2017 North West ‘Be Clear on Cancer’ Bowel Cancer Screening Regional Pilot

Final Evaluation Results
February 2019
Bowel Screening: Background
Bowel Screening Programme Uptake

- Bowel screening (gFOBT) is 10 years old now, but uptake remains lower than other national screening programmes

- There are significant inequalities in uptake related to:
  - Deprivation
  - Sex (lower in men)
  - Age
Based on data from the first million tests from the programme, Logan et al (2012)
How the programme works

Hub sends a screening invitation letter to all adults aged 60-74 registered with a GP.

**First-timers**
People invited for 1st time (usually aged ~60)

The hub then sends an NHS bowel screening test kit (gFOBT) to the patient.

**Non-responders**
People invited who've never responded to previous invites

If the patient doesn’t return the test they receive a reminder letter within 4 weeks. If the patient still doesn’t respond 13 weeks after the reminder they are classified a 'non-responder'.

The patient completes the test by taking 3 separate stool samples over a period of 10 days, and returns the kit to the hub in the envelope provided.

**Previously screened**
Those invited who have responded in the past

The hub develops the kit to get result.

Normal result
Patient then offered test again in two years time, if less than 74 years old.

Unclear result or spoilt kit
Sent a new kit up to two times.

Abnormal result
The patient details get passed onto a local screening centre. The patient is contacted and offered a nurse appointment, where they are then offered a colonoscopy.

AHA: SSP appointment
North West Campaign
Target audience, location & objectives

**GRANADA TV REGION**

1. South Cumbria
2. Lancashire
3. Greater Manchester
4. Merseyside
5. Cheshire

**STRATEGIC AIM:**
- To explore the use of Be Clear on Cancer to improve uptake of Bowel Cancer Screening

**OBJECTIVES:**
- Understand impact of ‘Be Clear on Cancer’ brand and ‘TV’ on Bowel Cancer Screening advertising
- Understand impact of ‘Be clear on Cancer’ bowel screening advertising + CRUK direct mail
- Increase uptake by 10% among First Timers and 3% among Non-Responders

**SECONDARY OBJECTIVES:**
- Increase campaign recall (+50%) and improved attitudes, intentions and reported behaviour pre to post-campaign
- Increased awareness of programme
- Reduce beliefs test is difficult to complete
Survey analysis
Key findings from the awareness survey

CAMPAIGN RECOGNITION:
• High recognition of advertising (79%) and key messages ‘Bowel screening saves lives’ & ‘bowel cancer screening is for 60-74 year olds’

AWARENESS OF THE BOWEL SCREENING PROGRAMME:
• Programme awareness was already high (75%) – no significant changes

BELIEFS AND BARRIERS:
• Small positive changes in beliefs (decrease in ‘bowel cancer cannot be cured’, driven by men) and mixed reactions to potential barriers to completing screening

INTENTIONS AND REPORTED ACTIONS:
• No significant changes
Uptake analysis: Overall
Uptake Analysis Methods

LOGISTIC REGRESSION (LR)
- Uses individual-level data – can model results and control for demographic factors individually (where data available)
- Facilitates direct comparison with previous campaigns

INTERRUPTED TIME SERIES (ITS)
- Uses aggregated CCG-level data
- Takes overall trends in uptake into account
- Resistant to confounding from demographic factors, bias only introduced by factors that change at same time as the campaign and are directly related to uptake

Separate results for:
- “First-timers”
- “Previous non-responders”
- “Previously screened”

Account for:
- Age group
- Gender
- Deprivation quintile (IMD)
- Ethnicity quintile
- Seasonality

Allow:
Verification and triangulation of results
LR ANALYSIS SHOWS INCREASES IN UPTAKE IN ALL 3 SCREENING HISTORY GROUPS, ALTHOUGH NO CLEAR EVIDENCE TO SUGGEST FURTHER UPLIFT WITH DIRECT MAIL.
Summary

ADVERTISING INCREASED UPTAKE AMONGST ALL SCREENING HISTORY GROUPS, BUT NO CLEAR INDICATION OF ADDITIONAL UPLIFT FROM DIRECT MAIL

First-timers
- Interventions increased uptake by around 2-3%
  - around 900 – 1,300 additional people screened during the campaign and 3 month follow up

Previous non-responders
- Interventions increased uptake by around 3-4%
  - around 1,900 – 2,500 additional people screened during the campaign and 3 month follow up

Previously screened
- Interventions increased uptake by around 3%
  - around 2,900 – 3,500 additional people screened during the campaign and 3 month follow up

In total, around 5,700 – 7,300 additional people screened during the campaign and follow up period
What does this mean?

