



**3rd EUROPEAN COLORECTAL CANCER DAYS:**  
**BRNO 2014 - PREVENTION AND SCREENING**  
25-26 April 2014, Brno, Czech Republic



# Screening for CRC

## The UK experience!



**Prof. Stephen Halloran**

- Royal Surrey County Hospital
- NHS Cancer Screening Programme
- University of Surrey

# Story of ...



*‘Colorectal Cancer  
Screening in England...’*

# UK Bowel Biennial Cancer Screening

## 1990 RCT *Evidence*

Screening with guaiac faecal occult blood tests works!

*Reduce CRC mortality by 16%*

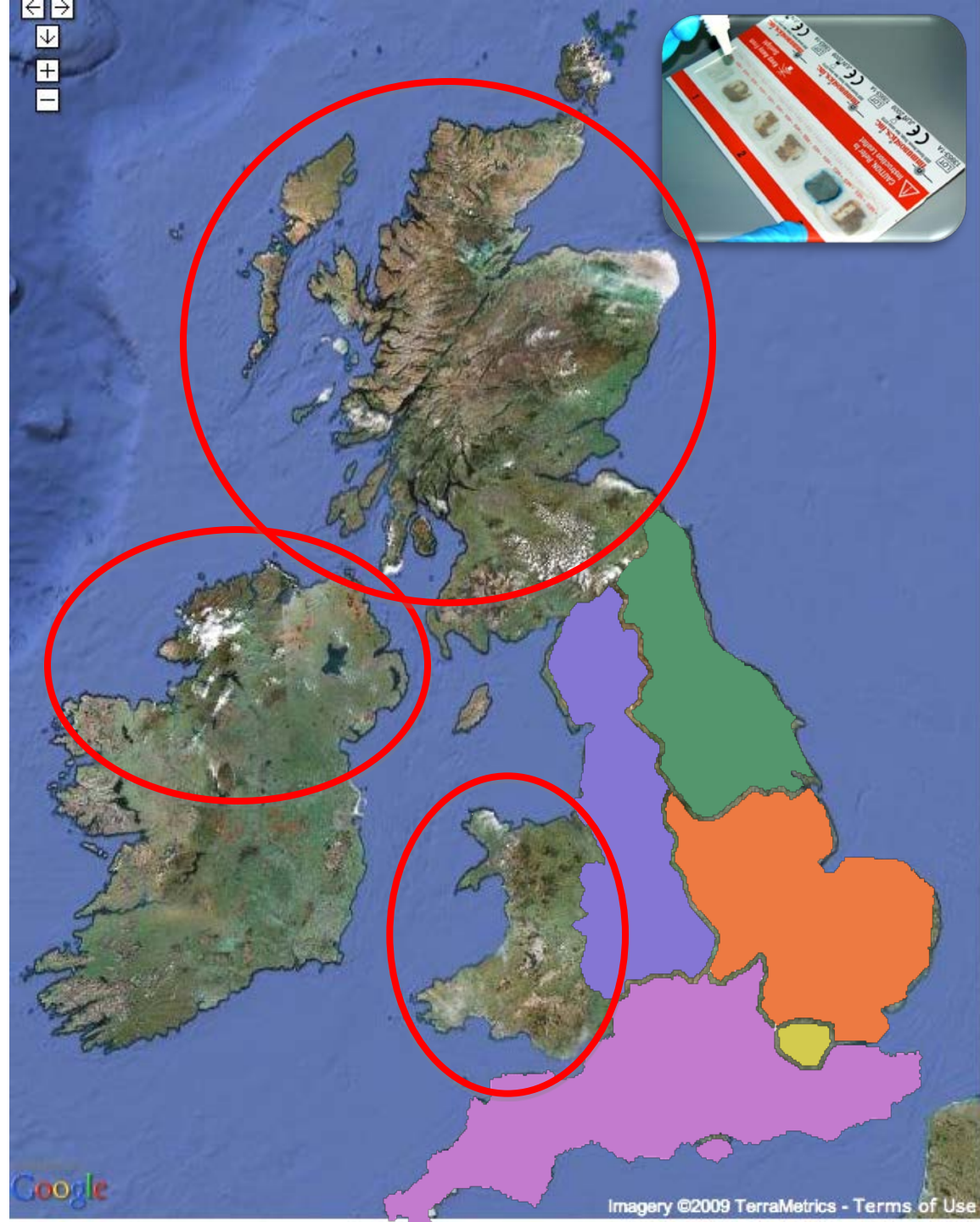
## 2000 Test in a *Pilot*

- Identify the **best** gFOBt
- Develop 'a **team** of enthusiasts'
- Write & test **software**
- Determine **standards**
- Develop **QA** systems
- *Make it works for us!*



# UK Biennial Cancer Screening

- **England** – July 2006
  - Guaiac FOBT two yearly
  - **Phase 1** 60 - 69 year olds
  - **Phase 2** 70 – 74
  - **Phase 3** <60 ?
- **Scotland** – July 2007
- **Wales** – Oct. 2008
- **N. Ireland** – 2010



# England 2006

## *Biennial Screening for Bowel Cancer*



England  
5 Hubs

### Screening Hub Activities

- Organisation
- Call and recalls (*25,000 /week*)
- Laboratory test
- Telephone helpline (*4,000 /week*)
- Appointments
- Statistical monitoring data



**Single web-based  
Screening System &  
Database**

# England Bowel Cancer Screening



1. **Day 1** – **Pre-invitation** to be screened (*Includes facts book*)
2. **Day 8** – By default send test kit (*Return Free*)
3. **Day 30** – Reminder
4. **and then...**

a. **No reply @ 3m** – *repeat invitation in 2 years*

b. **Kit Negative** – *repeat in 2 years*

c. **Kit Positive** – *Hub....*

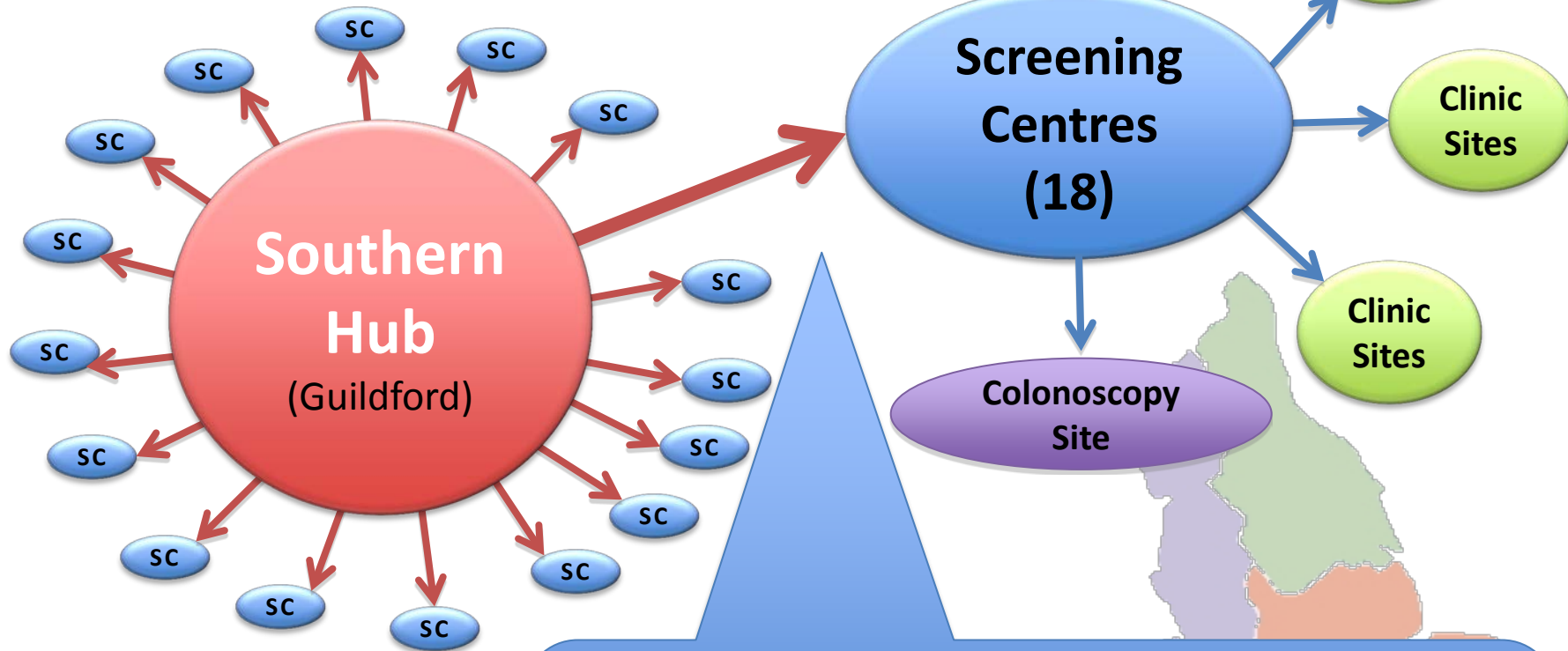
- i. Makes screening nurse appointment (5 days time)
- ii. Notify GP (first class mail)
- iii. Assessed for colonoscopy

Appointments  
within **14 days**

- Nurse Clinic
- Colonoscopy



# Bowel Cancer Screening



## Quality Systems

- **Accreditation:** *Organisation, labs, endoscopy*
- **Performance Indicators:** *Monitor inside and out*
- **Peer Review:** *Labs, endoscopy, pathology, etc*
- **Continuous Audit:** *Intermediate outcomes*
- **Evaluation:** *Programme evaluation group*

# Coverage & Access to Information

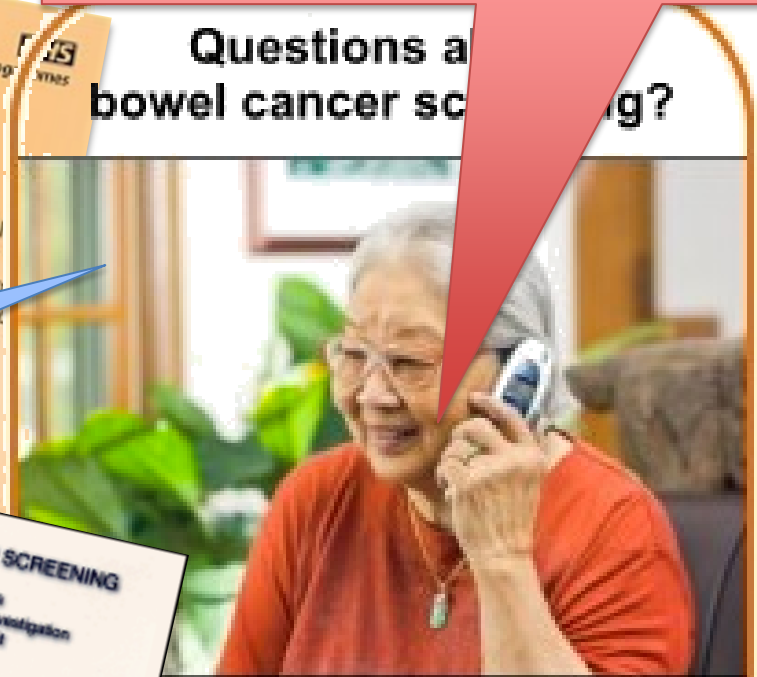
## Access to Information

- Emphasis on reaching everyone!

