

## COMMENTARY

# Donor motivation and psychosocial research

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While the COVID-19 pandemic has recently jeopardized blood programs' abilities to satisfy transfusion demands,<sup>1</sup> the national blood supply had already earned reproach. At their November 2015 meeting, the Advisory Committee on Blood and Tissue Safety and Availability concluded that there was evidence of a "blood crisis."<sup>2</sup> A year later, the committee declared that circumstances had worsened and the blood supply was "very fragile."<sup>3</sup> In the same year, a report sponsored by the United States Department of Health and Human Services, conducted by a division of the RAND Corporation, assessed the United States blood system as operating in a period of "flux and uncertainty."<sup>4</sup> For the authors of a 2017 sounding board article in the *New England Journal of Medicine*, there was evidence that "a once-reliable system is faltering."<sup>5</sup>

On reflection, challenges to the sustainability of the blood supply should have been anticipated, especially since Zou et al. had predicted, in 2008, that there could be severe shortages of blood and components unless supply improved or usage was reduced.<sup>6</sup> Their prophetic remarks were prompted by a review of the ages of volunteers donating between 1996 and 2005. They noted significant decreases during this time in donations by individuals between 25 and 49 years of age, while older donors, those more than 50 years of age, contributed increasingly to inventories. This aging of the donor base was confirmed by others.<sup>7</sup> At this author's blood center, the effect is particularly evident amongst apheresis platelet donors. Figure 1 shows the increasing reliance on older donors and the failure to recruit individuals in the younger age groups who were previously reliable

supporters of the apheresis platelet program. For example, in 2001, 34% of the apheresis platelet annual inventory came from individuals between the ages of 36 and 45 but this percentage contribution had dwindled to 12% in 2020.

Why the crisis in the sustainability of the blood supply did not become apparent earlier may well have to do with the comment from Zou et al. about a mitigating role for decreased usage. Patient blood management certainly had this effect; there was evidence of a decline in the demand for red blood cell units as early as 2008.<sup>8</sup> In 2015, the National Blood Collection and Utilization Survey reported a 14% decrease in transfusion between 2013 and 2015<sup>9</sup> and the 2017 report revealed a 6% decrease over the subsequent 2 years.<sup>10</sup>

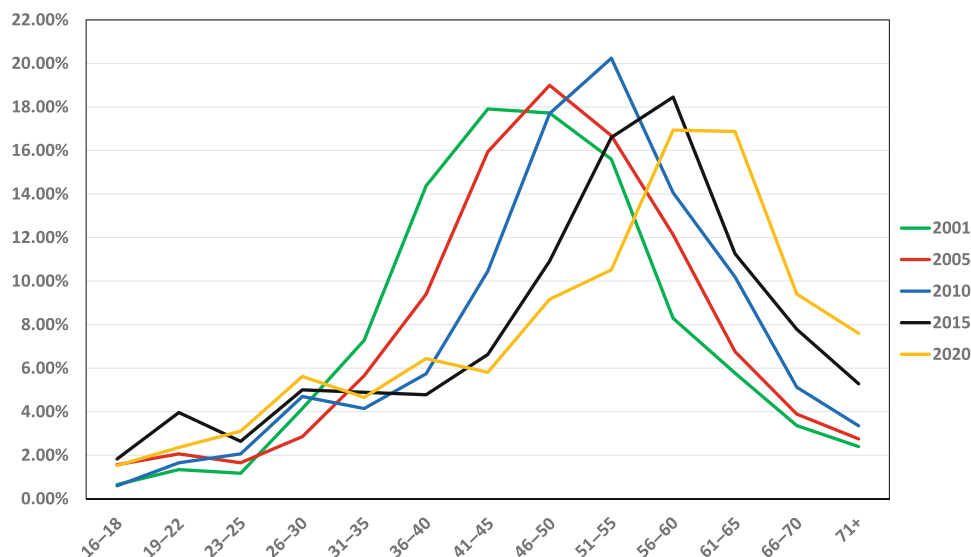
Against the background, then, of a national blood supply that was more cause for concern than a cause for celebration, an Act was passed in 2019 charging the Secretary of Health and Human Services to report to Congress recommendations for maintaining an "adequate national blood supply."<sup>11</sup>

Many of the report's subsequent recommendations, conceding that donor motivation was poorly understood, focused on donor recruitment.<sup>12</sup> The authors of the report urged both an exploration of "new ways to encourage younger generations of blood donors," and also an improvement in the diversification of the nation's donor base. Funding for such goals was not ignored and research collaborators were proposed, including the National Academy of Medicine and the Agency for Healthcare Research and Quality. A spotlight was also cast in a direction that, in a blood banking context, had

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**FIGURE 1** Changing percentage contribution, by age bracket, to the annual apheresis platelet inventory between 2001 and 2020 at Carter BloodCare, Bedford, Texas



not earned much illumination before, namely psychosocial research to understand donor motivation.

