Redesigning the Market For Volunteers: a Donor Registry

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Using a field experiment, we created a registry to motivate marginal blood donors. Compared to control groups, Registry members are more likely to volunteer and respond to shortage appeals. The Registry’s effectiveness stems from selection by altruistic volunteers and volunteer’s preference for commitment, but find no evidence of ask avoidance.

[to cite]:

[url]:
http://www.acrwebsite.org/volumes/1023880/volumes/v45/NA-45

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Redesigning the Market for Volunteers: A Donor Registry
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EXTENDED ABSTRACT
Volunteer markets, such as blood donations can suffer recurring periods of excess demand and excess supply, due to a lack of price signals and the altruistic motivations of their volunteers (Slonim, Wang and Garbarino, 2014). This paper designs and implements a Registry, that improves market coordination by exploiting the behavioral preferences of volunteers. Registries have been shown to be an effective coordination tools in other markets, such as kidneys replacements (Roth, Sonmez and Unver, 2004, 2007), bone marrow donation (Bergstrom, Garratt, Sheehan-Connor, 2009), and entry-level labor markets (Roth, 1984; Roth and Peranson, 1999). We find that Registry members are more responsive to donation solicitations and critical shortage solicitations than non-Registry members and that their increased responsiveness is more predictable, reducing the probability of both excess supply and demand. We also find evidence that the improvement of market outcomes when using the Registry to solicit donations is due to the positive self-selection into the Registry from altruism and desire for a commitment device, and no support for the improvement being due to ask avoidance.

In partnership with the Australian Red Cross Blood Service (Blood Service), we introduced a Blood Donor Registry throughout Australia using a large-scale field experiment that unfolded over two rounds using long-lapsed donors. Long-lapsed donors are donors who have given at least one successful whole blood donation, but have not donated in at least the past 24 months. Joining the registry involved agreeing to be in a database of people willing to donate when called when there was a shortage of their blood type. Donors invited to join the registry were told that they would only be called once or twice a year and only when there was a specific need for their blood type. The study involved two rounds; Round 1 manipulated whether the person was invited to join the registry or not, Round 2 (3–5 months later) involved either a standard shortage call to donate or a critical need shortage call (used when there is less than three weeks blood supply). In Round 1 (Invitation stage), over 13,000 eligible long-lapsed donors, were randomly assigned to one of five invitation conditions: 1) invited to join the registry only (Registry Only), 2) invited to join the registry and to donate now (Registry + Donation), 3) invited to donate now only (Donate Only), 4) no invitation to registry or donate but called in Round 2 when there was a shortage (Control 1), and 5) never invited or called (Control 2). The Round 2 donation request stage involve donation request calls 3-5 months later when a blood shortage was occurring. These request calls were only placed to those who had joined the registry in treatments 1 and 2, or answered the phone in treatment 3, or are in control 1. Looking at those who were reached in the Round 1 phone call, 73% of those in the registry conditions (treatments 1 and 2) joined the registry; suggesting it is a popular and appealing idea. We focus on donation behavior as the most important outcome, however, the full manuscript examines call answering and joining the registry as well.

First, we hypothesize that the Registry serves as a screening mechanism that identifies the more motivated lapsed donors. Hence when called to donate in a shortage, subjects who selected into the Registry from the Registry + Donation condition will be more likely to donate than subjects in the Donation Only condition, but that subjects who selected out of the Registry from the Registry + Donation condition will be less likely to donate than subjects in the Donation Only condition.

Second, we hypothesize that the Registry improves the coordination of supply, rather than only increasing the overall supply. In particular, Registry members are expected to be more responsive to solicitations than non-Registry members. We measure responsiveness in two ways: (1) Registry members are more likely to donate when solicited and, importantly, less likely to donate when not solicited; (2) Registry members donate more quickly after receiving the solicitation than non-Registry members.

Finally, exploring the behavioral mechanisms behind the Registry’s effectiveness we examine whether the Registry is effective due to the crowding-in of (1) pure altruists, (2) donors who need a commitment device or (3) donors who are engaging in ask avoidance behavior.

Pure altruism stem from a compassion to help others with no ulterior personal benefits while impure altruism stems from a “taste for giving,” such as status seeking and self- and social-image, often called ‘warm glow’ (Becker, 1974; Andreoni, 1989). This distinction is important since the Registry provides information to volunteers about the need for their blood donation, which affects the utility pure altruists obtain from making a donation, whereas impure altruists would not be influenced by this information since their utility from giving is independent of the need. If the Registry allows the self-selection of individuals with pure motives, Registry members should be more responsive to critical shortage calls (highest need), relative to standard calls, than non-Registry members.