## Challenge for those with...

- Dementia
- Major learning difficulties
- Blindness
- In Prison

Questions and answers about bowel cancer screening?

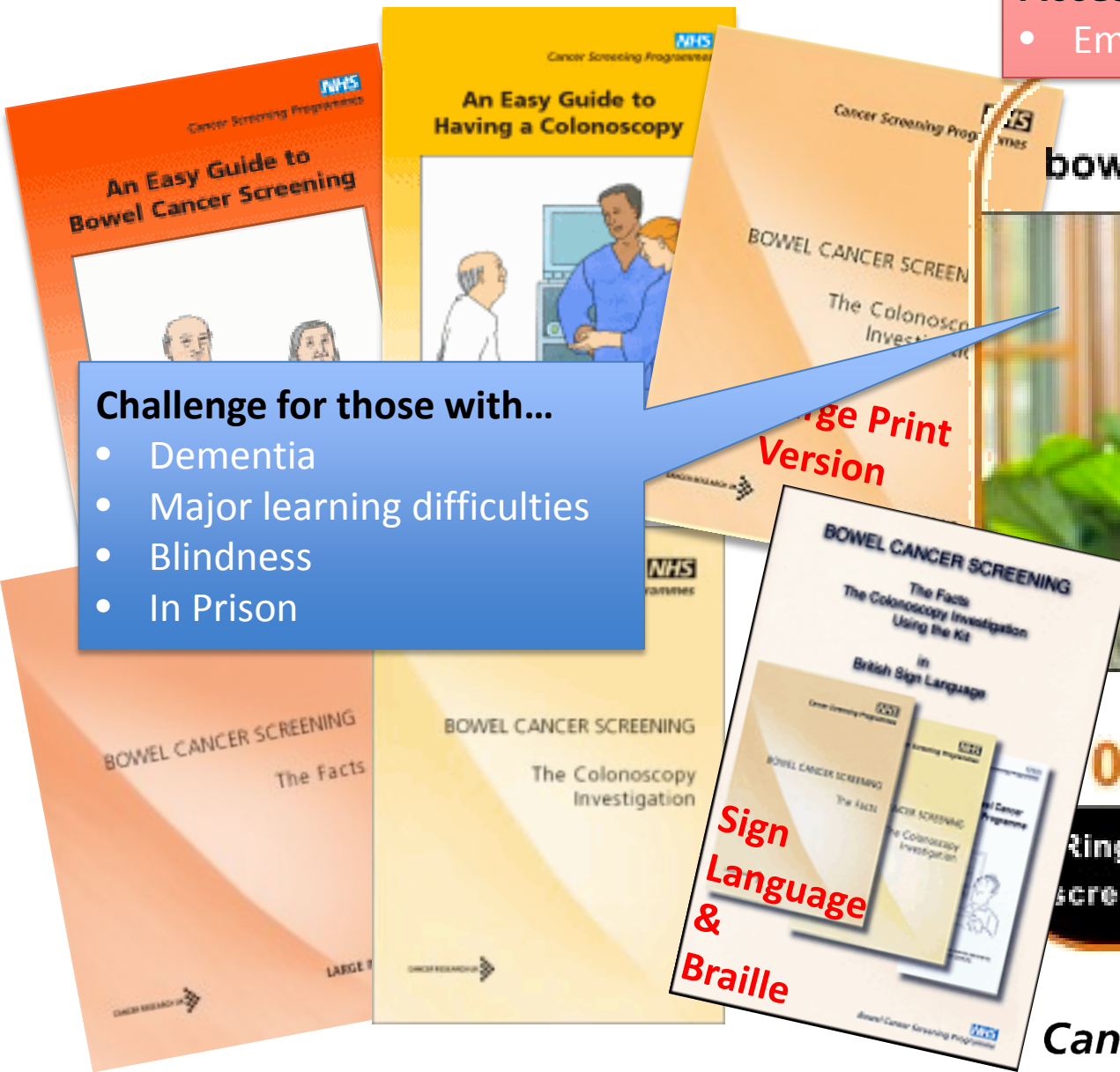


Call the HELPLINE  
**0800 707 60 60**

Ring this number to request a screening kit if you are over 70

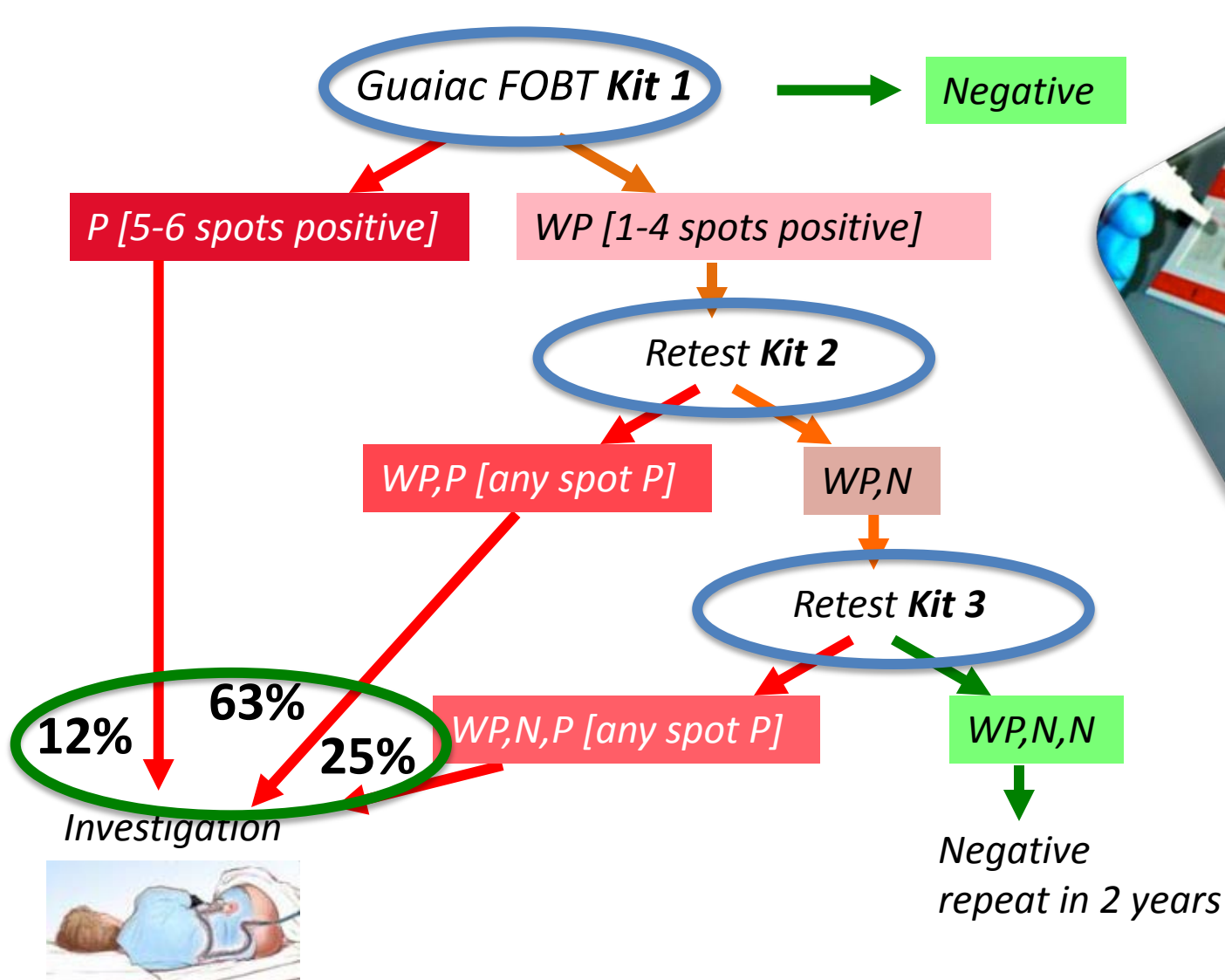
**NHS**

Cancer Screening Programmes



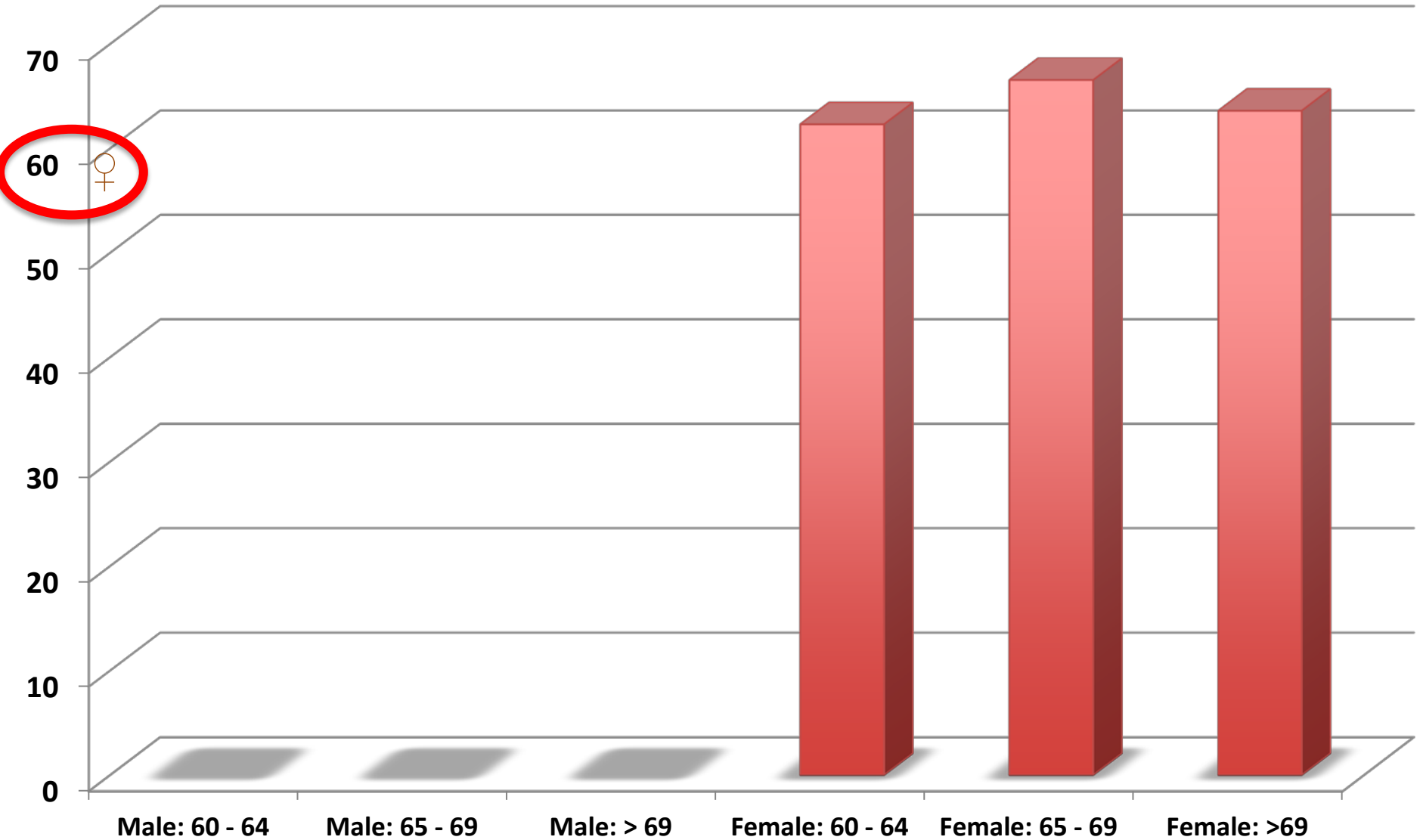


