



Public Health
England

Protecting and improving the nation's health

Increasing the return rate of home sampling kits using behavioural insights

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Outline

- Background
- Text message development
- Trial design
- Participant flow
- Results
- Limitations
- Implications

Background

- Advances in the understanding of the impact of **behavioural messaging** around health care is showing that lives and money can be saved using often quite **simple changes** to the way that we administer healthcare.
- This research aimed to test if sending **behaviourally informed SMS primer and reminder messages** to individuals who ordered self-sampling kits from www.freetesting.hiv could **increase the kit return rate**.

Text message development

- Survey of non-returners to inform behavioural analysis
- 2 existing opportunities to apply behavioural insights & 1 additional opportunity
- Applying behavioural insights techniques to text messages



If you want to encourage a behaviour, make it

EASY

ATTRACTIVE

TIMELY

SOCIAL



Friction Costs

EASY



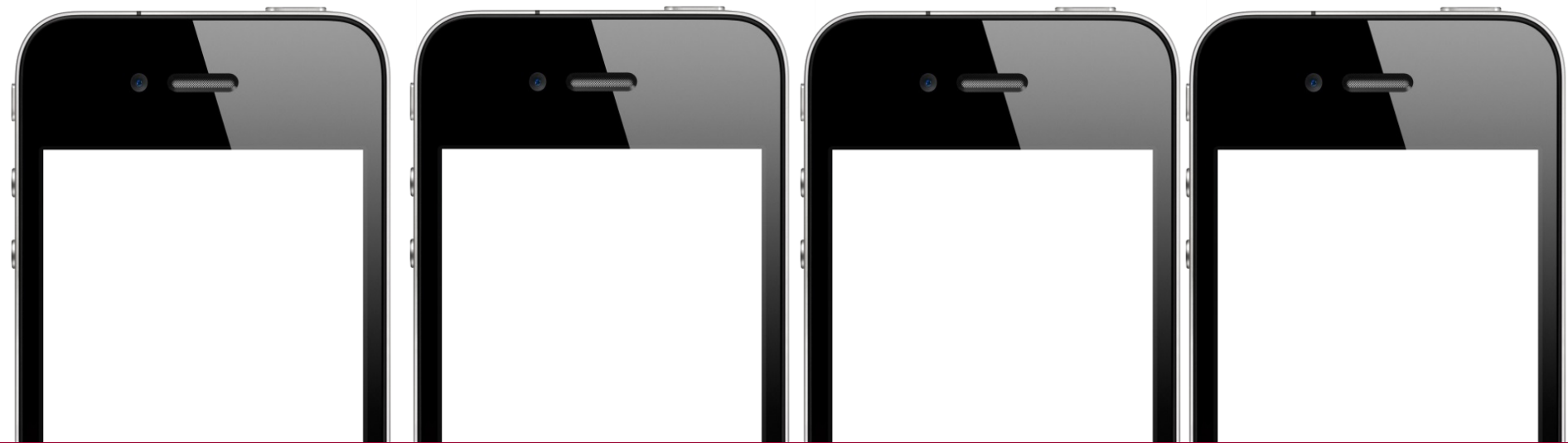
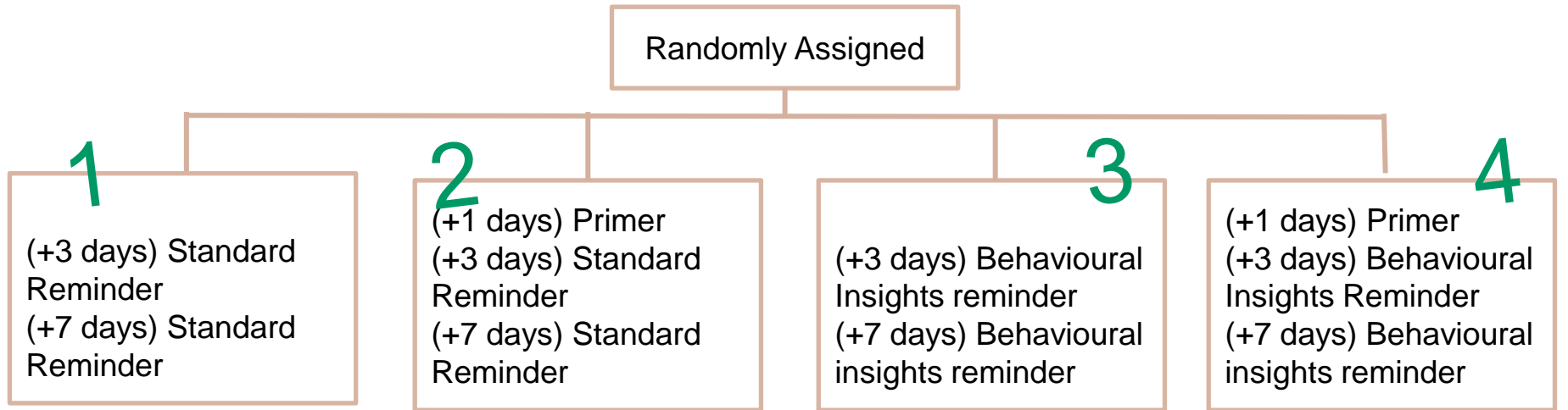
Prompts



