



MEASUREMENT MATTERS ISSUE BRIEF

Addressing Fraudulent Survey Responses in the PCOR-EM Pilot

PROJECT BACKGROUND

The *Measurement Matters* project (SOE-2022C2-28570) is a two year award granted to the LeadingAge LTSS Center @UMass Boston and Collective Insight, LLC in 2023 to develop and pilot a Patient-Centered Outcomes Research Engagement Measure (PCOR-EM). Funded by the Patient Centered Outcomes Research Institute (PCORI), the PCOR-EM was designed through a multi-phased process inclusive of consensus methods, focus groups, and cognitive testing interviews to assess meaningful patient and other community partner engagement in research. The research team partnered with PCORnet® Clinical Research Networks (CRNs) to reach individuals with direct experience in patient or community engagement to pilot the PCOR-EM. The research team then expanded outreach to other partners to increase the pilot response rate, including PCORI Ambassadors, the PCORI Engagement Advisory Panel, NIH/NIA-funded initiatives, Aging Special Interest Groups, universities, and PCORI-funded projects. Individuals who tested the PCOR-EM were offered a \$35 gift card incentive for completing the survey.

ISSUE BRIEF PURPOSE

While PCOR-EM outreach targeted specific, trusted networks, the **web-based nature of the survey** introduced vulnerabilities that allowed ineligible individuals (or possibly automated bots) to pilot the tool solely for the incentive. The research team recognized this issue within days of initiating the pilot process, and at that time, assessed root causes and solutions to mitigate the inclusion of fraudulent responses so not to undermine the validity of the PCOR-EM pilot findings and inappropriately disseminate gift card incentives. Given the growing challenge of fraudulent online survey responses, particularly when financial incentives are offered,ⁱ project advisors requested the research team document their PCOR-EM pilot experiences and lessons learned, which are highlighted in this issue brief.

EXPERIENCES AND LESSONS LEARNED

Problem Identification

The research team designed the PCOR-EM pilot survey for distribution only within networks conducting community-engaged research. Within the first days of the pilot, however, we discovered that the survey link had been shared broadly and accessed by individuals outside



these networks who were not conducting or partnering in engaged research. We identified this issue through the following data characteristics:

- Duplicate names, emails, and/or IP addresses across survey responses
- Email patterns typical of fraudulent activity (e.g., name + numbers @gmail.com)
- Large batches of survey responses within minutes of each other
- Vague or implausible answers to “how did you hear about this study?”
- Numerous non-U.S. IP addresses
- Minimal completion time (less than 5 minutes)

Root Cause of the Issue

The research team held internal meetings to investigate the root cause of the fraudulent PCOR-EM survey responses and conducted brief literature and web reviews to compare our experience with others. We determined that the primary cause was linking the eligibility survey directly to the PCOR-EM survey. This design allowed anyone who passed the eligibility screener to immediately complete the full survey without additional review or verification by the research team.

SOLUTIONS IMPLEMENTED

The research team paused the survey immediately upon detection of fraudulent activity and implemented a multi-pronged verification protocol to address the large number of fraudulent responses. This multi-pronged verification protocol included 1) Controlled Survey Access, 2) Enhanced Eligibility Screening, and 3) Secure Incentive Distribution. Each of these protocol elements are described below.

Controlled Survey Access

The research team removed public access to the full survey to reduce opportunities for fraudulent entry. Instead, we created a separate screener link that allowed us to complete robust eligibility screening before granting access to the pilot survey. Once participants passed this review, we sent them a unique, one-time survey link directly to their verified email. This controlled process ensured that only eligible and authentic participants advanced to the survey stage.

Enhanced Eligibility Screening

The research team required all participants to complete a screener before they could enter the pilot survey. To strengthen verification, we added an open-ended question, “How did you hear about our study? Please be specific.” Our team manually reviewed each screener submission and applied multiple checks to determine authenticity. These checks included assessing the plausibility of the referral source, reviewing email address formats, conducting Google searches of participant names to confirm research affiliations, identifying duplicate contact information



and IP addresses, and monitoring response timing and submission patterns. This process allowed us to confirm eligibility while filtering out fraudulent or suspicious entries.

Secure Incentive Distribution

The research team embedded the incentive claim link directly into the survey platform (REDCap) so participants could only access it after verification. We then cross-referenced the incentive distribution list against verified participants to ensure that only eligible individuals received the \$35 gift card. This step safeguarded resources while rewarding authentic participation.

OUTCOMES & LESSONS LEARNED

The research team successfully identified and addressed fraudulent PCOR-EM survey responses promptly, and as a result, completed the pilot process within a 3 month timeframe and initiated the PCOR-EM pilot analysis. During this process, the research team found:

- Fraudulent responses practically ceased after implementing the new screening and access measures.
- These strategies, as described above, preserved the integrity of pilot data and ensured that incentives went to individuals who had experience with engaged research.
- There is a need for proactive fraud prevention planning in all online research involving incentives to timely detect, halt, and prevent further fraudulent entries while maintaining recruitment momentum.
- While linking eligibility screening tools directly to the pilot tool appears to save time and administrative burden, it can lead to additional staff time for manual review and numerous potentially fraudulent responses and misappropriation of incentives that cannot be recovered.

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¹ Hitches, E., Dudley, D., Johnstone, M. et al. Bots and baddies: supporting the integrity of online survey research in the face of a growing challenge. *Qual Quant* 59, 1481–1506 (2025). <https://doi.org/10.1007/s11135-024-02001-w>