# The English *'three-kit algorithm'*

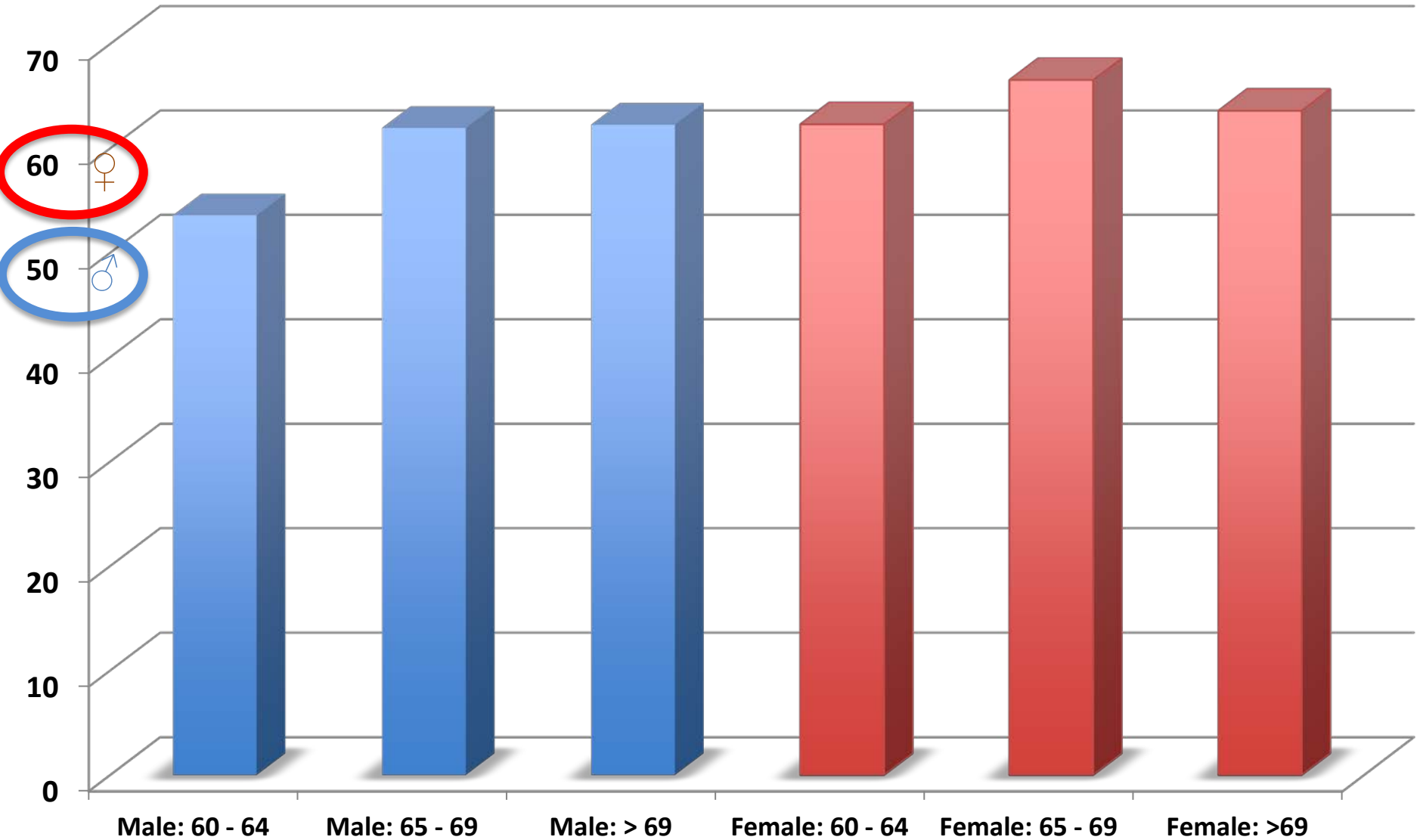


**Southern Hub  
Uptake 60.8%**

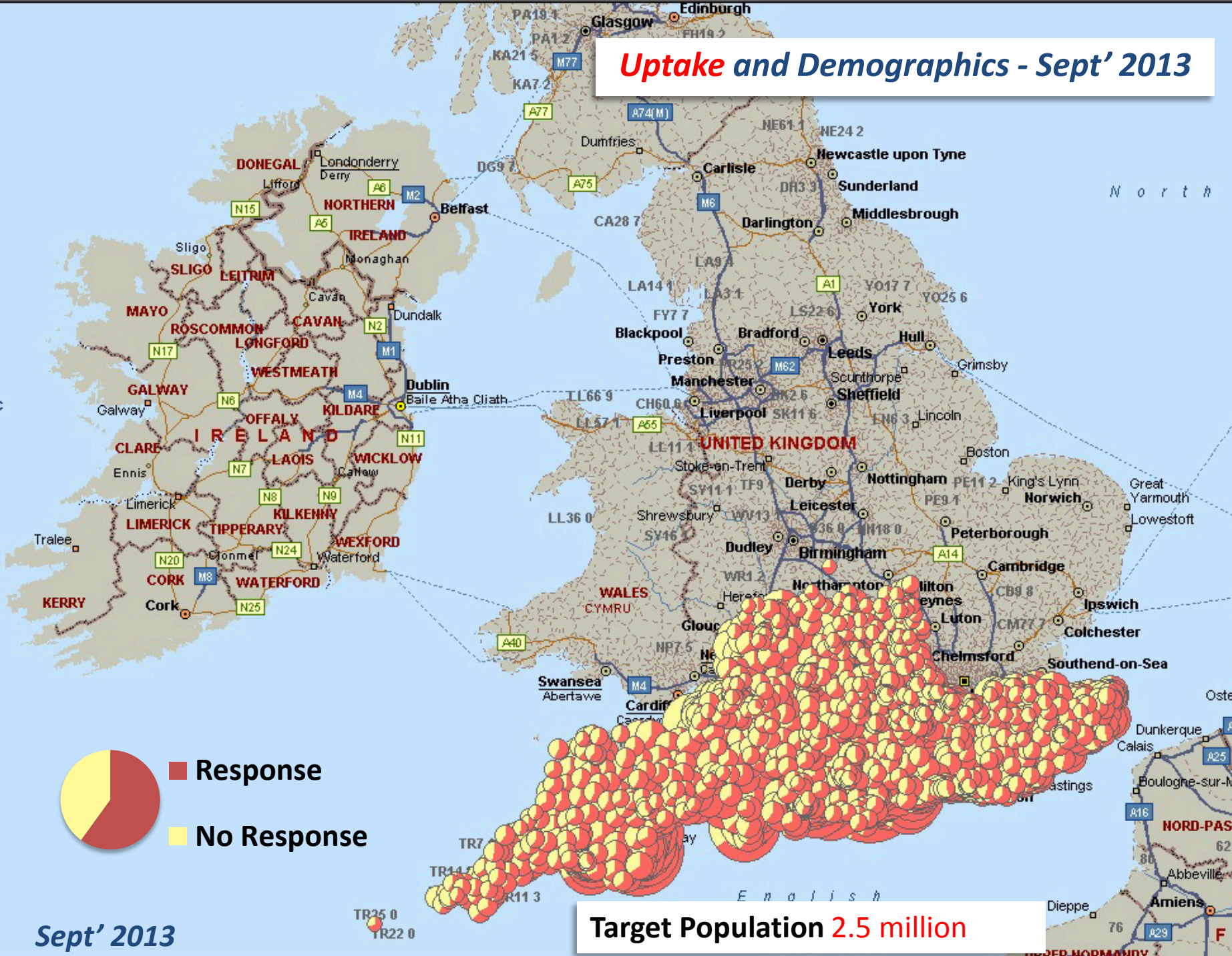
# % Uptake Southern Hub 2012 - 13



# % Uptake Southern Hub 2012 - 13



# Uptake and Demographics - Sept' 2013



■ Response  
■ No Response

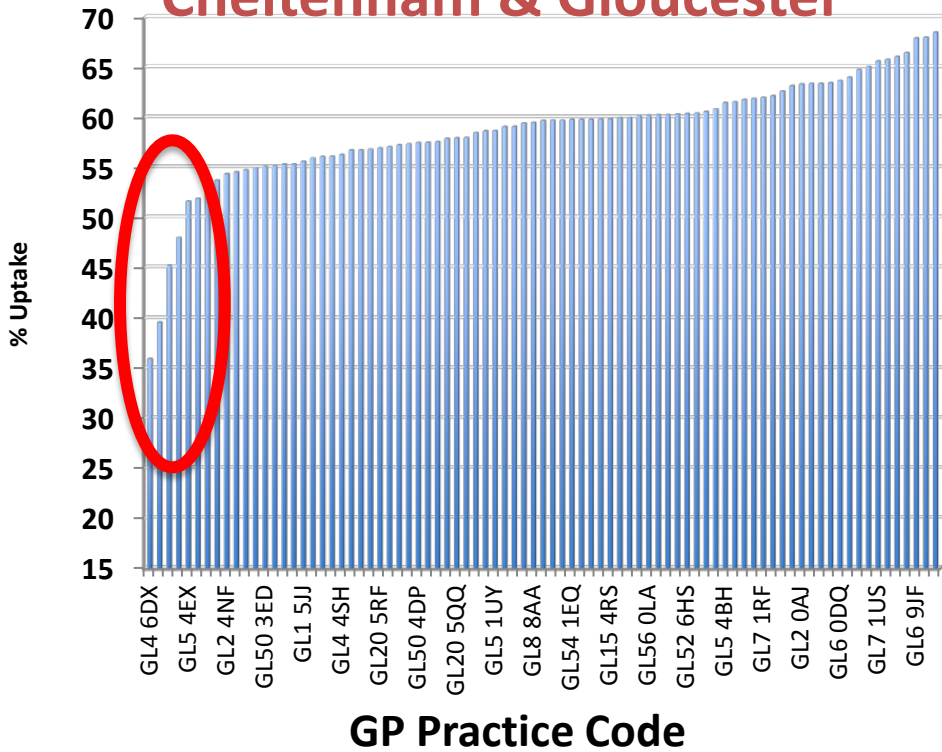
Sept' 2013

Target Population 2.5 million

