University of Colorado
Denver | Anschutz Medical Campus
Colorado Multiple Institutional Review Board (COMIRB)

COMIRB Guidance: Fraudulent Survey Responses - Mitigation Strategies

Background:

Posting research surveys online can be a cost-effective and productive method for collecting data from research participants. However, when compensation is offered for survey completion, there is a risk of receiving fraudulent responses from bots or unusable responses from people seeking unwarranted compensation. When this occurs, researchers may find themselves with unreliable or unusable data, owing more compensation than their funding allows, as well as fielding complaints from unhappy respondents.

If you are offering payments for electronic survey completion, the following strategies can help mitigate this risk. These suggestions are not foolproof and may not apply to all studies. Consider these strategies and include relevant ones in your protocol as appropriate.

Mitigation Strategies:

- Use fraud detection tools. Some survey tools like Qualtrics have fraud detection tools available within their service, but you can implement your own tools with other systems.
- Incorporate CAPTCHA to verify real respondents.
- Control survey distribution:
    - Avoid advertising the primary survey link publicly or on social media.
    - Advertise the study and ask interested individuals to contact the study team for a link to the survey.
    - Use a public link for a screening survey to verify eligibility. Send a different and unique survey link to eligible participants for the main survey.
    - If distributing the survey link by email, ask recipients not to forward the email.
    - Do not allow others to distribute the survey without permission. Clearly communicate this requirement to partners and collaborators. Consider adding "Do not post on social media" to flyers and advertisements not intended for social media.
- Implement technical restrictions:
    - Restrict responses to one survey per IP address*. This requires the survey tool to collect an IP address, which is considered an identifier, but it does not mean that the survey tool needs to pass along the IP address to the researcher.
    - Collect IP address* to compare responses from the same IP address.
    - Use IP address* restrictions to limit survey completion to specific geographical regions (e.g., United States only).
    - Set a response limit so the survey closes automatically when reached.

* If the survey tool allows

- Avoid using symbols like $, €, or £ in the public-facing advertising, as these are common bot search terms. Instead, use wording like, "Compensation will be provided" and include specific amounts in the information sheet or consent form.
- Build in questions to help identify invalid responses:
  - Incorporate open-ended questions to assess participant engagement and identify identical responses across surveys.
  - Ask similar questions at different points in the survey and check for consistency.
  - Ask about location at various stages to cross-verify responses (e.g., ask for zip code in one section and county of residence in another).
  - Include a "human" validation question like, "What color is a lemon?"
  - Include a "honeypot" question to help catch bots. These are questions that shouldn't be answered due to branching logic (for example, age = -1), but bot scripts might auto-fill it.
- Monitor and verify responses:
  - Monitor survey volume and responses frequently (at least daily) and be prepared to close the survey if unusual activity is detected.
  - Have a plan of action for swift response if your survey is inadvertently posted on social media, or if an unexpectedly high volume of responses is received.
  - Track completion timestamps to identify surveys completed in unrealistic timeframes, which should be discarded.
  - Avoid automated payment systems. Verify responses before providing compensation.

Consent Form, information sheet/postcard consent:

The consent document should clearly explain the circumstances under which participants will be disqualified or not compensated. For example:

- Specify that participants will be paid for completion of one survey only.
- Inform participants that payment will be processed within one to two weeks of survey completion. This allows time to assess response validity.
- Disclose IP address restrictions, if any (e.g., participants must be residents of the United States to be eligible for the study.).
- If necessary, consider including wording like the following: "We want to make sure all participants are real people. If your survey responses seem like they might be fake or generated by a bot, we may withhold payment and/or contact you to verify that you are a genuine participant in this study."

Unanticipated problems:

If you do suspect a significant number of invalid responses during the course of the study, pause the survey and contact COMIRB to discuss appropriate responses. You may need to submit the event to COMIRB as an unanticipated problem, and you may need to report the event to your funding agency or to others in your organization.

Resources:

- If using REDCap: CCTSI REDCap Help Center