What motivates blood donations? A Retrospective Outcome Analysis of Blood Drives at Post-Secondary Institutions in Southern Louisiana and the Mississippi Gulf Coast.

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This research project was performed in collaboration with The Blood Center in New Orleans, Louisiana.

Background: The United States has experienced blood shortages within the last decade, particularly after the COVD-19 pandemic. Within Southeast Louisiana and the Mississippi Gulf Coast, The Blood Center (TBC) is one of the primary blood collection agencies, serving over 50 local hospitals and outpatient transfusion facilities. Standard blood drives typically acquire one pint of whole blood per donation, which can be used to save up to three lives through transfusion. To meet the community's needs, TBC aims to maintain a continuous 3-day blood supply, which equates to an inventory of 1200-1400 pints and requires an average collection of 350 pints per day. Increased usage and low donor turnout may result in area hospitals canceling select elective surgeries until inventories reach stable levels regionally. Limited research exists which explores psychosocial factors that affect blood donor participation across a large subset of blood collection events. Thus, the present study retrospectively compares the outcomes of blood drives conducted by TBC with the goal of identifying common factors that positively and negatively impact donor participation for future implementation.

Methods: Data from 237 blood drives at post-secondary educational institutions led by TBC from January 2022 to September 2025 in Southeast Louisiana and the Mississippi Gulf Coast were retrospectively analyzed. Drives were separated into categories of interest based on year, day of the week, season, location, incentive type, personal association, and concurrent activities. Averages and standard deviations for actual drive donations and appointment follow-through rates were compared to evaluate statistically significant differences between categories.

Results: Blood drives were held in urban and rural areas throughout Southeast Louisiana and the Mississippi Gulf South. The total pints collected per blood drive ranged from 2 to 116 with an average collection per drive of 21.0 pints. Blood drives devoted to an individual (memorial and replacement drives) averaged 35.8 pints per drive compared to 20.2 pints for all other drives (77.2% increase, p-value = 0.00047). The ten largest drives, i.e., those with the most blood collected per drive, include eight hosted by LSU Health Science Center in New Orleans (LSUHSC New Orleans) and two hosted by the University of Southern Mississippi (USM). Surprisingly, blood drives that offered food incentives averaged lower donation numbers (14.4 versus 21.4 pints for drives without food, p-value = 0.015).

Conclusion: The most successful blood drives with regard to the largest number of collected units were held at LSUHSC New Orleans and USM. The LSUHSC New Orleans drives were hosted by either the School of Medicine or the School of Nursing, and many included a community component such as memorial drives in honor of an individual or were associated with a holiday and included an additional incentive (e.g., Halloween Haunted House tickets). The USM blood drives were centered around a friendly competition between the Air Force and Army ROTC cadets. While donors from health education institutions may readily donate based on their understanding of the importance of maintaining the community's blood supply, the success of the competition centered drives suggests that the health institution drives might be even more successful if they incorporated a friendly competition into future drives. The negative impact of food incentives suggests that these resources could be better utilized elsewhere. Future work will be needed to scrutinize the impact of several factors discovered here at future blood drives.