# %Uptake Geodemographic Profile

## GP Surgeries within Centres

### Cheltenham & Gloucester

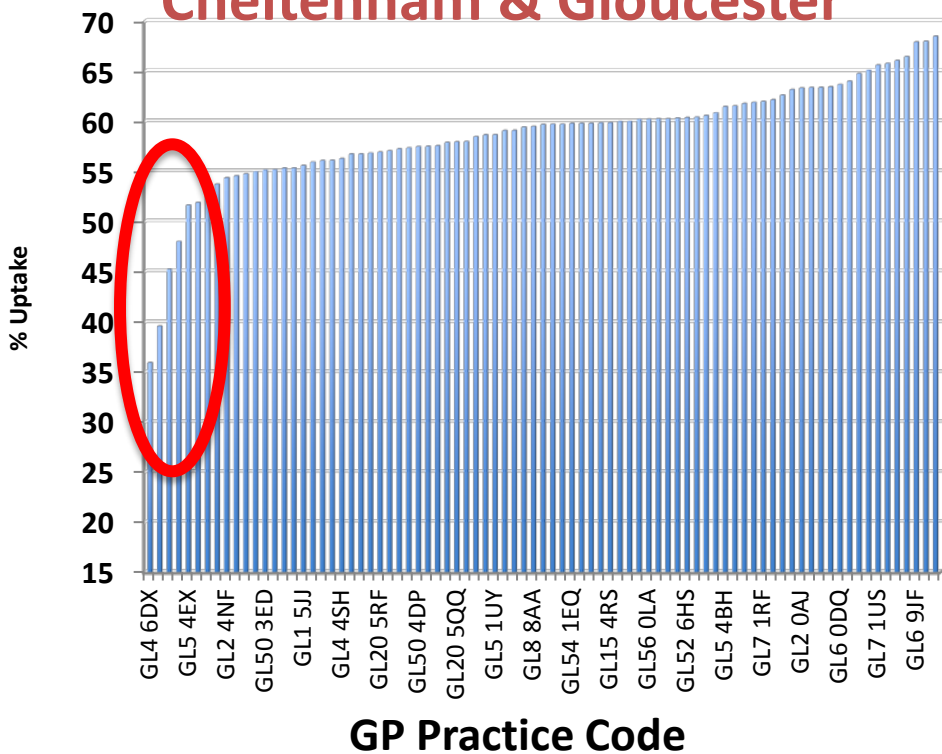


# %Uptake Geodemographic Profile

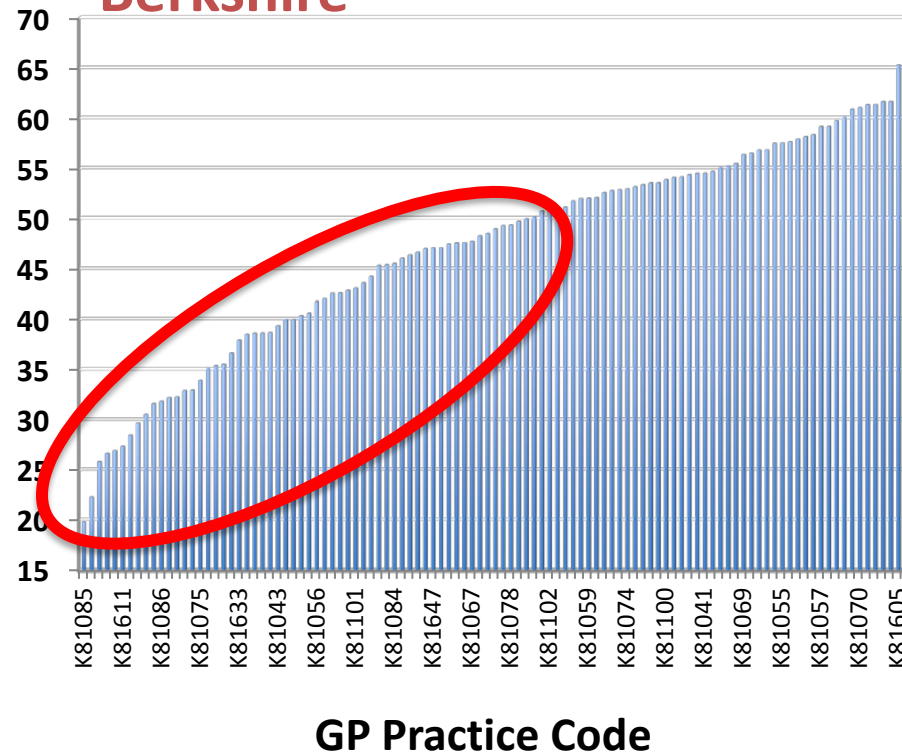
## GP Surgeries within Centres

Southern  
Hub Data

### Cheltenham & Gloucester



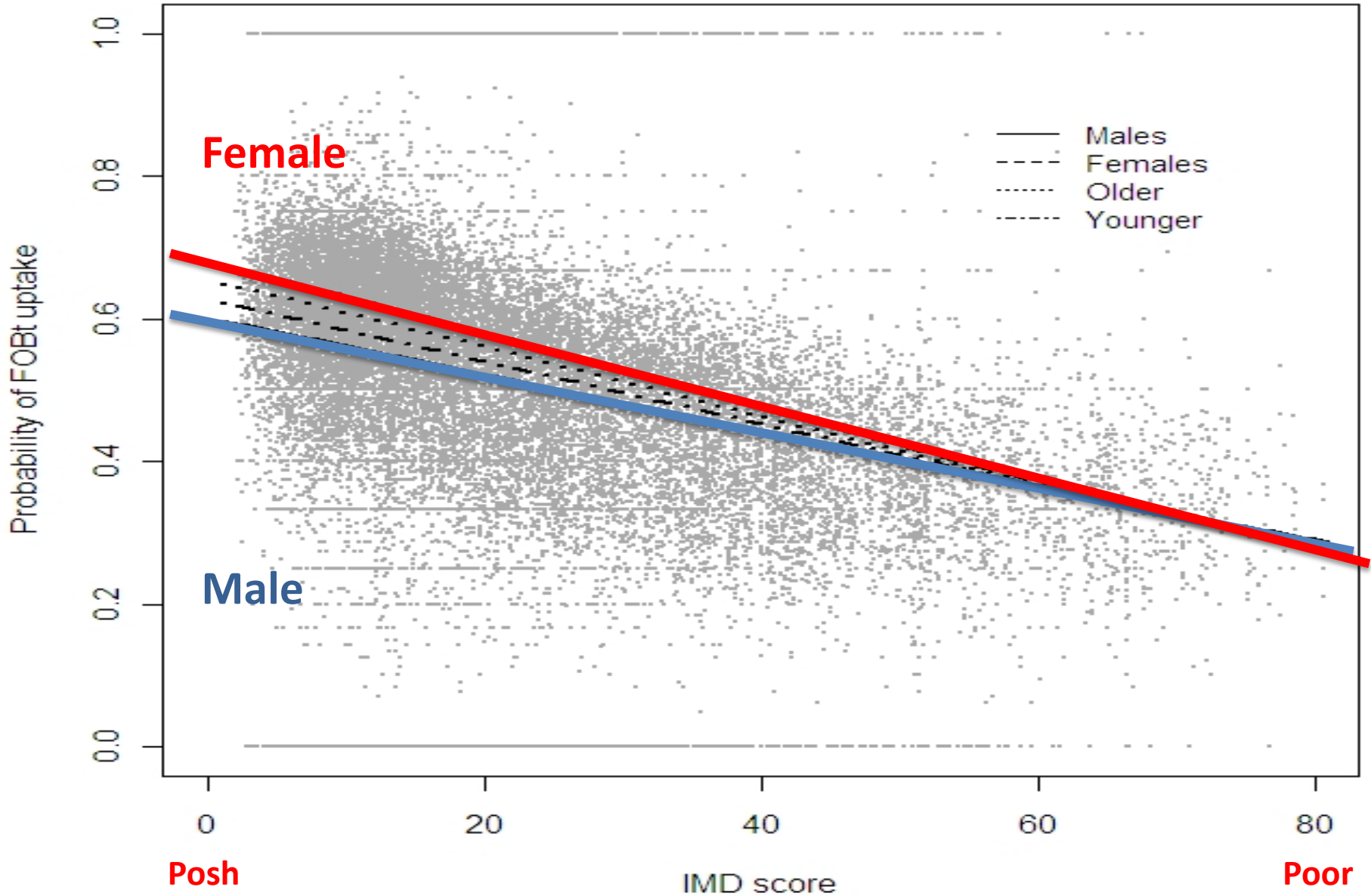
### Berkshire



# % Uptake - Influence of Deprivation

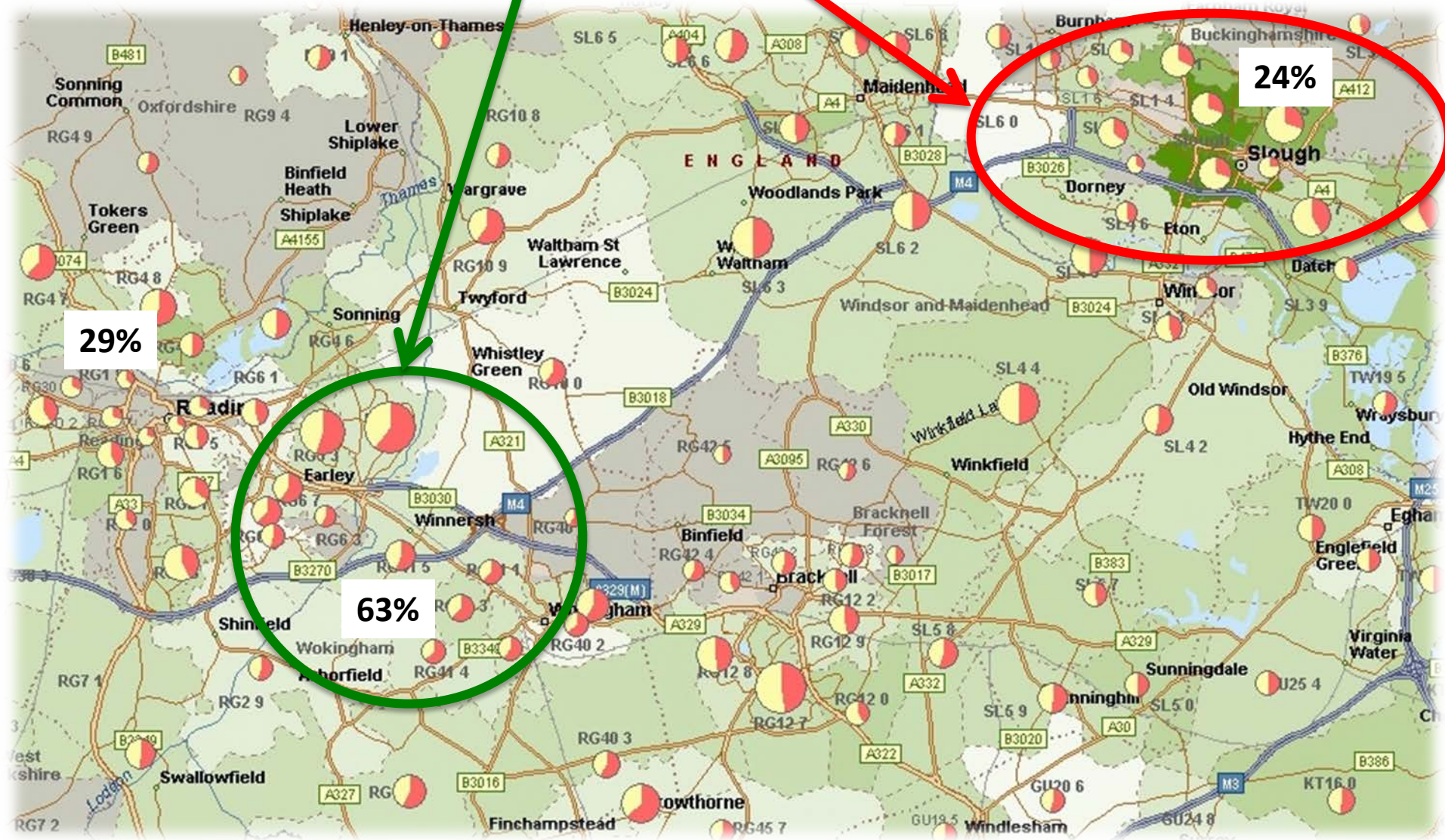
