

OpenBiome
Foundation

Donor Recruitment Operations

How to Recruit and Engage Stool Donors
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Abstract

Stool banking depends on a pool of committed and healthy stool donors. Building a sustainable donor pool can be difficult as less than 3% of prospective donors may pass health screenings, necessitating a large recruitment effort. This paper reviews several considerations for recruiting stool donors including guidance on advertising, designing incentives, and maintaining clear communication with prospective and active donors

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Introduction

Like blood banks, stool banks relied on donors to provide material that was processed for medical use. However, the logistics of stool banking differed from those of blood banking in several key ways, listed below, which affected strategies for donor recruitment.

Timing and Commitment: To maximize economy of scale, stool banks required a long-term commitment from stool donors. Unlike blood donors, who were required to wait at least 8 weeks between donations, stool donors could donate once a day, or even multiple times a day, if their schedule permitted. Because the cost of donor screening was spread out across the totality of a donor's stool donations, and because aspects of donor screening required multiple interactions with the donor at timepoints before and after donation, stool banks were incentivized to find highly committed donors who were motivated to donate multiple times per week for several weeks.

Donating stool also required the commitment of changing one's daily routine. Because maintaining appropriate chain of custody required observed/onsite donations, stool donors had to coordinate their bowel movements and schedule to donate at a facility. Common donation times included before and after work, although donors who worked nearby could also donate during lunch breaks.

Selectivity: Prospective stool donors had to pass rigorous health screening before qualifying to donate stool. Donors were screened for known and potentially transmissible disease. Out of an abundance of caution, any health conditions that were linked to the microbiome—such as autoimmune disease and certain allergies, metabolic disease, or neuropsychiatric disorders—were disqualifying. In most cases, whether the microbiome could cause disease had not been established, but until causality was understood, potentially microbiome-mediated diseases were excluded.

Overall, only 3% of applicants, for example, passed **OpenBiome's health screening**. Because of this selectivity, building a stool bank required a large recruitment effort and follow-up efforts to maintain relationships with donors for as long as possible. As well, donors were screened through a phased approach such that only the most promising candidates underwent in-person evaluation and stool and serological testing.

More information on optimizing multiple rounds of donor screening could be found in our white paper titled "Logistics of Donor Screening".

Key Takeaway

Stool donor recruitment aimed to engage applicants who were interested in a long-term commitment that involved making donating stool a regular part of their daily routine. Because finding qualified donors was rare, care was taken to engage stool donors for as long as possible.

Donor Recruitment Pipeline

Donor recruitment took several weeks due to health exams and lab testing. During this time, clear communication to prospective donors regarding where they were in the recruitment process and next steps to take was important to minimize application attrition.

The general outline of OpenBiome's past donor recruitment process was shared below as an example of how donor recruitment and screening could be coordinated.

Step 1: Initial Engagement via Advertisement and Online Health Screening

- The prospective donor responded to an OpenBiome advertisement. Advertisements could either be physical, such as signage at a bus stop, or digital, such as a digital advertisement on social media or search engines. In both cases, applicants were instructed to "sign up" or "learn more" at OpenBiome's stool donor webpage.
- Applicants visiting the stool donor webpage were instructed to take an online health questionnaire designed to gather basic contact information and check for the most common reasons for exclusion. Before taking the online health questionnaire, applicants were informed that their responses would remain protected and would not be shared with another organization.
- The online webpage also provided more information on FMT and *C. difficile* with emphasis on the potential impact a single stool donor could have on hundreds of patients who had exhausted standard treatment options. For more information on OpenBiome's Online Health Screening Questionnaire, please consult our "[Clinical Considerations for Donor Screening](#)" White Paper.

Time: Not counting the time required for applicants to visit OpenBiome's webpage and complete the health questionnaire, this step took between 1-2 days.

Exclusion: About 35 percent of prospective donors passed the online health questionnaire.¹

Follow up: If prospective donors passed the initial online health screening, they received an email, usually within 24 hours, inviting them to schedule an in-person exam. Prospective donors who did not schedule an exam were placed on a follow-up list with reminders sent weekly for approximately one month. Engagement with those who passed the follow-up form was a priority – in the experience of **OpenBiome**, as many as 74% of applicants who passed the online questionnaire were lost to follow up.

Step 2: In-person clinical assessment

- The prospective donor visited an OpenBiome facility and met with clinical staff to undergo a 200+ point clinical assessment.
- During their visit, prospective donors provided informed consent using a Stool Donation Agreement as well as raised any questions or concerns they may have had.

Time: Depending on the availability of the clinical staff, prospective stool donors usually scheduled an in-person clinical assessment within a week or two of receiving their email invitation. The assessment took about an hour to complete.