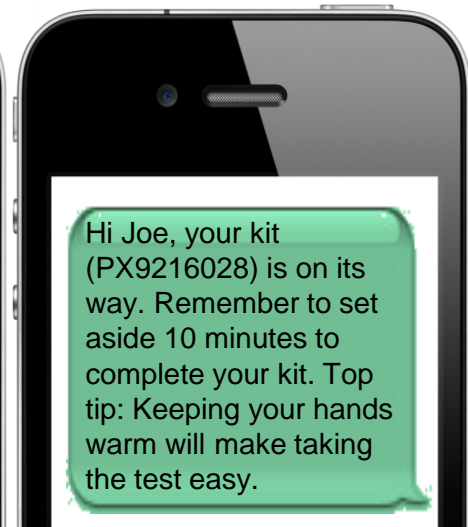
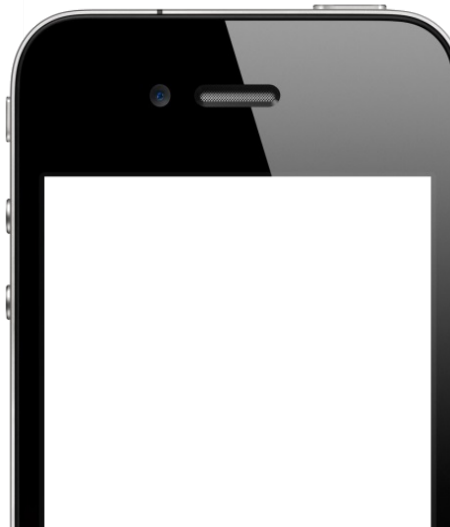
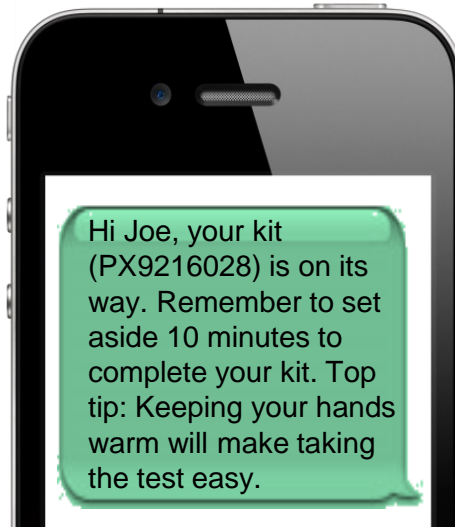
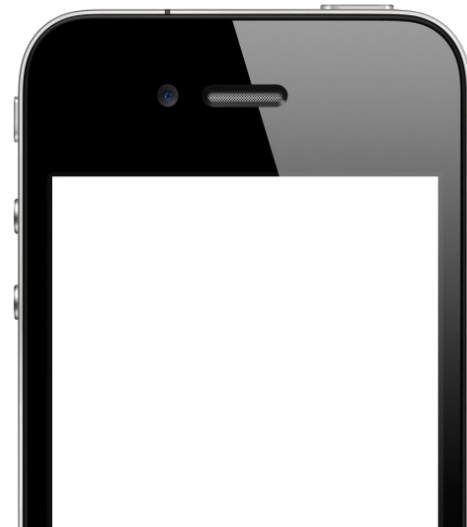
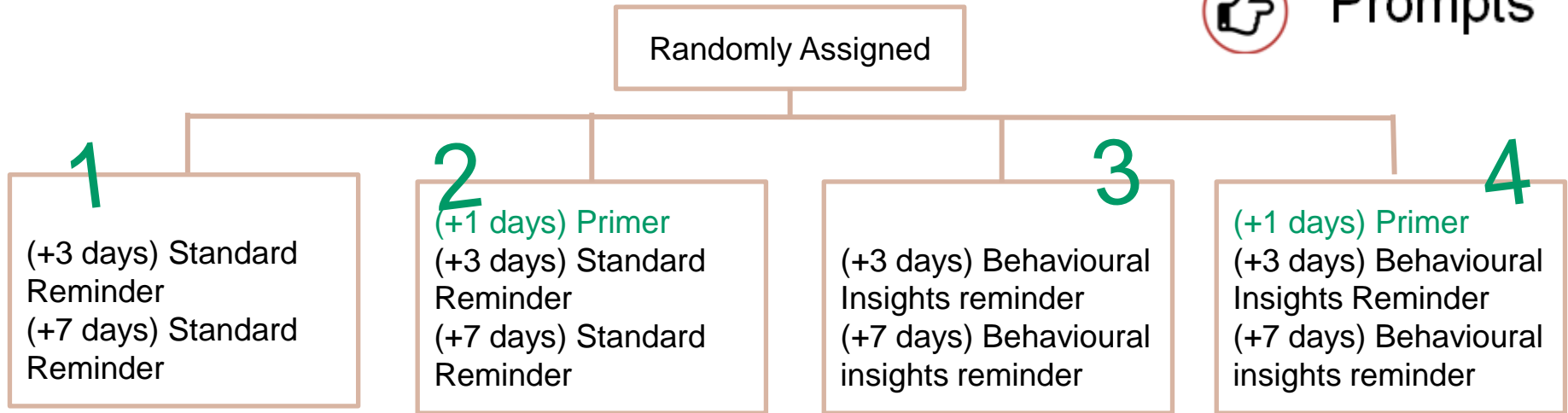
Deadlines