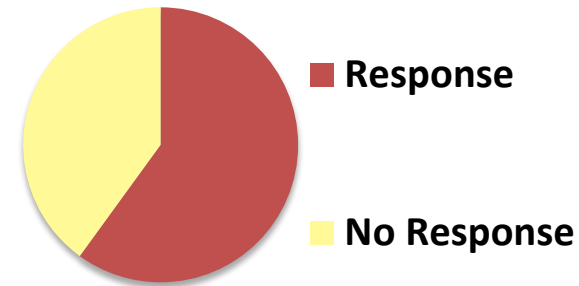
(BCSP - UCL Study)

von Wagner C, Baio G, Raine R et al. (2011) *Int J Epidemiol* 40, 712-718. 10.1093/ije/dyr008



Poor Uptake in **Slough**  
Better Uptake in **Reading**

Uptake

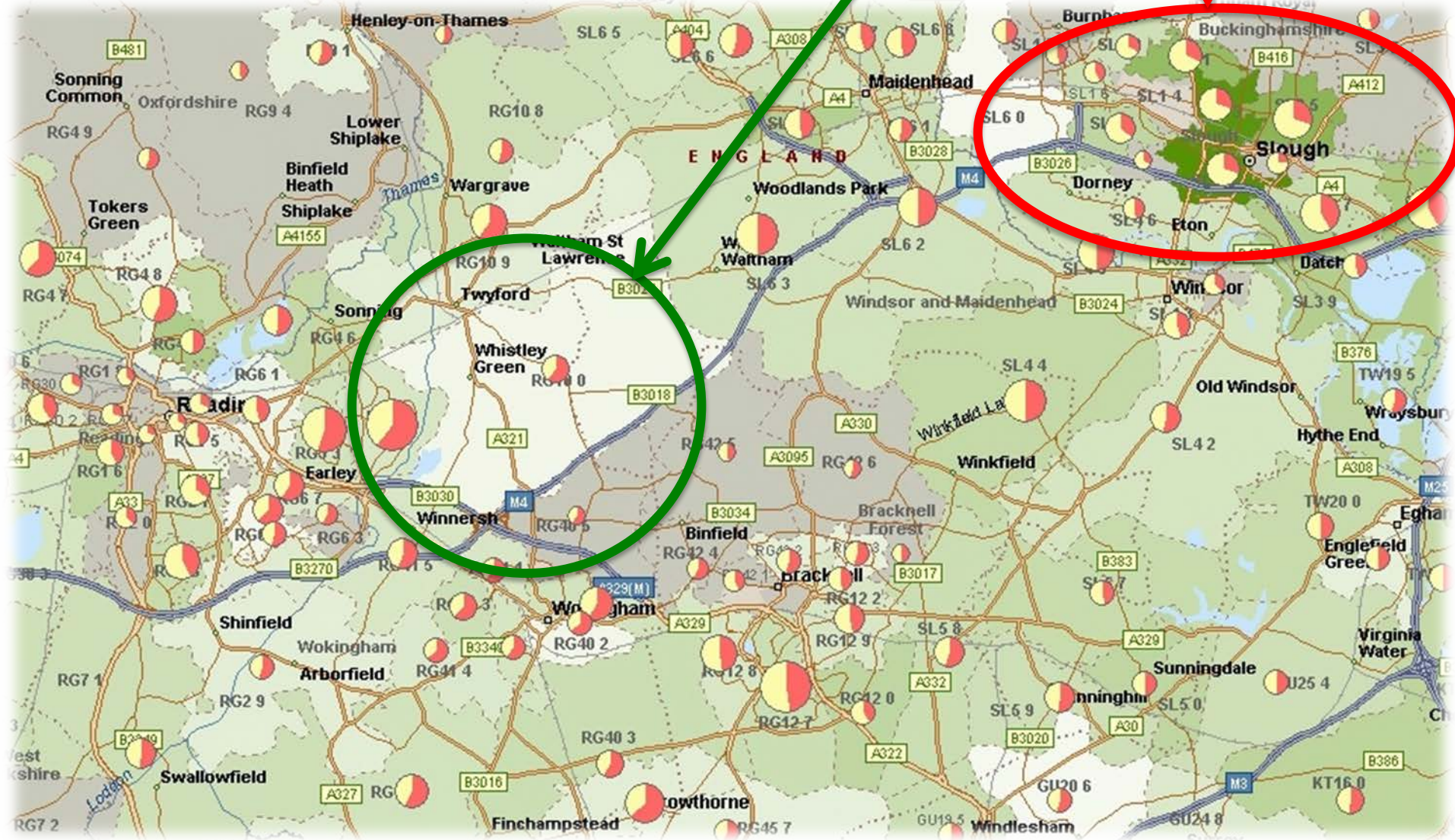




# Positivity

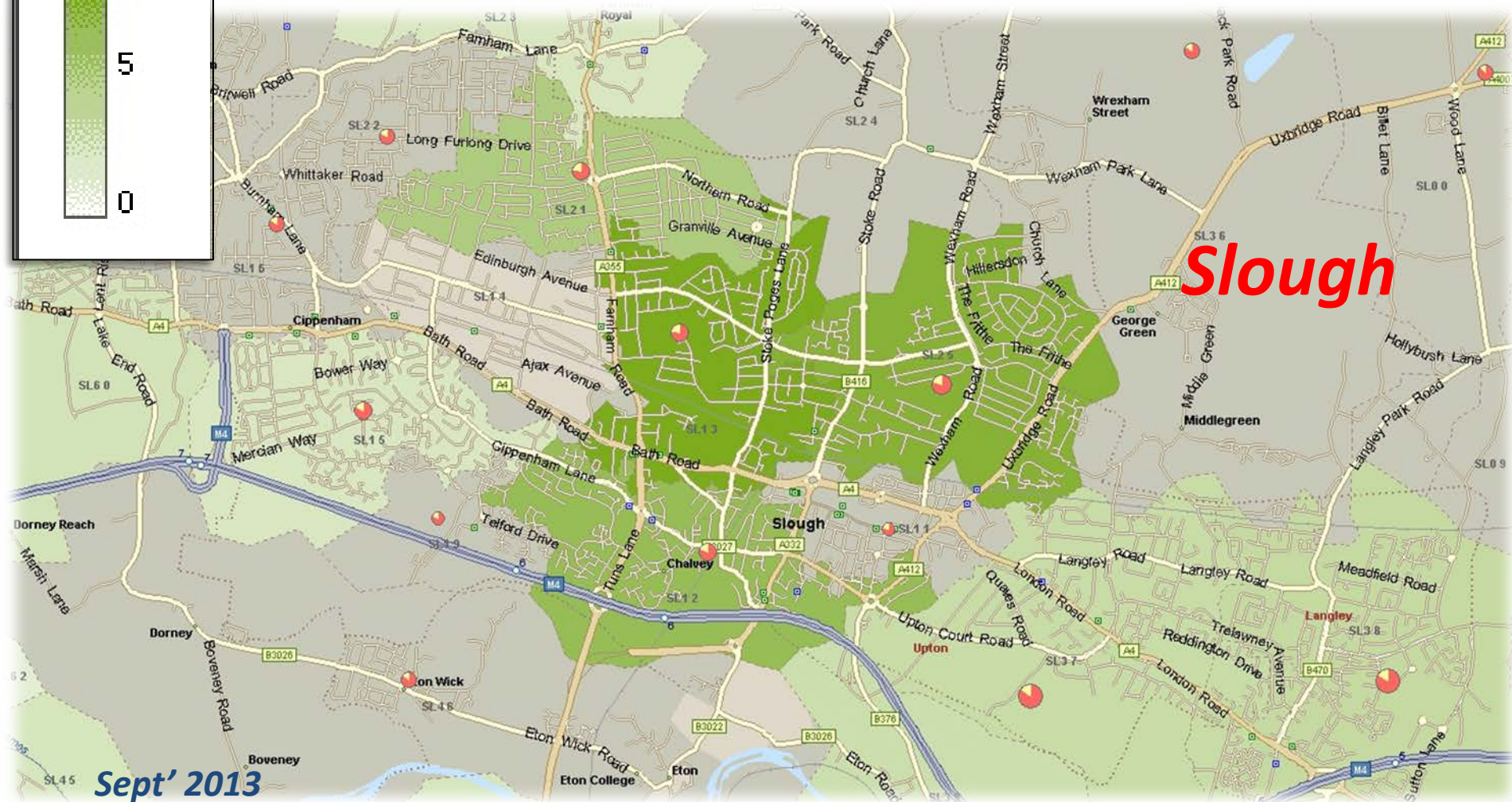
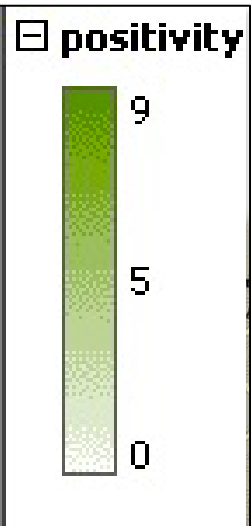