Special Consideration: If the clinical staff was booked out for long periods of time, prospective donors might have had to wait three to four weeks before an appointment was available. To maintain communication with donors, it could have been helpful to put them on a wait list and notify them when more appointments were available. Additionally, stool banks might have also reduced their advertising efforts in step 1 so that fewer applicants took the online health screening and were invited in for a clinical assessment.

Exclusion: About 10 percent of all prospective donors passed the clinical assessment. Common clinical reasons for exclusion included atopy, asthma or allergies, receiving medication and supplements, mental health conditions, and infectious disease history. More information on the clinical assessment could be found in our "[Clinical Considerations for Donor Screening](#)" White Paper.

Follow up: If prospective donors passed the in-person clinical assessment, they were invited to provide a blood and stool sample for laboratory testing. Prospective donors had the option of providing blood and stool after their clinical assessment or scheduling another appointment to do so.

Step 3: Laboratory tests

- Prospective donor blood and stool samples were tested for infectious pathogens and other signs of illness.

Time: Depending on the testing facility, laboratory testing took between one and two weeks to complete.

Exclusion: About 70% of prospective donors passed laboratory testing. More information on laboratory screening could be found in our "[Clinical Considerations for Donor Screening](#)" White Paper.

Follow up: Prospective donors were then qualified to donate stool.

Special Consideration: Stool banking staff periodically checked in with new stool donors to determine if any steps could be taken to make the stool donation process easier for them. New stool donors also provided valuable information regarding their motivations for donating stool, what aspects of advertising captured their attention, and how communication during the screening process could be improved.

Step 4: New Donor Orientation

- Before they began donating, new stool donors attended an orientation led by a member of the bank's Donor Operations team.
- The goal of the orientation was to welcome the new stool donor and make sure that they understood their responsibilities. This meeting allowed the Donor Operations team to make a personal connection with the donor and reinforce the impact they could have on patients as well as how exceptional they were to have passed the health evaluation. Donors also understood how and when they would be compensated, the cadence of additional health evaluations, and the importance of alerting the donor staff to any changes in their health.

Time: The orientation lasted between 30 minutes and an hour. The orientation could be held while prospective donors were waiting for their laboratory test results so that, if they passed the lab screens, prospective donors could begin donating stool as soon as possible.

Exclusion: All new stool donors went through an orientation.

Follow up: Stool donors interacted with a stool bank's Donor Operations team each time they made an onsite donation. Donors felt free to bring up any questions or observations they had during each interaction.

Special Consideration: Stool banks took particular care to explain their compensation scheme. For example, OpenBiome stool donors were only compensated at the end of a 60-day donation window if they completed a second round of health evaluations. OpenBiome made sure that donors understood the reasoning behind this payment schedule before the donation windows began so that donors were not surprised or felt taken advantage of. Many OpenBiome donors provided stool over multiple 60-day donation windows; the median length of a donor's enrollment in the stool banking program was 5.8 months (interquartile range 3.2 months to 12.1 months).

Key Takeaway: Stool donor recruitment was a multi-week process with multiple communications to prospective stool donors. Recruitment was designed to efficiently eliminate prospective stool donors with health conditions that could potentially be transmitted via FMT. During recruitment, stool banks analyzed their recruitment pipeline for bottlenecks and either devoted more resources to that step or reduced activity higher up in the pipeline. Because less than 3% of stool donor applicants qualified to

donate stool, stool banks looking to grow their donor pool and account for natural donor attrition aimed to have at least 200 prospective donors complete the initial online health screening each week.

Incentivizing Stool Donation

According to an OpenBiome survey of stool donors, compensation for donations was a significant motivating factor. The following is a list of considerations when deciding how to compensate stool donors.

1. Amount and Primary Form of Compensation

In general, compensation for donations was high enough to fairly remunerate donors for the effort it took to make an on-site donation and participate in the program for a minimum of 60 days, but low enough to avoid coercing donors into donating stool and sharing private health information.

Compensation was reviewed and approved by the appropriate regulatory bodies. OpenBiome's compensation protocol was reviewed by the New England (Institutional Review Board) IRB. For most of its history, OpenBiome reimbursed its stool donors 40 dollars per processed donation. In 2020, during the COVID-19 pandemic, this amount was increased to 60 dollars per processed donation.

Other facilities successfully operated a voluntary stool donation program, similar to blood banks.

2. Stool Requirements for Compensation

Due to size (too small) or composition (too watery or too hard), not all stool donations were suitable for processing into FMT treatments. Stool banks determined whether they would compensate donors for every donation or only donations that were suitable for processing. Compensating donors for every donation was more costly but could incentivize donors to be more active. An analysis of OpenBiome stool donors found that, depending on the donor, as much as 70% of donations were not usable. For this reason, OpenBiome only compensated donors for donations that were processed.

