

Improving engagement with trial participant newsletters using theory-based enhancements: Results of a randomised Study Within A Trial (SWAT)

Karen Bracken^a, Camille E Short^{b,c}, Andrew Vincent^b and Gary Wittert^b on behalf of the T4DM study investigators

a. NHMRC Clinical Trials Centre, University of Sydney, b. Freemasons Foundation Centre of Men's Health, Adelaide Medical School, The University of Adelaide, c. Melbourne School of Psychological Sciences and Melbourne School of Health Sciences University of Melbourne

INTRODUCTION

- Clinical trials commonly report sending participant newsletters as a strategy for maintaining participant engagement.
- However, participant engagement is difficult to measure, making evaluations of newsletters as a tool for improving engagement problematic.
- In the case of email newsletters, the first step of engagement is for the participant to open the email. Thus, email open rate could be used as an easily measurable surrogate for participant engagement.

AIM

To evaluate interventions to improve the open rate of a participant email newsletter.

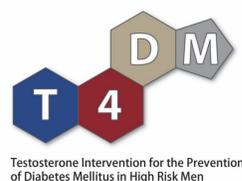
METHODS

Approach

- We identified three message elements that could impact a participant's propensity to open a one-off email newsletter: (1) who sent the email, (2) the subject line of the email, and (3) the salutation at the top of the email (which may be visible to some participants as a preview before they open the email).
- We looked to theories of motivation and information processing^{1,2} to develop strategies to enhance each of these message elements.
- We selected a factorial design as an efficient way to evaluate combinations of manipulations of these three message elements (Table 1).

Setting: T4DM Diabetes Prevention Study

- Phase III, multicentre, randomised, placebo-controlled trial
- Investigating 2 years testosterone injection for prevention of Type 2 diabetes
- Conducted at 6 Australian endocrinologist-led, hospital-based sites.
- 1007 men aged 50–74 years enrolled
- Final study visit conducted in May 2019, main study results pending
- From July 2016, participants were sent quarterly email newsletters



Evaluation

- In November 2018, participants were randomised to receive, on a single occasion, an email newsletter with one of eight possible variations using a 2x2x2 factorial design.
- Primary outcome: email open rate
- Analysis was by logistic regression modelling

Interventions

1. Sender characteristics

Generic "The T4DM study team" vs enhanced "[Nurse's name] and the T4DM study team"
Enhanced sender information draws on self-determination theory¹ by using the name of a familiar nurse to promote feelings of relatedness.

2. Subject line

Generic "The T4DM study is on track" vs enhanced "Thanks to you, the T4DM study is on track"
Enhanced subject line again draws on self-determination theory¹ to invoke feelings of competence.

3. Salutation

No salutation vs personal salutation "Dear Mr [surname]"
The personal salutation was used to enhance perceived personal relevance, a factor known to increase attention towards information².

CONCLUSIONS

- Newsletter open rate was improved by combining the nurse's name in the sender field (designed to promote feelings of relatedness) and a subject line designed invoke feelings of competency ("Thanks to you, the T4DM study is on track").
- Inclusion of a personalised salutation line did not result in more emails opened.
- This evaluation demonstrates the potential of simple, theory-based adaptations to improve open rates of participant email newsletters, a first and necessary step to engagement with newsletter content.

RESULTS

Of 931 randomised participants (Figure 1), 511 (55%) opened the email (Table 1).

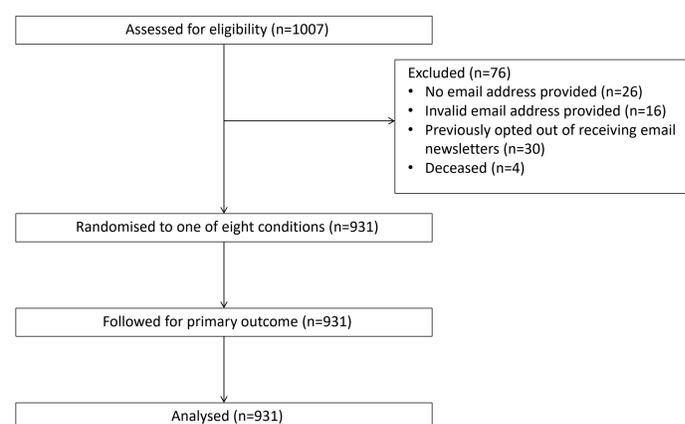


Figure 1: CONSORT diagram

Table 1: Email factors, combinations and open rates

Sender	Subject Line	Salutation	Open rate (%)
Generic	Generic	None	54% (61/114)
Generic	Generic	Personal	54% (64/117)
Generic	Enhanced	None	48% (55/114)
Generic	Enhanced	Personal	52% (61/117)
Nurse	Generic	None	48% (56/116)
Nurse	Generic	Personal	56% (67/119)
Nurse	Enhanced	None	66% (76/116)
Nurse	Enhanced	Personal	60% (71/118)
TOTAL			55% (511/931)

There was no evidence of difference in open rate across the eight email combinations (Table 1) ($p=0.21$). However, there was evidence of a difference in open rate based on sender and subject ($p=0.03$).

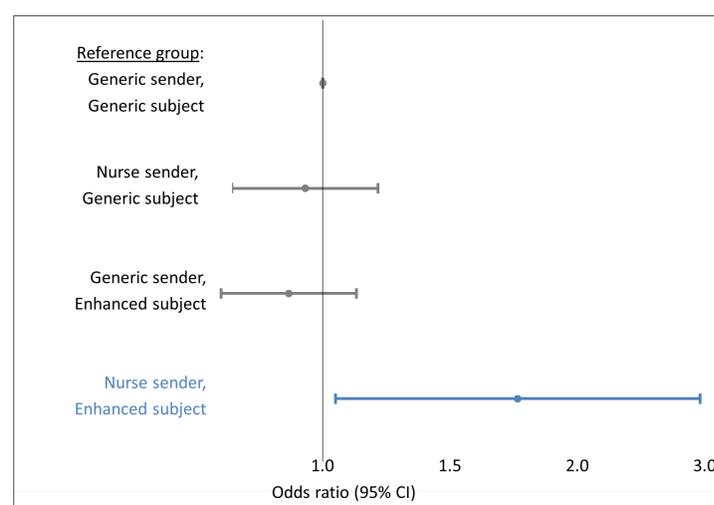


Figure 2: Impact of sender and subject line on email open rate (adjusted for age, on-treatment status and salutation)

Newsletters including a combination of nurse's name in the sender details and subject line enhanced to build competence ("Thanks to you, the T4DM study is on track") were almost twice as likely to be opened (OR=1.8, 95% CI: 1.0– 3.0) compared to newsletters which included a combination of generic sender details and generic subject line (Figure 2).