# Positivity in Reading and Slough



# Bowel Cancer Screening Programme – *S. Hub*

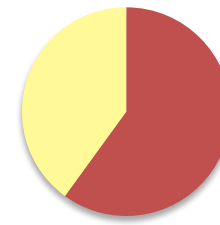
## *Uptake and Demographics* *By Postcode Sector*



Sept' 2013

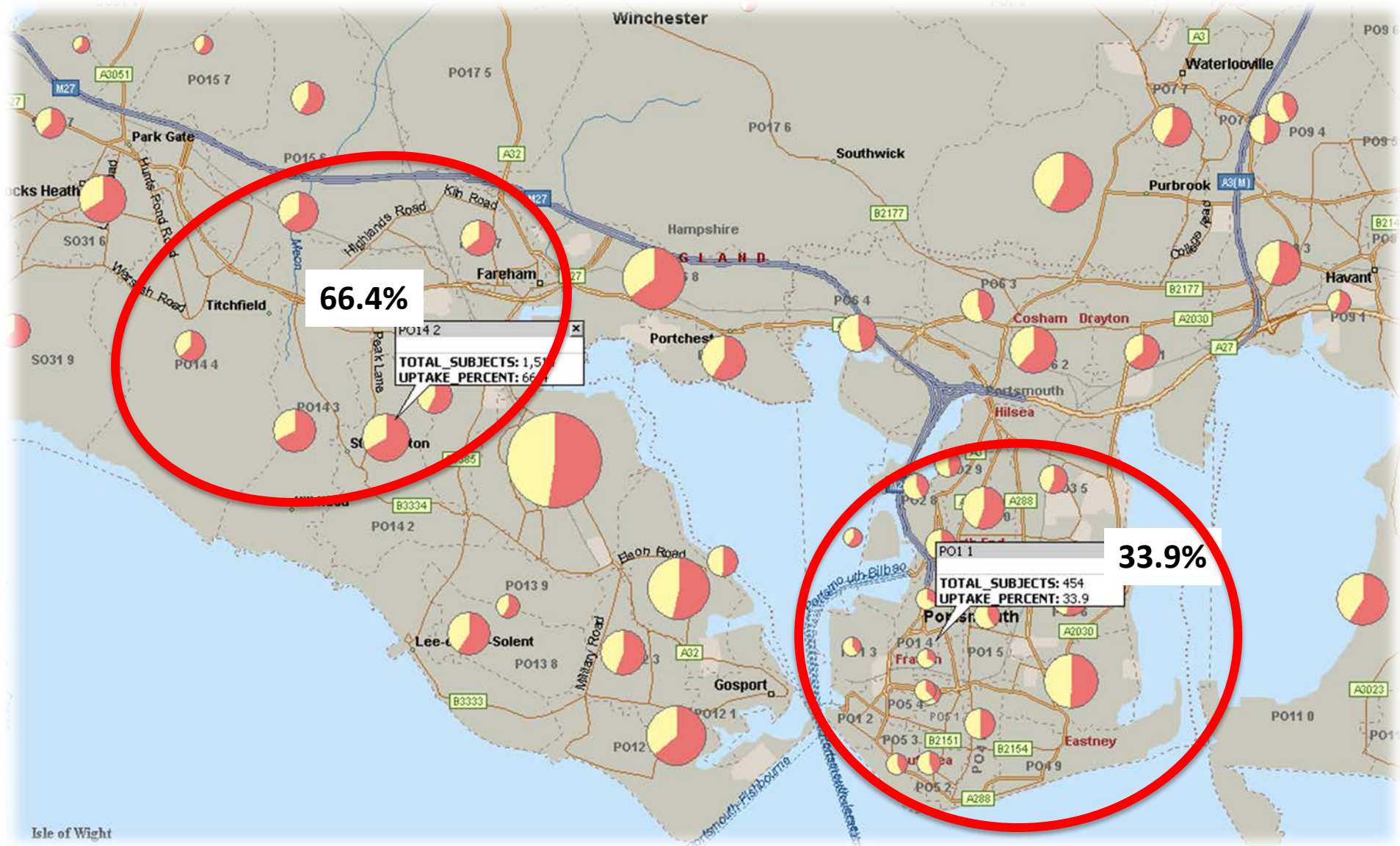
# Uptake in Portsmouth

## Uptake



■ Response

■ No Response



66.4%

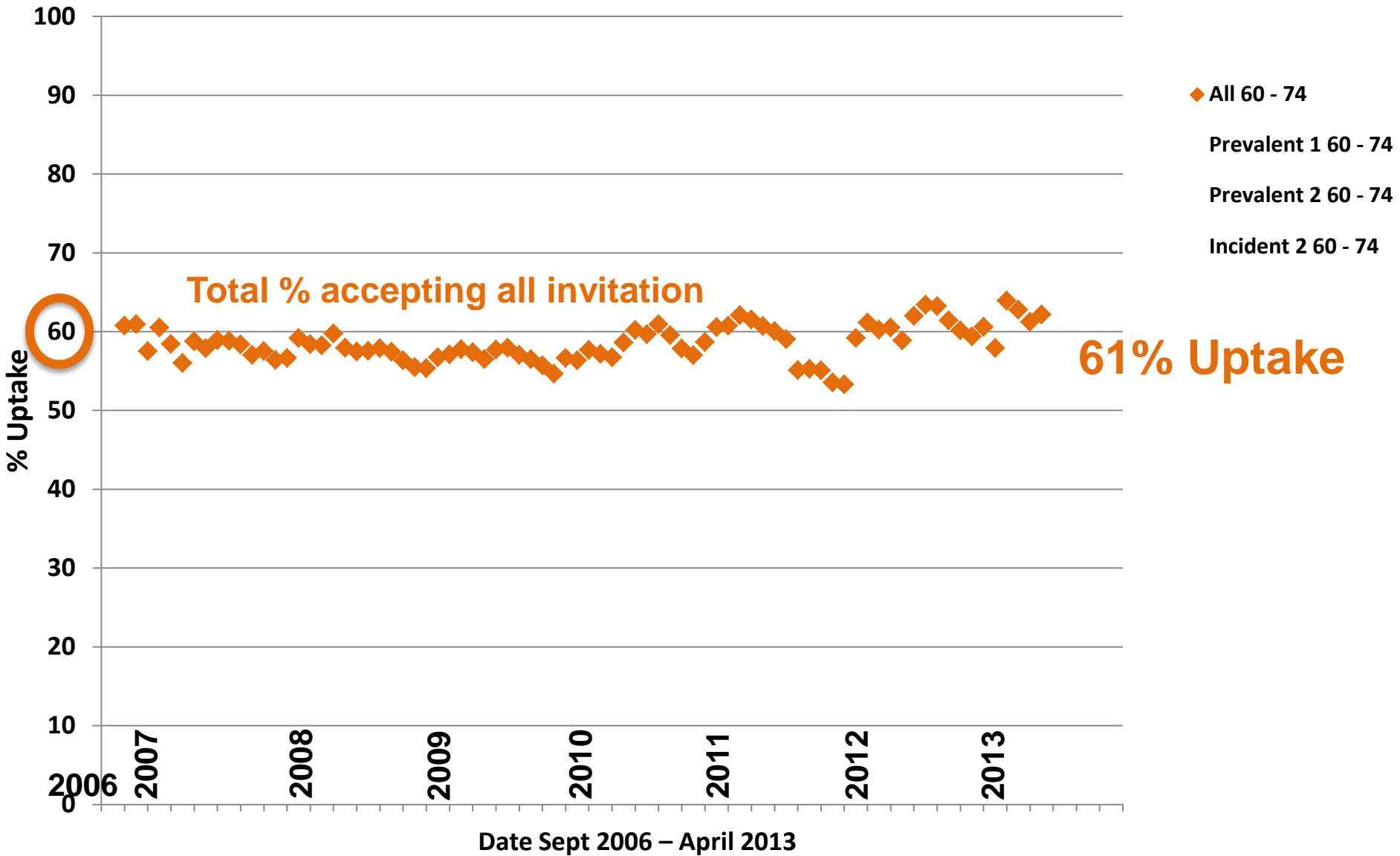
TOTAL SUBJECTS: 1,500  
UPTAKE PERCENT: 66.4%

