protocol. This order set allowed aggressive measures to preserve organs in the setting of impending brain death. This process kept donation open as a viable option early in the process, prior to brain death determination. An added benefit was perceived nurse autonomy and satisfaction.

RESULTS: The Medical Center of Plano received Level II Trauma Designation status in December 2009; therefore 2010 data was selected for review to reflect the first year as a Level II facility, tracking the results for the following two years. As a result of the strategies implemented, total donors increased from nine in 2011 to 26 in 2013 (188.9% increase). Total lives saved increased from 32 lives in 2011 to 78 lives in 2013 (159.4% increase). In addition, the timely referral rate increased each year to 98.7% which further contributed to program success.
LESSONS LEARNED AND FUTURE DIRECTIONS: Lessons learned throughout our program growth is that a strong relationship with your OPO is a must. Education about the donation process must be on-going and reinforced by unit leadership. Creating champions among the unit staff both in the ED and ICU is also a must for program success as they provide peer to peer guidance when leadership is not on site. Finally, collaboration with ED physicians and critical care medicine further supports a strong culture of donation.

Future direction for the program includes placement of the OPO coordinator in-house at the Level II trauma center to further enhance communication and identify opportunities for early intervention. The addition of a T4 protocol to the catastrophic brain injury order set is planned to combat failure of the thyroid gland and provide circulatory stability. Specifically, it is the administration of the following boluses in rapid succession: methylpredisone, levothyroxine, regular insulin and D50W. This is followed by an infusion of levothyroxine titrated to maintain a systolic blood pressure greater than 100.