TIMELY

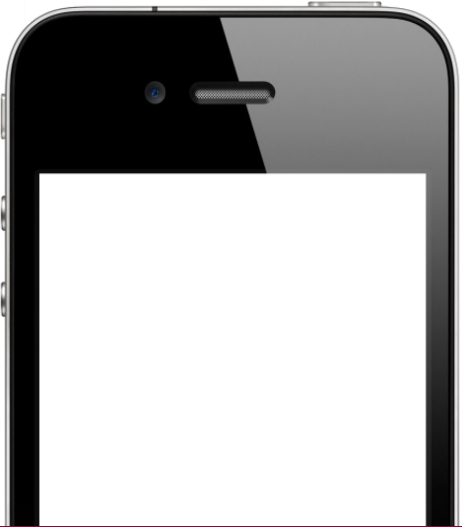
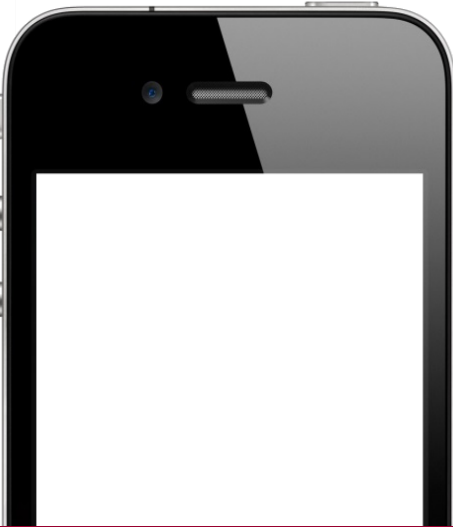
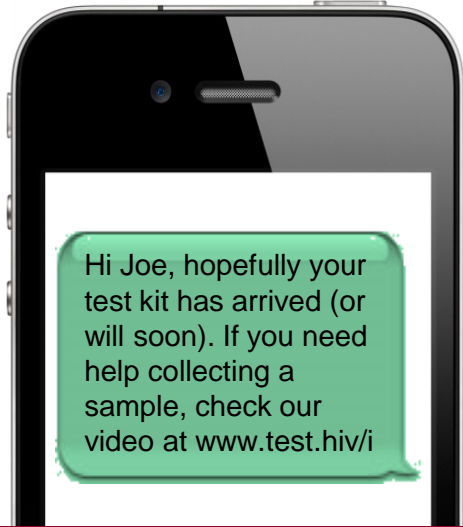