33.9%

TOTAL SUBJECTS: 454  
UPTAKE PERCENT: 33.9%

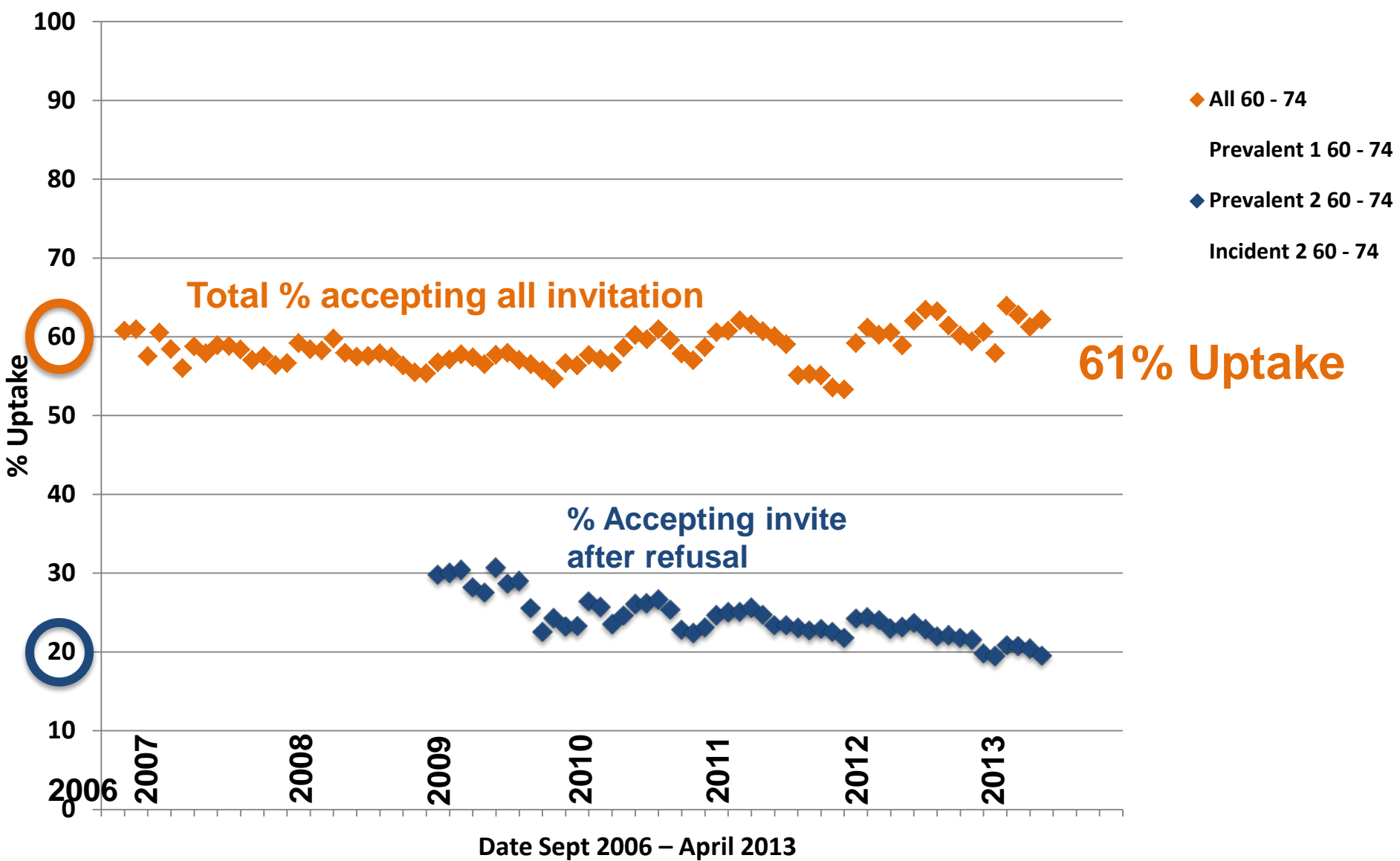
# %Uptake - gFOBT Screening

Monthly uptake 60 – 74 years



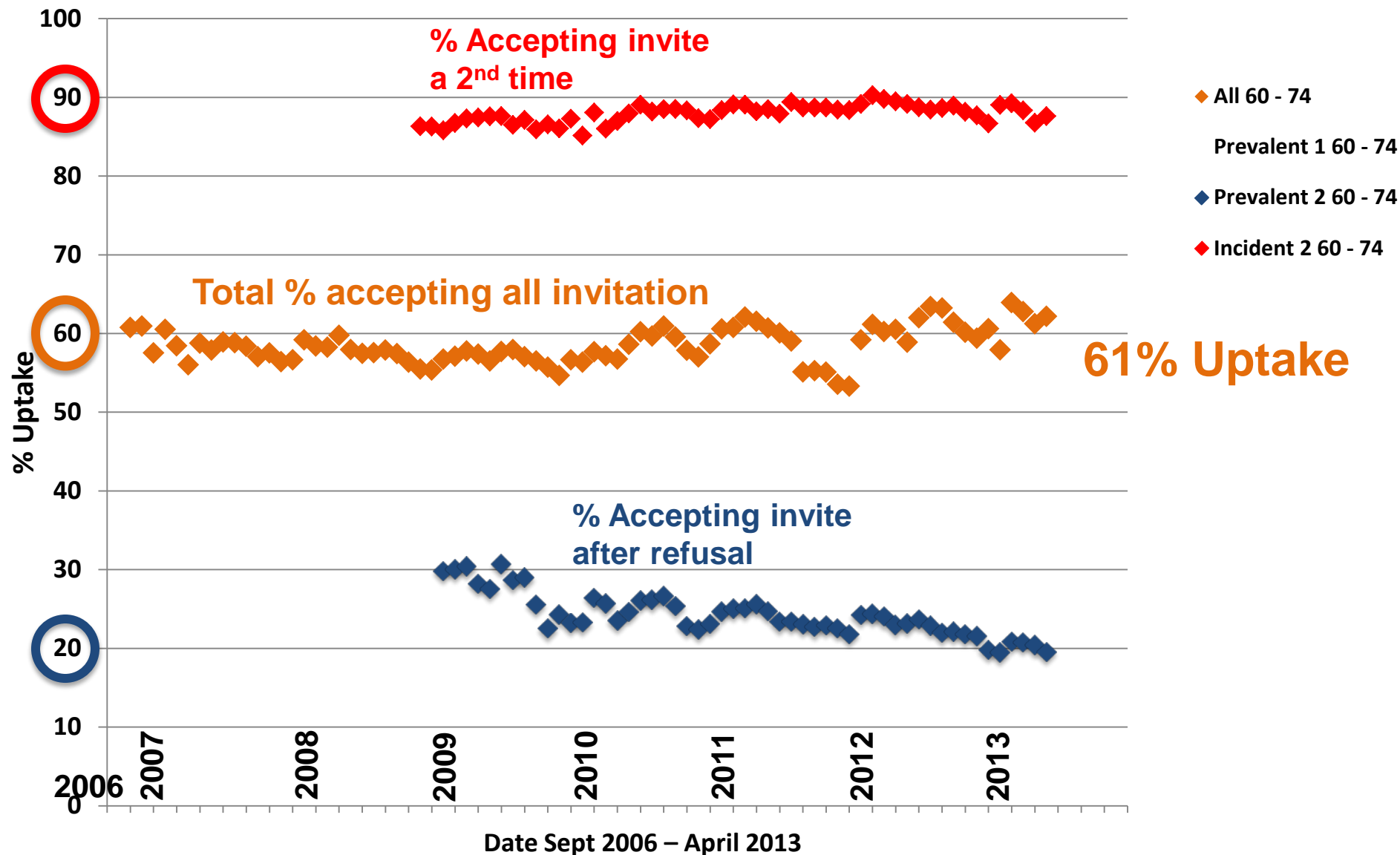
# %Uptake - gFOBT Screening

Monthly uptake 60 – 74 years



# %Uptake - gFOBT Screening

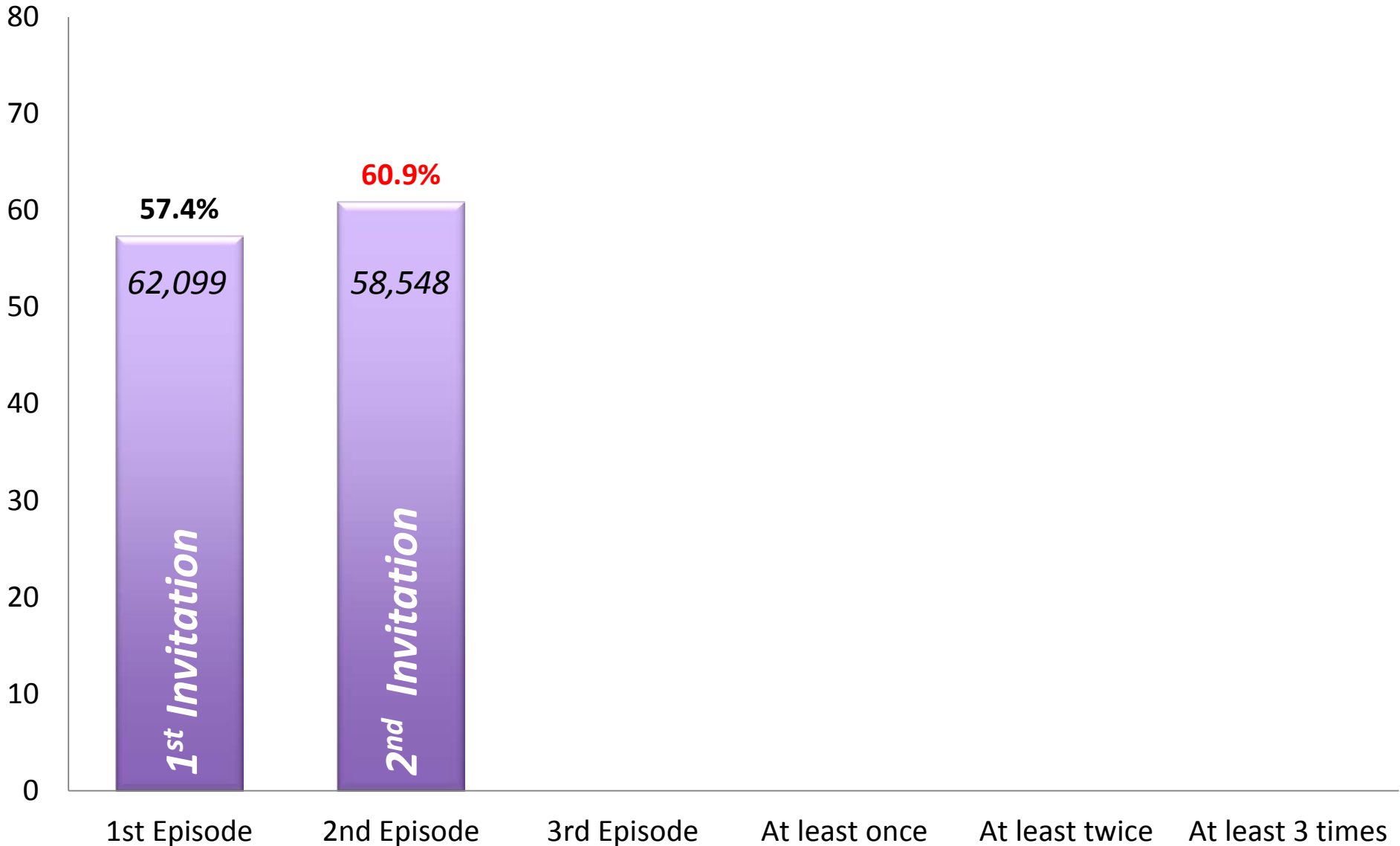