3. Timing of Compensation

The timing of compensation could be used to incentivize donors to comply with a stool bank's Quality and Safety program. OpenBiome used bookend screening, where stool donors underwent health tests, including clinical assessment and laboratory screening, at the beginning and end of a 60-day donation window. FMT units derived from stool donations during this window were only qualified for patient use if the donor passed both sets of health tests, and all testing performed in between. (Some laboratory screening, and random health checks, occurred at more frequent intervals.) To ensure that donors completed the second bookend testing, OpenBiome delayed compensation until those tests were completed. Stool

banks also considered other compensation schemes such as providing half of the compensation at the time of donation and the remaining compensation after the second screening.

4. Alternate Forms of Compensation

OpenBiome had used other forms of compensation, described below, to incentivize stool donations. These forms of compensation were supplementary to the \$40 donors received per processed donation and were used strategically throughout the year to increase stool donations. Stool banks worked with their IRB (or overseeing regulatory body) to ensure additional compensation was not coercive.

- Participation Merchandise: OpenBiome also provided branded gifts, valued at approximately 40 to 100 dollars, to provide a more personal touch. This included OpenBiome-branded water bottles, shirts, fleeces, stickers, framed posters, and thank you letters.
- Punch/stamp cards: Like punch cards at a café, stool donors received a card that was stamped for every donation. After earning a certain number of stamps, stool donors were rewarded with a bonus prize in the form of an Amazon gift card.
- Competition: Some donors were interested in “gamifying” stool donation by competing to see who could provide the most stool donations or most grams of stool over the span of a week or month. Such competition could also be adjusted to be more cooperative—by setting a goal for the entire donor pool—or inclusive—by setting personal goals for each donor, such as donating 10% more than their monthly average. In the past, OpenBiome had compensated competition winners with gift cards to local businesses and restaurants.
- Newsletter and Testimonials: To cultivate and maintain a more personal connection with donors, OpenBiome began a weekly newsletter in 2020. The newsletter expressed gratitude for stool donors' efforts and updated them on OpenBiome's progress in manufacturing FMT preparations and treating patients. Newsletters often included patient testimonials sharing their experience with *C. difficile* and FMT (Figure 1) as well as more lighthearted fun facts about bacteria and stool.

5. Donor Lounge

Stool banks could make donating stool a more enjoyable process by offering access to a lounge where donors could comfortably spend time while waiting to use the bathroom. Lounges were cleaned regularly and stocked with snacks, coffee, and tea. Walls or other areas of the lounge could be adorned with patient testimonials, thank you letters, and fun facts about FMT or the microbiome to help reinforce the impact stool donors had on patients.

Key Takeaway: There were many options and approaches to providing compensation for stool donations. Compensation frameworks were simple enough for donors to understand and were clearly communicated with donors before they began donating.

Designing Advertisements

Physical and hyper-local digital advertising were a stool bank's primary method of communicating with the public and encouraging them to consider becoming stool donors. A list of considerations for designing advertisement and examples of ad design are reviewed below.

Core Messaging: Donor recruitment advertisements emphasized the outsized impact that stool donors could have on patients who had exhausted standard treatment options as well as financial compensation for donating stool (Figures 2 and 3). The majority of OpenBiome designs highlighted the altruism or heroism of donating stool through the use of cartoon "pooper heroes" (Figures 2-5).

Tone: The tone of the advertisements was positive and upbeat with a clear call to action. It was assumed that viewers might only spend a few seconds looking at the advertisement; visuals and text were simple and easily understood. OpenBiome ads used brightly colored cartoon images with minimal text (Figures 2 and 3).

Consistency: Although viewers might not immediately respond to a single advertisement, they might begin to recognize the stool bank and think more about becoming a donor after seeing multiple ads. Because of this, advertisements had consistent messaging and design elements so that they were recognizable and linked in the viewer's mind. OpenBiome's use of cartoon "pooper heroes" across its advertisements had helped build brand recognition (Figures 2-5).

Timeliness: OpenBiome had found that themed advertisements relevant to a specific time outperformed more general ads (Figures 4 and 5). Themed ads could be seasonal (e.g., Spring, Summer, Fall, Winter) or reference a specific event (e.g., The Super Bowl). One of OpenBiome's most successful advertisements was Valentine's Day themed.

Placement and Targeting: Historically, OpenBiome had had the most success with advertisements placed on subway cars passing through stations near its donation facility (Figure 2). This was likely due to the fact that people on subways were already traveling past OpenBiome's facility making it easier for them to incorporate stool donation into their daily routine. Other placements for physical ads included bus shelters, bike stations (e.g., Bluebikes hubs), and bus kings.