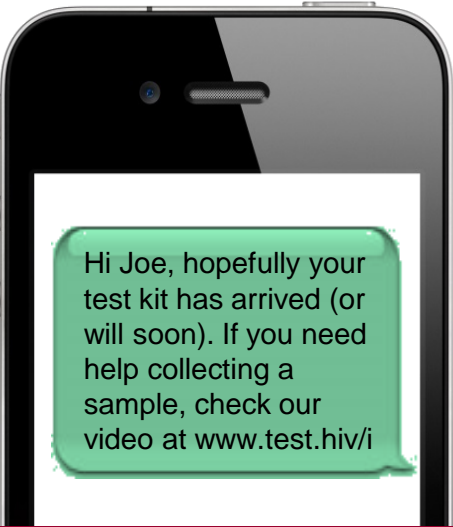
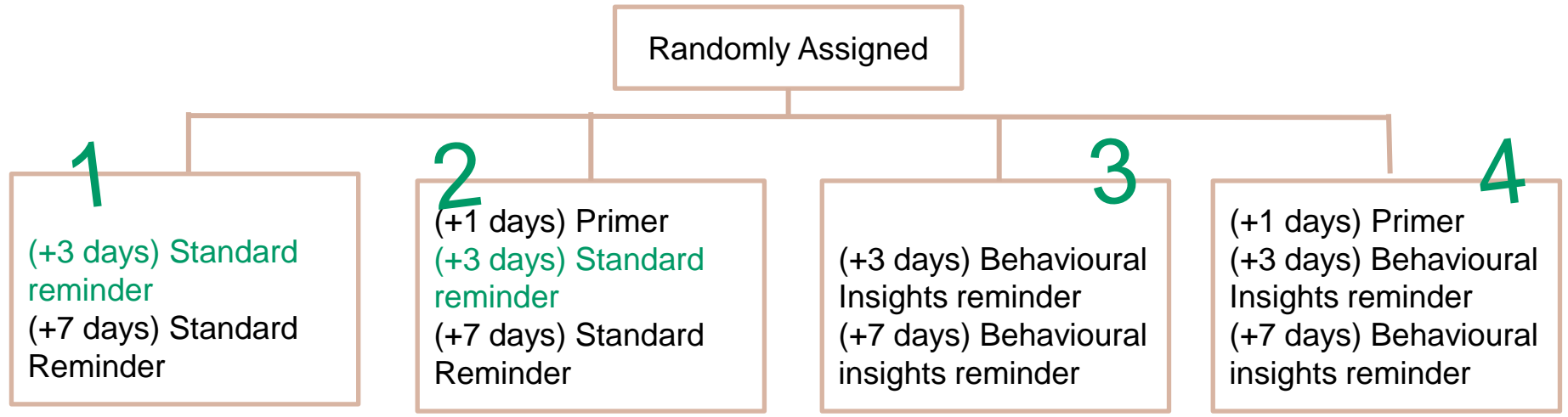
Trial design



