**URGENT WARNING: Surge of fraudulent participants; how to identify imposters**

**Objectives:** To recruit 500 women, aged 50 years or older, to participate in an online continence promotion program.

**Methods:** Our recruitment process was a three-pronged approach utilizing: 1) statewide community organizations, 2) nationwide community organizations, and 3) Facebook advertisements.

We curated an email list of statewide community organizations utilizing our previous connections and work we have done in which community representatives endorsed they would be willing to promote an online continence program to their members. Next, we identified nationwide community organizations by googling each state and organizations that may serve older adults, including Aging and Disability Resource Centers, Senior Centers, and YWCAs, within every state. All community organizations and/or representatives identified, were provided with a newsletter blurb, social media promotions, and flyers they could print and hang around their organization.

Lastly, to over-recruit individuals who are underrepresented in research, we utilized the U.S. Census Bureau to identify the top 15 cities with the largest underrepresented populations. These findings were utilized to geographically target our Facebook ads. In addition, our Facebook ads contained photos of diverse women, particularly geared to recruit individuals who identify as Black or African American.

**Results:** With 504 in-state and 857 out of state emails sent and Facebook ads running, we steadily recruited dozens of participants each week during the first three weeks of recruitment. At the end of the third week, we had hundreds of participants enroll overnight. With now over 700 participants enrolled in the study, we closed study recruitment.

In the following weeks, we began to become suspicious that imposters or fraudulent participants may have enrolled in this study when we received emails that were near, if not completely, verbatim and sent to us around the same time demanding compensation. In addition, we noticed the associated names next to participants’ email addresses differed from those provided to us; some names associated with emails were significantly different, while other names were the masculine version of a name opposed to the feminine version provided in our research surveys.

Out of the 970 fraudulent participants removed, 743 (77%) utilized Gmail addresses, followed by 203 utilizing Outlook email addresses (21%). Most fraudulent participants endorsed hearing from the study from Facebook (568/970, 59%) and from someone they knew (293/970, 30%). Table 1 outlines a description of the common indicators our team noted of fraudulent participants.

**Conclusions:** Although fraudulent participants have significantly increased since the pandemic, the issue and solutions are often addressed in journals urogynecologists or reconstructive pelvic surgeons do not interact with. Our team hopes to shed light on this growing issue in hopes that it may help others in our field better maintain their data integrity and avoid the time-consuming and financial implications we have experienced.

**Table 1.** Description of indications a participant is fraudulent or an imposter.

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| **Category** | **Sub-category** | **Examples** |
| Interest emails | Subject line | Subject lines:   * + - “Interested”     - “Study”     - No text in the subject line     - Body of message in the subject line: “I am interested in participating in the study” or “Hello, my name is [xx] I want to participate in the study” |
| Body of email  Note: Real participants often state their age, what they have been experiencing, and question their eligibility to participate in the study. | Bad example: “Hi there, Greetings, I came across your Women on the Go Study Website today and I saw your online program that helps women build knowledge and skills to improve bladder and bowel health. I'm deeply interested in this study program. I will be glad if permitted to participate actively and share my opinion with you. Thank you so much for your consideration”  Good example: “Morning, I am a [xx y/o] women with a prolapsed bladder, as of [month and year]. Surgery improved it a little, but it is still very much "at the door" when I am standing. At [age] I had a hysterectomy after discovering cancer of the uterus, and I also had an episiotomy while giving birth to my only child, a son. Given my history, I would be interested in helping myself strengthen muscles in that area to help my bladder. If you believe I would make a good candidate for your study, please let me know. Sincerely, [first and last name]” |
| Signature | Not ending their emails with at least their first and last name. Commonly, real participants had email signatures including their first and last name, phone number, and/or email address. |
| Survey responses | Phone number | Utilizing online program can determine if the phone number is:   * + - Valid (yes/no)     - Line type (phone numbers listed as VoIP should be considered fraudulent)     - Fraud score (0 – not likely fraudulent 🡪 100 – likely fraudulent)     - Risky (yes/no) |
| Mailing address | Themes our study team observed through mailing address responses from fraudulent participants:   * Wrote they lived in a metropolitan locations, specifically Los Angeles, Miami, Brooklyn, and New York * Provided two different addresses in Address line 1 and Address line 2 * Only provided the street name, not a street number   Structure of mailing address provided:   * + - [##]W [##]th St or [##]th [##]W St     - Blvk [####]     - 10th street, 11th street, 12th street, etc     - 123 Main Street |
| Common errors | Individuals who were identified to be fraudulent often shared the same spelling errors: “Navada” instead of “Nevada,” “Carlifornia” instead of “California,” “Lowa” instead of “Iowa,” “North California” instead of “North Carolina,” and commonly mistook cities in the United States as states. 73 fraudulent participants wrote the state they lived in was “United State” or “USA.” |
| General email | Name associated with email address | Name differs from typed first and last name on informed consent. However, this does not always indicate someone is fraudulent, as some individuals share email accounts with their significant others. |
| Similar emails received within a short time of one another  Note: Email accounts can suggest a response so look for multiple verbatim emails sent within a short time. | Verbatim emails received within a short period of time from multiple email addresses.  Example: “I’ve created a previous account”   * This email was received from five different email addresses, some of which were not sent the email as they had already created their program account * All five emails were received to the study team email address on the same date between 5:10AM and 5:16AM * All five emails were verbatim and did not have a period at the end of the sentence |
| Compensation | Subject line | Subject lines:   * + - “Promised compensation”     - “About the compensation”     - “Requesting for the compensation”   We also observed only fraudulent participants use all capitalized letters in the subject. |
| Body of email  Note: Often these emails come across as being demanding and may gaslight the study team. | Bad example: “Good day, I emailed you because of the promised compensation for completing this study, After completing this study you promised to provide and we will receive a compensation but till date I haven't seen anything, receiving and email that I have been removed from the study but haven't been compensate So all this thing aren't Good I haven't received my promised compensation and you removed me from the study because of am the last or what please explain And I completed this study long ago that is last year December which is unfair Take it to be like you how will you feel about this? Thank you for your response.”  Good example: [Last paragraph of an email received from participant] “Also, as a side note ... I got a message after I filled out the initial survey saying that I would receive the $25 gift card, but have not received it. Please know that receipt of the card has absolutely nothing to do with my participation, but did just want to let you know that if I was understanding correctly, it sounds like it should have reached me. I'm thinking it may have just slipped through the cracks, and I'm not worried about even receiving it. That's not why I'm participating, but just wanted you to be aware in case others also experienced it.” |