AN INCREASE OF AROUND 5,700 – 7,300 PEOPLE SCREENED MEANS AN...

• additional 24-63 colonoscopies
• additional 2-5 cancers diagnosed through screening
• additional 6-16 medium/high risk adenomas diagnosed
• additional 1 cancer diagnosed at the earliest stage

... DURING THE LIVE CAMPAIGN AND 3 MONTH FOLLOW UP PERIOD IN THE NORTH WEST

Impact broadly in line with modelling data provided to screening centres pre-campaign which predicted:
• In 3 months, across the North West, a 10% increase among First Timers & 3% increase among Previous Non-Responders would generate around 1,600 additional people screened and 45 additional colonoscopies

Note: modelling data did not account for uplift in Previously Screened (largest population).
Uptake analysis: Deprivation
Uptake Analysis: Deprivation

• Most vs. least deprived groups:
  – In the advertising areas, there was a significantly larger increase in uptake in the most deprived groups compared to least deprived groups for first-timers and previously screened.
  
  – There wasn’t a significant difference in the increase in uptake between most and least deprived groups who received advertising for previous non-responders.
Uptake analysis: Sex
Uptake Analysis: Sex

- Males vs. Females:
  - In the advertising areas, there were significant increases for both males and females, however there was a significantly larger increase in uptake for females compared to males.
Impact on services
Impact on Services

• Impact on Screening Centres:
  – There was an increase in the number of SSP appointments in campaign areas, however the 2 week waiting time standard for an SSP appointment was met 99% of the time throughout the whole period.
  
  – The number of diagnostic test (colonoscopy) appointments increased in campaign areas during the campaign period. The results suggest there might have been an impact on the proportion of people waiting longer than 6 weeks for colonoscopy in the months after the campaign.

• Two week wait and 62 day waiting times:
  – Number of urgent two week wait referrals for suspected lower GI cancers increased in both control and campaign CCGs, which suggests that the campaign did not have an effect on the number of urgent two week wait referrals.
  
  – We looked at the 62 day wait from urgent referral (or via the bowel cancer screening programme) to first definitive treatment for bowel cancer patients, and there was not an obvious campaign impact on the 62 day target within the context of past trends.
Summary and discussion
## Summary of Key Findings

<table>
<thead>
<tr>
<th>STRATEGIC AIM</th>
<th>Cancer Taskforce Recommendation: “Public Health England should explore the use of Be Clear on Cancer to improve uptake of screening programmes, particularly amongst disadvantaged groups.”</th>
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<tbody>
<tr>
<td>KEY FINDINGS</td>
<td>Use of ‘Be Clear on Cancer’ brand and TV was successful: Advertising increased uptake among all screening history groups</td>
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<td>Advertising + direct mail did not appear to have a significantly greater impact on uptake compared to advertising only</td>
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| EVIDENCE | • Advertising increased uptake among First Timers (2.3%), Previous Non-Responders (3.1%), and Previously Screened (2.8%) during the live campaign period. There was a smaller sustained impact after the campaign ended.  
  • Advertising had greatest impact among more deprived first-timers & previously screened  
  • Overall campaign recognition of 79%  
  • No increase in awareness of programme  
  • TV reported as main source of info on programme when patients asked at screening centres |
| | • Advertising + direct mail also generated increases in uptake: First Timers (+2.9%) and Previous Non-Responders (+3.8%) during the live campaign period. |
| | **Note:** direct mail was effective in previous CRUK London & Wales pilots |
| Impact of the campaign was felt by Bowel Screening Hub and Screening Centres, but appeared to be managed |
Future Plans

• Results from the evaluation are promising

• Looking to the future:
  – Introduction of FIT screening will likely improve uptake, but still anticipating that it will be below the 75% target and inequalities will likely still exist.
  – Furthermore, programme will in the future start to offer bowel screening from age 50. Data from Scotland show that uptake is lower in the 50-59s than older age groups, so may be a role here.
  – Furthermore, the NHS long term plan has highlighted bowel screening as a way of contributing to stage shift and improved outcomes.