OpenBiome also used digital advertising—mainly Facebook and Instagram ads (Figure 3 and 4)—to supplement its physical advertising. During the Covid-19 pandemic, OpenBiome relied primarily on digital ads. We used Facebook Business tools to target people who were likely to become stool donors by:

1. Creating "look alike audiences" that resembled viewers who had clicked on the advertisement and completed the online health questionnaire.
2. Creating custom audiences of people with interests in the microbiome, *C. difficile*, or biology.

3. Creating custom audiences of people who worked at pharmaceutical companies located near OpenBiome's donation facility.

From surveys and interviews with stool donors, we observed that the following groups of people comprised a large portion of our stool donor pool.

1. Graduate students, who might have had more flexible schedules and been more incentivized by financial compensation.
2. Scientists or researchers, who might have had an interest in the microbiome, the research OpenBiome was performing, and might have had more patience for the health screening required to become a stool donor.
3. Athletes or physically active people, who might have had a higher baseline of health and were more likely to pass the health screening, and who might have incorporated stool donation into their workout routine (running or biking to OpenBiome's donation facility).

In general, most stool donors described the desire to help patients as a primary motivating factor for donating stool but also stated that, due to the effort required to donate stool, they would not have been donating stool without financial compensation.

Key Takeaway: While building a donor pool that ranged from 30-70 donors, OpenBiome spent between five thousand and fifteen thousand dollars a month on advertising. Cost-effective outreach to the public depended on designing ads with the appropriate core messaging, tone, consistency, and timeliness that were targeted towards audiences most likely to respond.

Conclusion

Operating a stool bank depended on recruiting stool donors that were not only healthy enough to pass health screenings but also motivated to make multiple on-site stool donations per week for several weeks. Successful recruitment was a multi-step, multi-week effort that included initial outreach through physical and/or digital advertising, online and in-person health screening, and continued engagement throughout the stool donation process.

Figures

Yesterday, I had a colonoscopy and FMT. I hope it was successful and I wish I could thank whoever donated their stool. This morning was the first time since the original *C. diff* infection, that I was able to enjoy a cup of coffee without becoming sick. I ate both breakfast *and* dinner, and I am still feeling well! I have not been able to say that I feel great for a very long time. I am even starting to feel hopeful – maybe I will be one of OpenBiome’s many success stories.

Figure 1: Patient Testimonial

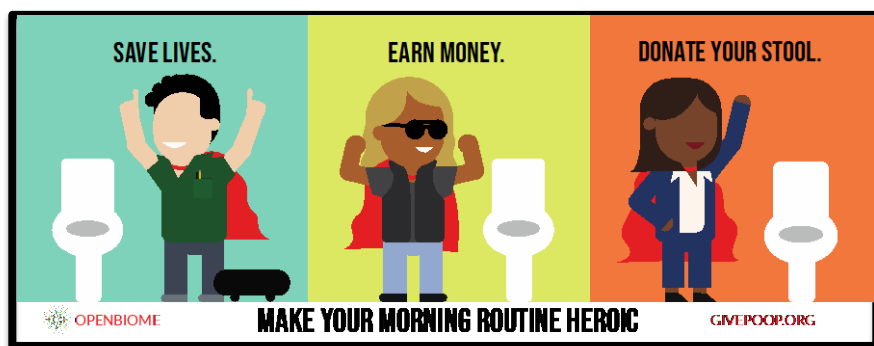


Figure 2: OpenBiome Subway Advertisement



Caption: A typical stool donor earns \$250/month while helping patients in need. Sign up today!

Figure 3: OpenBiome Facebook Advertisement

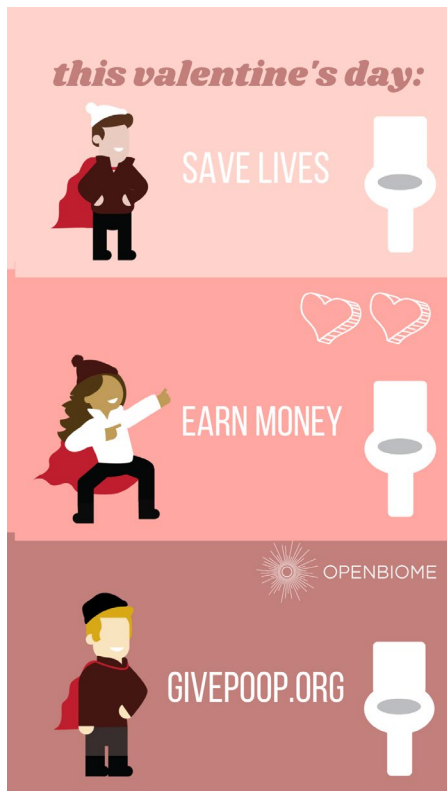


Figure 4: OpenBiome Instagram Advertisement for Valentine's Day



Figure 5: OpenBiome Bus Shelter Advertisement

References

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