Enthusiastic endorsement of the report's call for such psychosocial research funding followed. At the 52nd Advisory Committee on Blood and Tissue Safety and Availability meeting in September 2020, social science research funding was recommended with the goal of attracting younger and more diverse donors. America's Blood Centers included an endorsement of such funding in their 2021 Advocacy Agenda<sup>13</sup> as did the Association for Blood and Biotherapies.<sup>14</sup>

Emphasis on the importance of psychosocial research is not a new insistence and studies of donor motivation and engagement, while limited, do have a long history. In 1961, the Medical Journal of Australia published a paper entitled "A Study in Blood Donor Motivation"<sup>15</sup> which reported on the Red Cross Transfusion Service in Victoria's investigation of what the author referred to as "the forces which are at work for and against the donating of blood." She was concerned that the adequacy of inventories could not be maintained without a more comprehensive understanding of the drivers of "continuous, successful recruitment."

*Transfusion* also published an early foray into motivation research with an analysis of collections in American Red Cross Northern Ohio and Columbus Regional programs where some counties did well, while others did not, as measured by recruitment efficacy.<sup>16</sup> The authors concluded that research on donor motivation was essential to ensure that recruitment could "make maximal use of the individual donor psychology." The general disregard for the recommendation over subsequent years prompted Oswalt, in a 1977 review of blood donor motivation publications, to complain that "while there is a

substantial body of scientific information on the medical and chemical aspects of blood, there is a woefully inadequate foundation of scientific data upon which to draw information about acquiring blood from donors."<sup>17</sup> Some years later, however, a book by the sociologist Robert D. Putnam published in 2000, *Bowling Alone: The Collapse and Revival of American Community*, rekindled interest in recruitment research. He pointed to significant prosocial conduct challenges in community behavior that had profound relevance for those interested in psychosocial aspects of blood donation.<sup>18</sup> In this context, he detailed compelling evidence for the loss of social capital and a decrease in civic engagement. A review of Putnam's observations and its immediate implications for understanding the increasing challenges to donor recruitment prompted Kolins and Herron to comment that "the key to a future with an adequate blood supply may be found by embracing applied sociology."<sup>19</sup>

Given there has been only sparse published evidence of enthusiasm for such an embrace, it is not surprising that there have been few fresh strategies for managing dwindling blood supplies. With the emergence of the pandemic and ample evidence of a collapsing national inventory, old recruitment tactics were employed. There was a flurry of appeals. They differed from the tiresome reruns of so many ineffectual previous appeals only by the inclusion of messages from eminent national authorities. The Director of the Center for Biologics Evaluation and Research was called on, as was the Surgeon General, whose message especially addressed millennials (born 1981–1996) and generation Z (born since 1997) individuals.<sup>20</sup>

Against this background, and with significant media attention to the blood shortage, the opportunity to

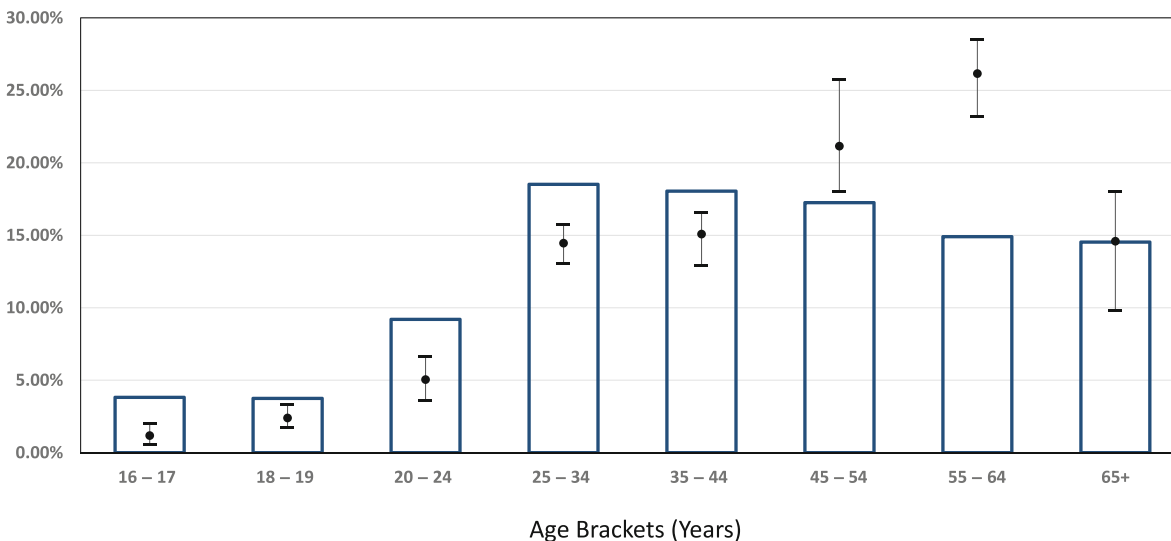


FIGURE 2 Percentage of the general population, by age bracket (the histogram), in the Dallas Fort Worth metroplex and, for the same age brackets, the average daily percentages contribution to the red cell inventory (dot) and range (bars) for the period March 18–28, 2020