SMS Messages – 1 day after kit dispatch



SMS Messages – 3 days after kit dispatch



SMS Messages – 3 days after kit dispatch



Friction Costs

Randomly Assigned

1

(+3 days) Standard reminder
(+7 days) Standard Reminder

2

(+1 days) Primer
(+3 days) Standard reminder
(+7 days) Standard Reminder

3

(+3 days) Behavioural Insights reminder
(+7 days) Behavioural insights reminder

4

(+1 days) Primer
(+3 days) Behavioural Insights reminder
(+7 days) Behavioural insights reminder

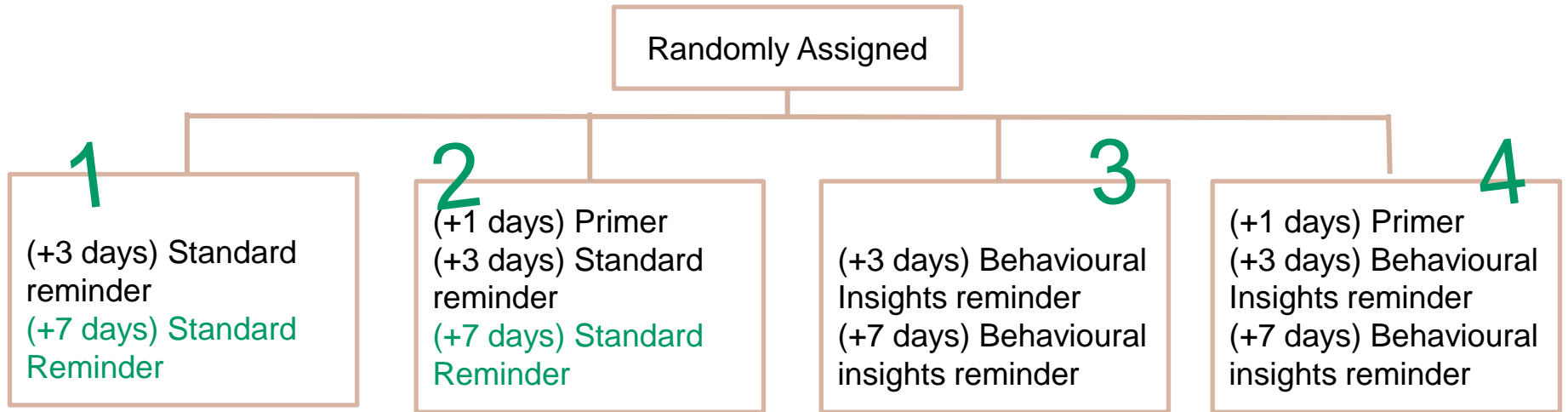
Hi Joe, hopefully your test kit has arrived (or will soon). If you need help collecting a sample, check our video at www.test.hiv/i

Hi Joe, hopefully your test kit has arrived (or will soon). If you need help collecting a sample, check our video at www.test.hiv/i

Hi Joe, Remember to return your kit as soon as possible. We've already paid for postage, so once you're done, put the completed kit in the post and we'll take care of the rest.

Hi Joe, Remember to return your kit as soon as possible. We've already paid for postage, so once you're done, put the completed kit in the post and we'll take care of the rest.

SMS Messages – 7 days after kit dispatch



SMS Messages – 7 days after kit dispatch

Randomly Assigned



Deadlines

1

(+3 days) Standard reminder
(+7 days) Standard Reminder

2

(+1 days) Primer
(+3 days) Standard reminder
(+7 days) Standard Reminder

3

(+3 days) Behavioural Insights reminder
(+7 days) Behavioural insights reminder

4

(+1 days) Primer
(+3 days) Behavioural Insights reminder
(+7 days) Behavioural insights reminder

Hi Joe, if you've not already returned your test kit (PX9216028) don't forget to. Need a replacement kit? See www.test.hiv for details.

Hi Joe, if you've not already returned your test kit (PX9216028) don't forget to. Need a replacement kit? See www.test.hiv for details.

Hi Joe, your test kit (PX9216028) is due to be returned in 3 days. Please complete and return the kit before it expires.

Hi Joe, your test kit (PX9216028) is due to be returned in 3 days. Please complete and return the kit before it expires.