• The Be Clear on Cancer programme should continue to consider the bowel screening campaign within its portfolio and work with key stakeholders to plan for further campaign activity at the appropriate time
Thank you.

Any questions?
UPTAKE ANALYSIS

“Uptake” = those adequately screened 12 weeks after invite (aged 60-74)

Due to the complexity of the campaign, 2 complementary methods were used in the evaluation:

Logistic Regression (LR)
- **Pros:** Analyses data at an individual-level, including controlling for demographic factors on an individual basis; allows comparison with previous campaigns.
- **Cons:** Requires large sample sizes; does not account for underlying trends/patterns in the data; necessitates each individual being allocated to a discrete intervention group.

Interrupted Time Series (ITS):
- **Pros:** allows changes in uptake over time to be compared between the campaign and comparison areas; proven to be a robust method for evaluating the effects of time-delimited interventions.
- **Cons:** Requires a sufficient number of time points both before and after the intervention, as well as within each phase of the campaign (e.g. advertising-only, advertising plus direct mail); cannot be used to make inferences about individual-level outcomes.
### UPTAKE ANALYSIS:

#### Comparison CCGs (n=21)

- NHS Canterbury and Coastal CCG
- NHS Crawley CCG
- NHS East Riding of Yorkshire CCG
- Hartlepool and Stockton-on-Tees CCG
- NHS High Weald Lewes Havens CCG
- NHS Hull CCG
- NHS Luton CCG
- NHS Newcastle Gateshead CCG
- NHS North Durham CCG
- NHS North East Essex CCG
- NHS North Somerset CCG
- NHS North Tyneside CCG
- NHS North West Surrey CCG
- NHS Slough CCG
- NHS South Eastern Hampshire CCG
- NHS South Reading CCG
- NHS South Tees CCG
- NHS South Tyneside CCG
- NHS Southend CCG
- NHS Thanet CCG
- NHS West Essex CCG

#### Advertising and direct mail CCGs (n=22)

- NHS Blackpool CCG
- NHS West Lancashire CCG
- NHS East Lancashire CCG
- NHS Blackburn With Darwen CCG
- NHS Chorley And South Ribble CCG
- NHS Fylde & Wyre CCG
- NHS Greater Preston CCG
- NHS Lancashire North CCG
- NHS South Sefton CCG
- NHS St Helens CCG
- NHS Knowsley CCG
- NHS Liverpool CCG
- NHS Halton CCG
- NHS Wirral CCG
- NHS Warrington CCG
- NHS Southport And Formby CCG
- NHS Central Manchester CCG
- NHS Salford CCG
- NHS North Manchester CCG
- NHS Wigan CCG
- NHS Bolton CCG
- NHS Vale Royal CCG

#### Advertising CCGs (n=11)

- NHS Cumbria CCG
- NHS Heywood, Middleton & Rochdale CCG
- NHS Bury CCG
- NHS Oldham CCG
- NHS South Manchester CCG
- NHS Stockport CCG
- NHS Tameside & Glossop CCG
- NHS Trafford CCG
- NHS Eastern Cheshire CCG
- NHS South Cheshire CCG
- NHS West Cheshire CCG
TREND GRAPH - % waiting 6 weeks or less for a diagnostic test appointment

% of patients waiting 6 weeks or less for a diagnostic test appointment

- Campaign
- Comparison
- Camp without Pennine
TREND GRAPH - TWW
URGENT (TWO WEEK WAIT) REFERRALS FOR SUSPECTED LOWER GI CANCER

NUMBER OF TWW REFERRALS BY WEEK AND AREA (OCTOBER 2014 - JULY 2017)
TREND GRAPH - 62 DAY WAIT
FROM URGENT REFERRAL TO FIRST DEFINITIVE TREATMENT

PERCENTAGE OF PATIENTS WHO W AITED LONGER THAN 62-DAYS FROM URGENT GP REFERRAL TO RECEIVING FIRST DEFINITIVE TREATMENT (OCTOBER 2014 - JULY 2017)