conduct a natural experiment emerged whereby we could estimate the success of these appeals, paying particular attention to the age group of donors who responded. Given the closure of schools and universities at the time, we thought our review would be especially useful in gauging responses from young donors whose availabilities were not impeded by the need to attend classes. We chose to look at the red blood cell collections at our blood center during the most intense period of appeals, the eleven days between March 18 and March 28, 2020. Figure 2 shows the percentage contribution, by age range, to the general population in the major collection area for our blood program. The average percentage contribution to the inventory, by age range, for the period under scrutiny and the range of daily percentage contributions are also shown. What was disappointing was the observation that the age groups responding to the appeals were, significantly, the older age groups that were also those groups donating most loyally during the non-pandemic periods. The percentage contribution to inventory by donors older than 45 was greater than their percent representation in the community. For younger donors, their percent contribution was less than their percent representation in the collection area. While results from Texas might not be generalizable, despite the Surgeon General's hope that generation Z and millennials would hear the appeals and respond, this was not the case. With regard to the young, it would be interesting to see if they are also deaf to appeals from the source plasma industry. There have been significant recent increases in payment for plasma "donations," up to \$1000 in a month is currently offered in the Dallas/Fort Worth region, which might indicate that the young are disinterested, even when the reward is financial.

With accumulating evidence, more than 2 years into the pandemic, for anything but an adequate, sustainable, blood supply, new approaches to donor recruitment must take priority. Fresh proposals, even those which may seem counter to traditional recruitment tactics, deserve attention. For example, the value of combining insights from different specialties was emphasized in a paper by Ferguson and co-workers<sup>21</sup> that looked at potential contributions to donor recruitment and retention from interventions based on social and behavioral sciences. The authors urged that recommendations from these sources be integrated, making the point that where social science studies revealed opportunities for recruitment, behavioral science studies provided clues about donor retention. Little wonder that publications of outcomes from such strategies are rare; blood programs infrequently foster research relationships across different disciplines.

Such interdisciplinary relationships and the attendant insights they provide into the complexities of donor motivation are necessary if new strategies are to overcome the dependence on old recruitment tactics, especially if the former seem counterintuitive. For example, traditional donation appeals most often emphasize that donation is an opportunity to express altruism. There is experimental evidence, however, that for the young the sense of personal benefit might outweigh any intention to benefit others. If there is indeed a selfish element to the donation decision for some youngsters, recruitment messages should emphasize the "personal benefits" that donation offer rather than reiterating that donation is an act of altruism.<sup>22</sup> The challenge for blood bankers presented by studies of this nature is how best to

incorporate a fresh understanding of motivation into new recruitment campaigns.

Although the content of messaging to donors deserves fresh scrutiny, there is also evidence that an established ritual of the donor's registration experience, the questionnaire, could benefit from a reappraisal of its role. While the emphasis has been on the donor's health and the likelihood that his or her donation has risks for infectious contamination, a donor interview could be an opportunity to address other issues. In a study by France and co-workers, donation anxiety was revealed as a significant inhibitor of repeat donation by first-time donors.<sup>23</sup> The investigators suggested that novice donors be asked if they were anxious about donating and, if they answered in the affirmative, they should be given information that could point to coping mechanisms for them to employ.<sup>24</sup> In another study that also looked at a very different role for a donor questionnaire, Livitz and co-workers explored "motivational interviewing" as a strategy to increase the likelihood that individuals would donate. The interview included questions that encouraged a number of motivation-enhancing qualities, including a sense of self-efficacy, and in the investigators' opinions, the approach could be valuable in both first-time donor recruitment and retention of repeat donors.<sup>25</sup>

The emphasis that the Secretary of Health and Human Services report to congress placed on finding "new ways" to recruit younger donors was gratifying. If blood programs learned anything from what was essentially the collapse of the national inventory in the early days of the COVID-19 pandemic, it was that old tactics, unchanged by results from any significant investment in recruitment and retention strategies, failed. Problems with blood inventories are not going to be met by lurching from one appeal to another, even when those appeals are made by individuals with stature or recognition in the general community. While it is encouraging that some inroads have certainly been made into an understanding of alternative attitudes to donation, especially with regard to different donor age groups, much of this knowledge has yet to be tested.

It is disappointing that the warning signs of challenges to a stable blood supply, published more than 10 years ago,<sup>6</sup> were not recognized earlier, but some atonement for this sin of omission could be achieved by the application of outcomes from psychosocial donor motivation research to recruitment campaigns.

### CONFLICT OF INTEREST

The author has disclosed no conflicts of interest.

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