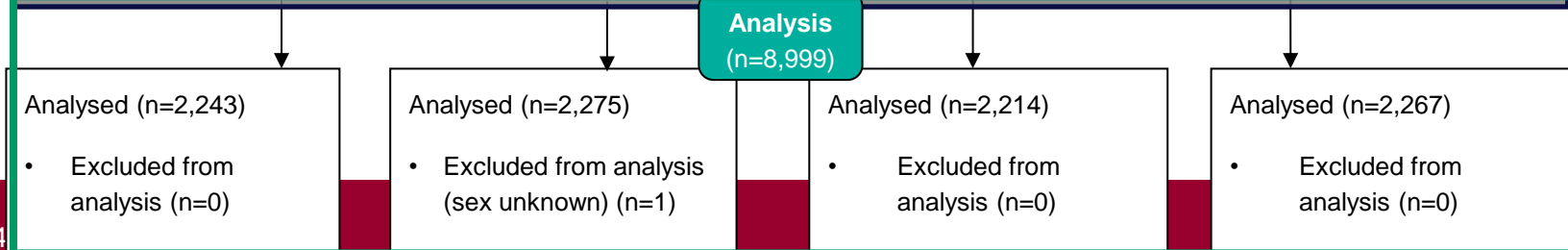
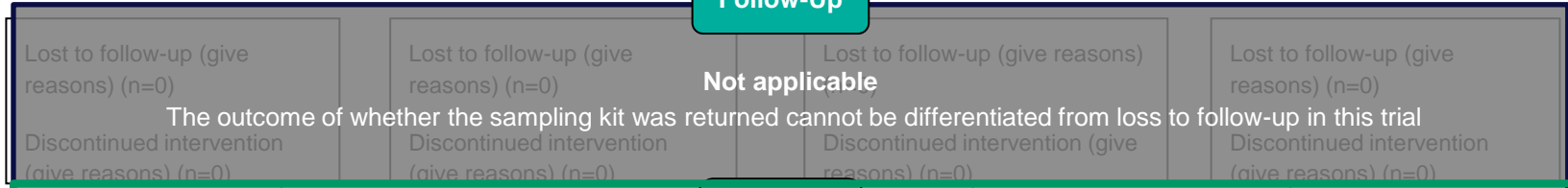
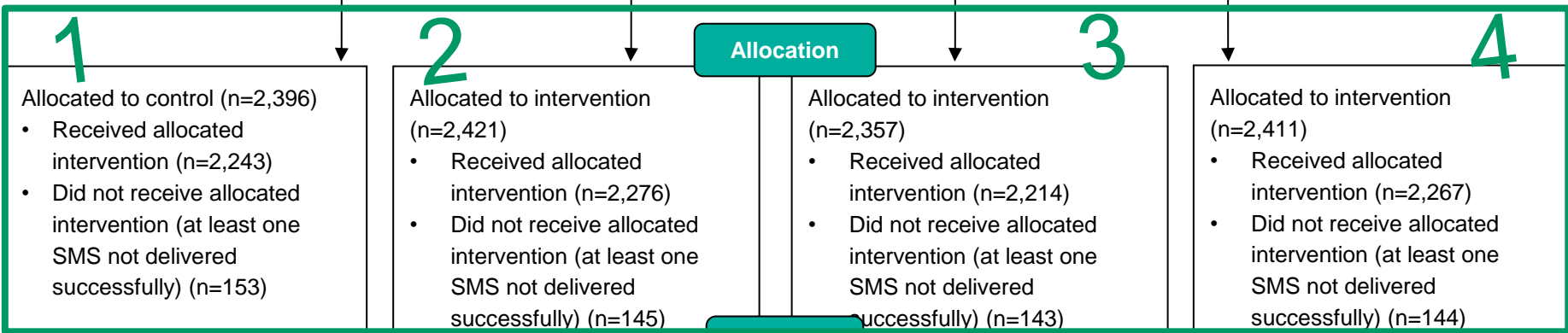
Participant flow

Enrolment
(21/11/16 – 18/02/17)

Requested HIV self-sampling kit on
freetesting.hiv and eligible for free testing
kit (n=15,593)

