**Title:** Utilizing Performance Excellence and Business Intelligence to Drive Efficiency in Tissue Procurement

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**Organization:** Mid-America Transplant

**Background:** Our tissue procurement group was experiencing an increase in tissue donor volumes that resulted in capacity constraints in the recovery process. Our current processes made it challenging to maximize donation in periods of peak volume due to variation in the way we managed the donation continuum.

**Hypothesis:** We anticipated that holding a Performance Excellent event (collaborative group including frontline staff coming together to root cause problem solve and trial solutions prior to deployment) around this challenge would identify area of opportunity to help drive improvements in workflow and standardize decision making and increase adherence to previously established standard work to drive efficiencies and improvements in the donation process.

**Methods:** We conducted a Performance Excellence event focused on reducing the capacity constraints in the donation process and driving improvements in tissue procurement. We identified gaps that were preventing the team from operating at peak capacity during times of steady volume. The team identified opportunities to create standard work around key decisions that occur during a shift; which case to begin next, when it was acceptable to end the current shift, and adherence to previously created 4-person standard work flow. One of the key drivers of work flow was determined to be the order in which donors were recovered; it was discovered there was variation between shift and teams regarding how the decision was made on which case to start next. The team worked with Business Intelligence to create/revamp the department's visual management board to include logic to help significantly reduce the variation in decision making regarding case priority and order. The team assigned point values for key items including length of time the donor was in morgue, types of tissues to be recovered (those recoveries that require longer timeframe received greater points), ocular recoveries, and time remaining till "time out." The higher the points established the priority for recovery. The team also identified key elements to display on the visual board to ensure the critical information needed was shown, but also keeping it simple to not over complicate it. After the initial event each team member was responsible for sharing the outcomes with their teammates and seeking feedback on how the visual board worked and helped to reduce variation between the teams. After a few weeks of initial testing, the team reconvened, and some modifications were made based on the team's feedback and data.

**Results:** The tissue visual board has become an everyday, relied upon tool for the tissue team.  The track board coupled with other solutions from the PE event have helped to drive efficiencies in the department's workflow, minimize variation, decrease the amount of time a donor spends in the morgue pending recovery, and support the maximization of tissue procurement. Prior to the start of the event the time from donor's arrival to tissue first incision (75$^{th}$ percentile) was 10.3 hours; post event this time decreased to 6.85 hours; a 33% decrease.  Additionally, the team tracked first case of the shift start time; we experienced a 107% increase in the adherence to case start time.  Cases starting within the first 60 minutes of the shift increased to 58% from an initial state of 28%.

**Conclusions:** Utilizing Performance Excellence and Business Intelligence, coupled with front line staff, helped to identify gaps in our process and develop unique, technological and data-driven solutions. Mid-America Transplant's BI and PE departments have proven to be a great asset coupled with clinical operations in developing creative solutions to drive standard work and efficiencies in day to day workflow.

# Utilizing Performance Excellence and Business Intelligence to Drive Efficiency in Tissue Procurement

Erica Hinterser, Director, Tissue Procurement, Mid-America Transplant

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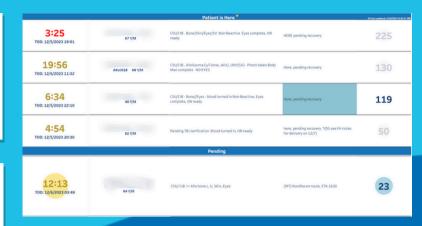
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