The Registry provides a non-binding commitment device that increases the psychological costs of not donating when asked in the future. Commitment devices have successfully modified behavior in several contexts, including savings (Thaler and Benartzi, 2004; Ashraf, Karlan and Yin, 2006), health (Gine, Karlan and Zinman, 2010; Royer, Stehr and Sydnor, 2015) and monetary donations (Breman, 2011). The Registry represents a preference for a restricted choice set (Gul and Pesendorfer, 2001), where joining the Registry removes the option to “not donate” from future choice sets. This predicts that Registry members will increase their donation rates more than non-Registry members between Round 1 and Round 2. The Registry might also increase utility among donors who experience dis-utility from being solicited for a donation (Exley and Petrie, 2016). Since the Registry invitation promises to contact donors only once or twice per year (significantly less than the Blood Service solicits active donors), the Registry may encourage donors to return by limiting the number of calls you will receive, a form of ask avoidance (Andreoni, Rao and Trachtman, 2011; DellaVigna, List and Malmendier, 2012). The hypothesis is that there are a portion of long-lapsed donors who would donate if only they did not expect that the donation would lead to an increase in Blood Service solicitations. The Registry alleviates this dis-utility by promising to reduce the number of future “asks”, and hence should crowd-in donors who are choosing to stay long-lapsed in order to avoid future solicitations.

First, it is important to note that the key features of the Registry that contribute to these behavioral changes are: (1) the invitation to a voluntary and low-cost commitment device that identifies more motivated donors, (2) the ability to participate in critical shortage calls (highest need), relative to standard calls, than non-Registry members, and (3) the ability to specify a commitment device or (3) donors who are engaging in ask avoidance behavior.

Second, it is important to note that the key features of the Registry that contribute to these behavioral changes are: (1) the invitation to a voluntary and low-cost commitment device that identifies more motivated donors, (2) the ability to participate in critical shortage calls (highest need), relative to standard calls, than non-Registry members, and (3) the ability to specify a commitment device or (3) donors who are engaging in ask avoidance behavior.
mechanism: subjects who selected-in to the Registry (Registry + Donation) are 6 percentage points more likely to donate when asked in Round 1 than subjects in the Donation Only condition (p < .01), while subjects who selected-out of the Registry in Round 1 are 8 percentage points less likely to donate than subjects in the Donation Only condition (p < .05), a net difference of 14 percentage points.

Next, we address hypothesis 2 to show that Registry members are more responsive. An important part of coordinating the supply of whole blood is also to ensure that individuals only donate when they are needed. Consistent with Hypothesis 2, compared to Donation Only subjects, Registry members are 6 percentage points (p < .01) more likely to donate when solicited to donate in Round 1 (Registry + Donation) and 10 percentage points (p < .01) less likely to donate when not solicited to donate in Round 1 (Registry Only).

Round 2 Donation Behavior (Calls when shortage): Examining donation behavior in Round 2 where we will compare behavior of individuals who select into the Registry, with individuals in the Donation Only treatment who are being solicited for a donation for a second time and with individuals in Control 1 who are being contacted for the first time in conjunction with the experiment.

Of those who answered the phone in Round 2, we find that Registry members are 6 percentage points more likely to donate than Control 1 subjects, who have never been asked (p < .05) and 13 percentage points more likely to donate than Donation Only subjects who were asked a few months before (p < .05). This is consistent with H1, that the Registry helps identify those willing to donate.

Consistent with Hypothesis 2 that the Registry improves coordination, Registry members are significantly more responsive to the solicitation; they are 10 percentage points more likely to donate within 3 weeks of the solicitation than Donation Only subjects (p < .01). Supporting that they adjust their donation to suit the greater immediate need.

Examining why people select into the Registry we consider three behavioral theories: 1) selection on pure altruism; if a donor is long-lapsed because he stopped giving out of concern for whether his donation is needed, then the Registry may provide the necessary information about the urgent need for whole blood, which crowds-in the volunteers with pure altruism motives; 2) selection on a preference for commitment; if a donor is long-lapsed due to problems of self-control, then the Registry may provide the needed psychological commitment to crowd-in the long-lapsed volunteer; 3) selection on “solicitation dis-utility” whereby the Registry reduces volunteers’ expectations about future donation solicitations. If a donor is long-lapsed because of solicitation dis-utility and if the Registry promises to reduce future solicitations, then the Registry will crowd-in these long-lapsed volunteers.