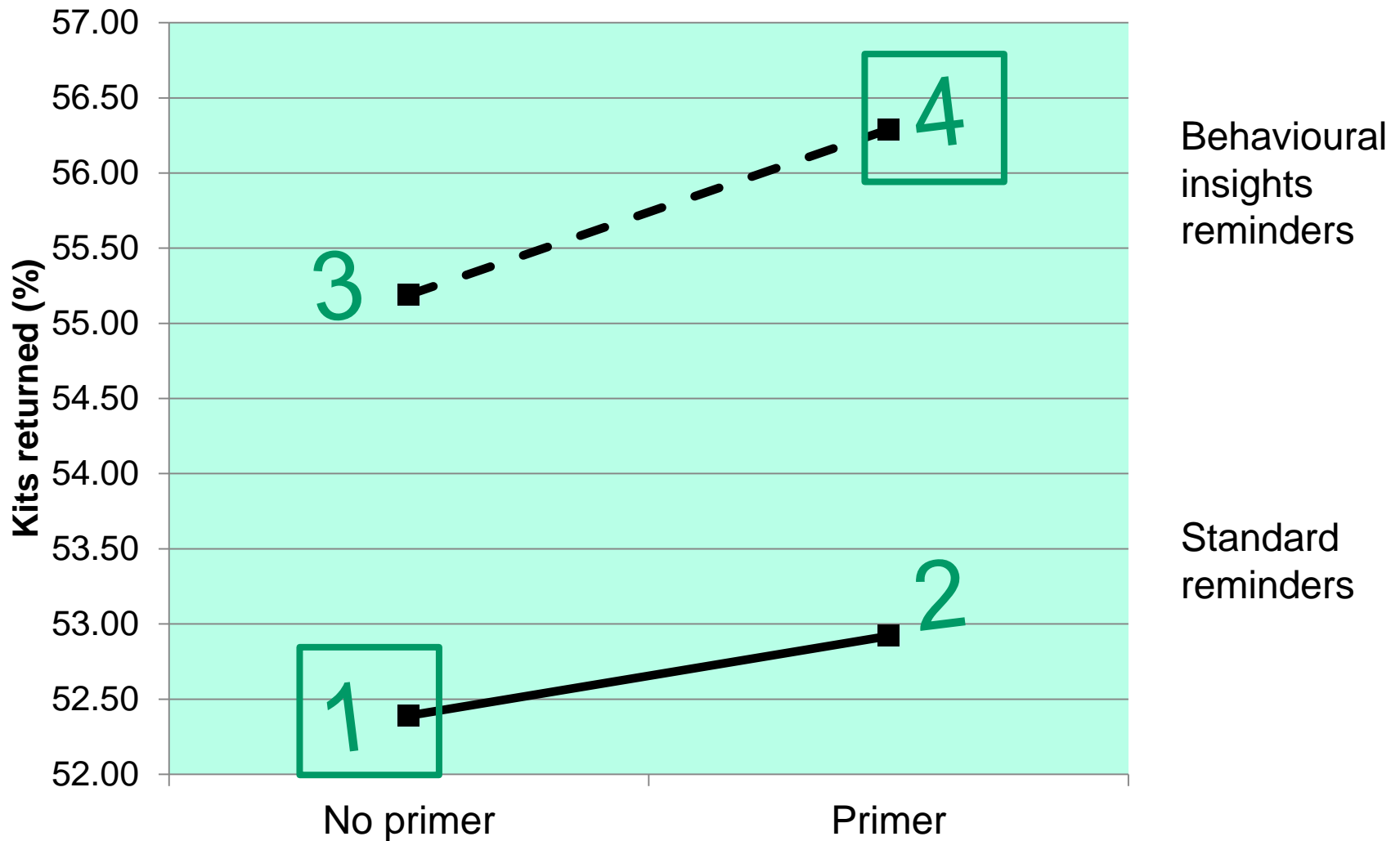
Excluded (n=6,008)
• Not meeting inclusion criteria (n=0)
• Declined to participate (n=6,008)
• Other reasons (n=0)

Randomised (n=9,585)



