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Behavioral Strategies to Improve Cohort Retention within CCFA Partners

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Background: CCFA Partners is an internet cohort of more than 12,000 patients with inflammatory bowel disease (IBD). Long-term cohort retention is critical. Prior research has shown that survey participants are more likely to respond when the window for response is narrow – ‘scarcity’ of opportunity for response. Scarcity may reduce non-response due to procrastination. Other methods previously demonstrated to improve survey response include targeted message themes: pay it forward, guilt, altruism, and self-serving (Figure 1). It is not known whether these methods are effective in a cohort such as CCFA Partners, so we evaluated the effectiveness of a scarcity strategy and/or targeted message themes in improving follow-up rates in CCFA Partners.

Methods: We used a randomized 2X4-factorial experiment to evaluate the effects of scarcity and four message themes. CCFA Partners participants were randomized to a scarcity group or a control group. The scarcity group received a ‘warning’ email informing them that they would be sent a survey link the next day and would only have 72 hours to complete the survey. The control group received no warning email. To test effectiveness of the different message themes described above, members of the scarcity and the comparison groups were randomized to receive a message appealing to one of these themes or to a standard (control) message (Figure 2). To determine the effect of scarcity we compared response rates for the scarcity group to the comparison group using chi square testing. Main effects of each message theme were assessed by comparing response rates of each theme to the standard message group using a chi square test. .

Results: A total of 8697 individuals were contacted to complete a follow-up survey within CCFA Partners from 5/24/2013 to 8/21/2013 per protocol. Of these, 2965 responded (started their follow up survey). Overall, there was no difference in response between the scarcity and control groups, 1508/4349 (34.7%) vs. 1457/4348 (33.5%) respectively, $p=0.25$. Similarly, no scarcity effect was observed within strata of disease type (Crohn’s versus ulcerative colitis, $p=0.67$), or sex ($p=.0.70$). However, scarcity was significantly more effective in the >50 age group (41.8% response versus 31.2% and 31.6% in ages 30-50 and <30 respectively). Response to most message themes was only slightly better than controls, but not significantly: pay it forward (34.4% vs. 31.9%, $p=0.27$), altruism (32.7% vs. 31.9%, $p=0.72$), and self-serving (32.3% vs. 31.9%, $p=0.85$). In contrast, response to guilt messages was significantly! better than controls (36.3% vs. 31.9%, $p=0.05$).

Conclusions: Behavioral strategies applied to an internet-based IBD cohort have little benefit in improving response rates, although there were differences to scarcity based on age. Of message themes utilized, guilt had the strongest effect. The lack of significant increase in response rates to other messages may be related to lack of efficacy of these principles in the IBD population, dilution of the effect due to the mechanism of delivery (e-mail), or the inability to further enhance participation in an already motivated population. Further studies on cohort retention, specific to the IBD population, are needed.