Pure Altruists: Given that the Registry only calls a member if there is a need for their blood type, a registry call tells members there is a current need and a critical need call tells them there is less than three weeks supply. Knowing there is an active need should trigger pure altruist to be more willing to give and this effect should be strongest when the call is a critical needs call.

If donors with purer motives are self-selecting into the Registry because it tells them when their donation will be most needed, we would expect that not only would Registry members be more likely to give when called but that they would also be more responsive to a critical call than non-Registry members.

Looking at donors who were reached in Round 2, Registry members are 5 percentage points more likely to donate within 3 weeks than non-registry members (p < .05). And if the member receives a critical need call they are an additional 9 percentage points more likely to donate within 3 weeks than a Registry member who receives the standard solicitation (p < .05). Whereas non-Registry members who receive the critical call are no more likely to donate within 3 weeks than non-Registry members who received the standard solicitation (ns). Hence, the Registry not only generates a stronger response to standard need signal but an even larger response when the need is more critical, supporting the Registry successfully identifies more pure altruists.

Commitment Device: we next consider selection on a preference for commitment. If a donor is long-lapsed due to problems of self-control, then the Registry may provide the needed psychological commitment to crowd-in the long-lapsed volunteer. If people are using the Registry as a commitment device, we would expect 1) No difference in donation rate between Donation Only subjects in Round 1 and Round 2, since they are facing the same decision each time with no commitment device, and 2) an increase in donation rate in the Registry + Donation condition between Round 1 and Round 2, since in Round 1 these folks had no commitment device but in Round 2 their agreement to be a Registry member serves as a commitment device. These hypotheses imply that the rate of increase between the Round 1 and Round 2 donation rates should be larger for the Registry + Donation treatment than for the Donation Only treatment. For those who answered the phone in Round 2, we find that Registry members increase donation rates by 19 percentage points, whereas non-Registry members increase their donation rates by 8 percentage points (p < .01), supporting that Registry members use the Registry as a commitment device.

Solicitation Dis-utility and Ask Avoidance: we next consider the possibility that people’s desire to limit the number of times they are asked for a donation is part of the Registry’s appeal. Active donors receive frequent solicitations from the Blood Service, while when a donor becomes long-lapsed the Blood Service significantly reduces the number of solicitations. If a long-lapsed donor makes another donation, he returns to the pool of active donors and starts receiving regular solicitations again. Registry members are told they will be contacted “only once or twice a year but never more than four times” in a year, hence the Registry allows people to be donors but with guaranteed limited solicitation.

A volunteer with multiple prior long-lapse experiences will have more accurate expectations about the number of solicitations he will receive than an individual who is long-lapsed for the first time. Our data shows that people with longer donation histories were significantly more likely to experience a second period of lapse. Which means that people with longer histories should expect fewer solicitations and hence be more responsive to the infrequent registry call. Conversely, recency bias suggests that first-time long-lapsed donors are more likely to believe that the number of solicitations during a long-lapse will be more similar to the number of solicitations as an active donor. Thus, they might well expect more frequent calls and hence be less responsive to the call they receive. Solicitation dis-utility implies, conditional on joining the Registry, volunteers with longer donation histories will be more likely to make a donation. The evidence of ask avoidance is not supported, in that the length of a Registry member’s donation history has no effect on the likelihood of donation when called (p > .10).

We find that the Registry is effective at improving market outcomes, increasing donation rates among long-lapsed donors, it does so by crowding-in volunteers with pure motives and volunteers who have a preference for commitment. We find no evidence consistent with the Registry appealing to volunteers who experience solicitation disutility. Given past evidence in support of solicitation disutility that contrasts with our lack of evidence (Andreoni et al., 2011; DellaVigna et al., 2012), future research exploring the boundaries...
of solicitation dis-utility is important. One potential reason for the different results may be that in our study we examine volunteer labor supply, whereas in previous work subjects were involved in a one-off monetary donation request. Although we introduce the Registry in the whole blood market, the Registry provides a general framework for managing voluntary labor markets. Because the supply of voluntary labor operates quite differently from traditional labor markets dictated by wages, we believe that identifying the behavioral mechanisms is an important contribution, providing useful insights into how to design future Registries or expand existing Registries.

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