Results

Kit return by intervention combination



Kit return by intervention combination

| | No primer | Primer | Marginal total |
|--------------------|---------------------------------|---------------------------------|-----------------------------|
| Standard reminders | (1) 1,175 (52.39%) (n=2,243) | (2) 1,204 (52.92%) (n=2,275) | 2,379 (52.66%) (n=4,518) |
| BI reminders | (3) 1,222 (55.19%) (n=2,214) | (4) 1,276 (56.29%) (n=2,267) | 2,498 (55.75%) (n=4,481) |
| Marginal total | 2,397 (53.78%) (n=4,457) | 2,480 (54.60%) (n=4,542) | 4,877 (54.19%) (n=8,999) |

How effective were the two interventions?

| Trial arms | (1) No primer + standard reminders | (2) Primer + standard reminders | (3) No primer + BI reminders | (4) Primer + BI reminders |
|---------------------------------------|---------------------------------------|------------------------------------|---------------------------------|------------------------------|
| (1) No primer + standard reminders | | | | |
| (2) Primer + standard reminders | 1.02 (0.91-1.15) | 0.717 | | |
| (3) No primer + BI reminders | 1.12 (1.00-1.32) | 0.060 | 1.10 (0.97-1.23) | 0.127 |
| (4) Primer + BI reminders | 1.17 (1.04-1.32) | 0.009 | 1.15 (1.02-1.29) | 0.023 |
| | | | 1.05 (0.93-1.18) | 0.462 |

Interventions

| | | |
|--|------------------|--------------|
| Primer (2+4) vs no primer (1+3) | 1.03 (0.95-1.12) | 0.438 |
| BI reminders (3+4) vs standard reminders (1+2) | 1.13 (1.04-1.23) | 0.003 |

(N=8,999)

Kit return by other factors

Kit return was also associated with:

- Age
- Sexual behaviour and gender identity
- Ethnicity
- Deprivation

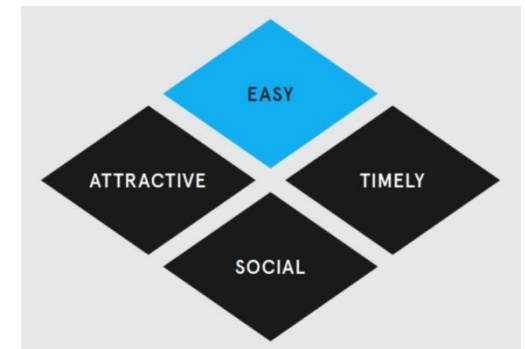
- Last HIV test
- Unprotected sex with within the last 12 months
- Sex under the influence of alcohol or recreational drugs

Limitations

- Underpowered due to high drop-out level
 - Beneficial effect of primer unknown, warrants further testing
 - Large confidence intervals

Implications

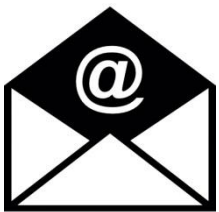
- 4% increase in return rate – at population level this can have a big impact.
- Low resource intensive intervention, with no additional costs to changing the wording of the messages.
- Recommendations:
 - Add behavioural insights reminder messages to existing self-sampling services.
 - Add primer if feasible, although its effect warrants further testing



Acknowledgements

PHE - Karen Tan, Luis Guerra and Anthony Nardone

Preventx - Tim Alston



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Extra info

Comparisons with excluded individuals

Kit return rate for those who did not receive all messages versus those who did:

- 35.90% vs 54.19%

Kit return rate for those not randomised versus those who were:

- 55.84% vs 53.07%

Balance checks

- Intervention groups considered **balanced** in all respects
- Randomised versus non-randomised – **not balanced**
- All messages delivered versus at least one message failed – **not balanced**

Primer + BI reminders vs control (4 vs 1)

Primer + BI reminders vs primer (4 vs 2)

BI reminders vs standard reminders

BI reminders vs control (3 vs 1)

BI reminders vs primer (3 vs 2)

Primer + BI reminders vs BI reminders (4 vs 3)

Primer vs no primer

Primer vs control (2 vs 1)