Monthly uptake 60 – 74 years



# *% Uptake - 3 Episodes (E1, E2 & E3)*

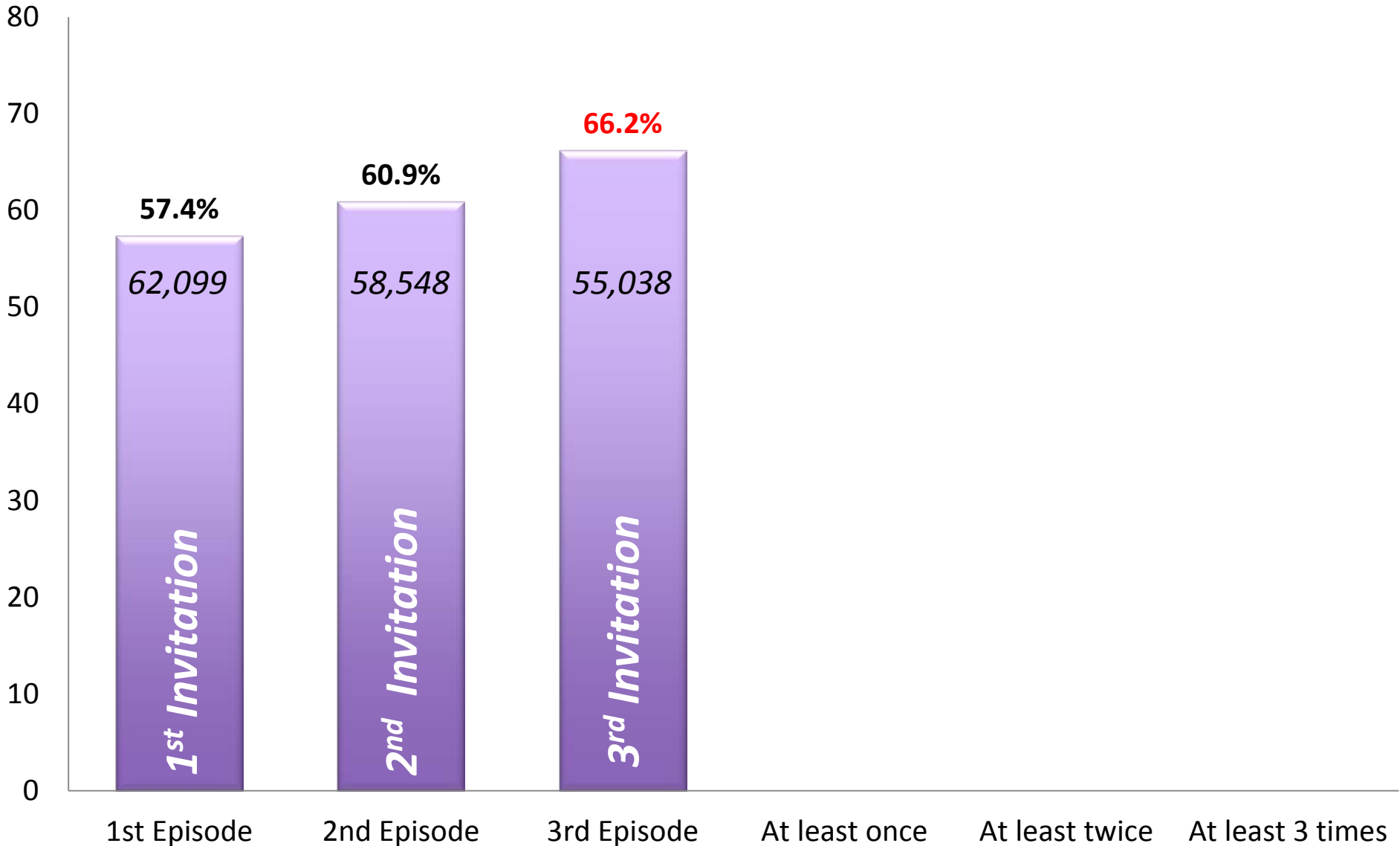


# % Uptake - 3 Episodes (E1, E2 & E3)



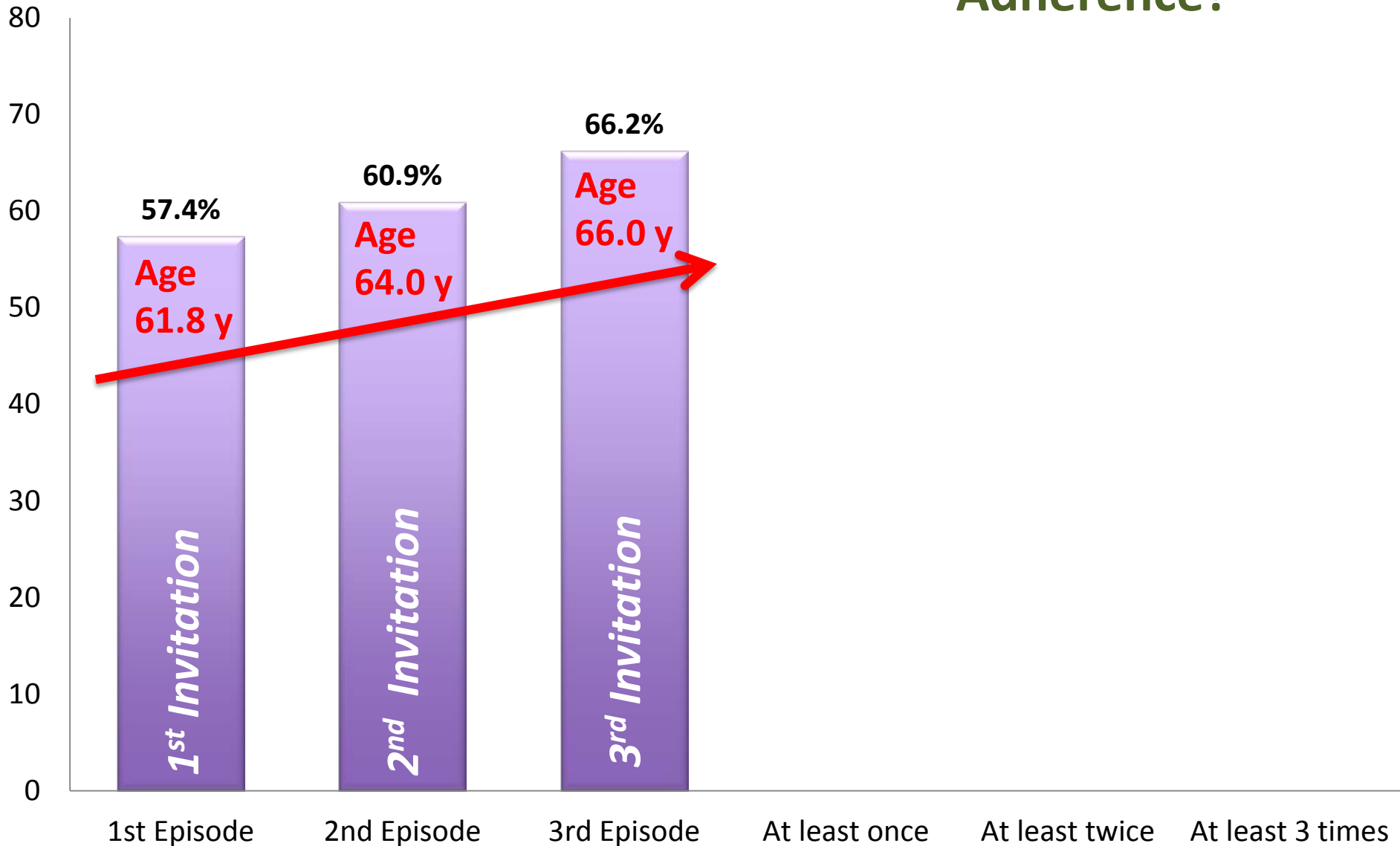


# % Uptake - 3 Episodes (E1, E2 & E3)

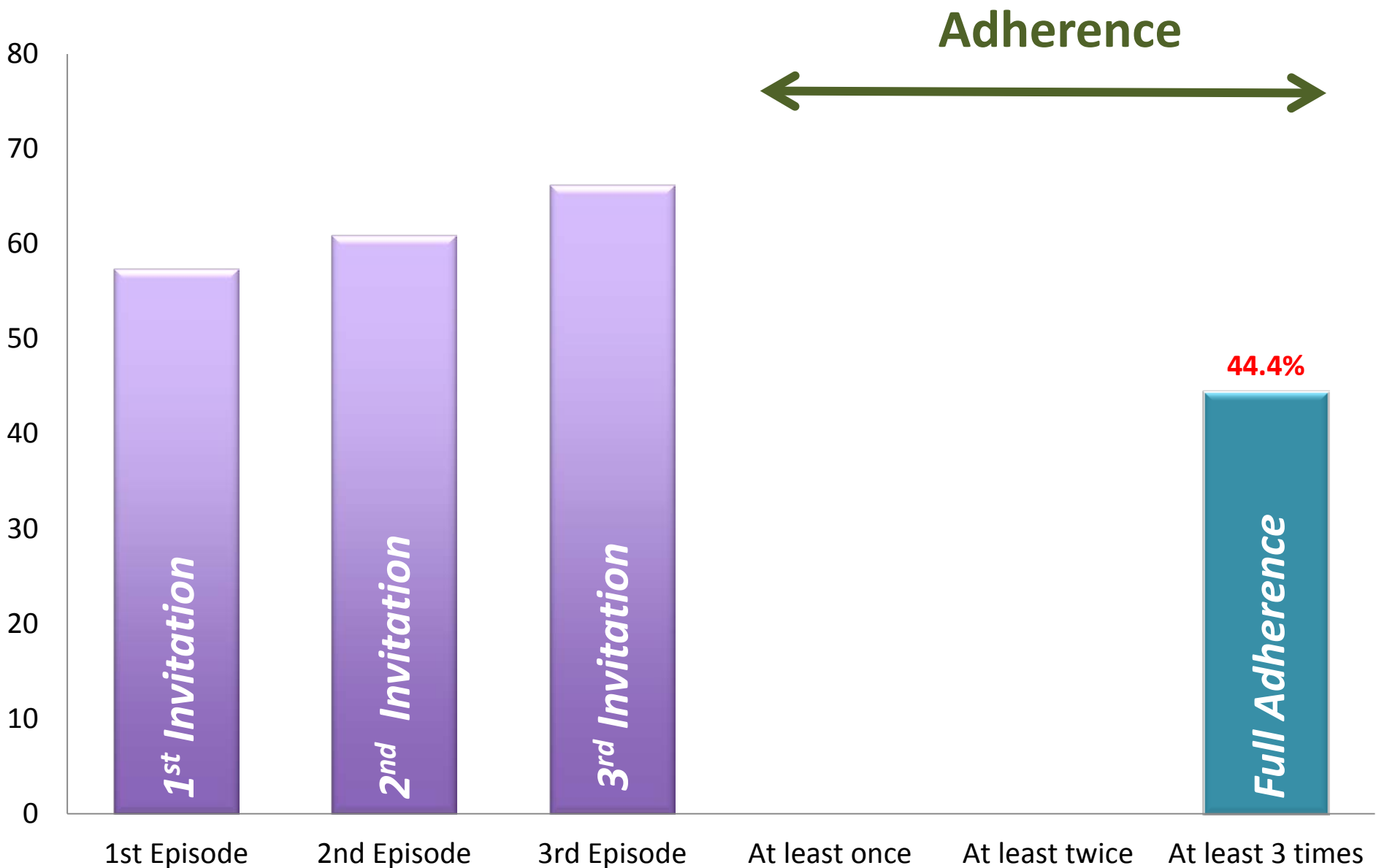


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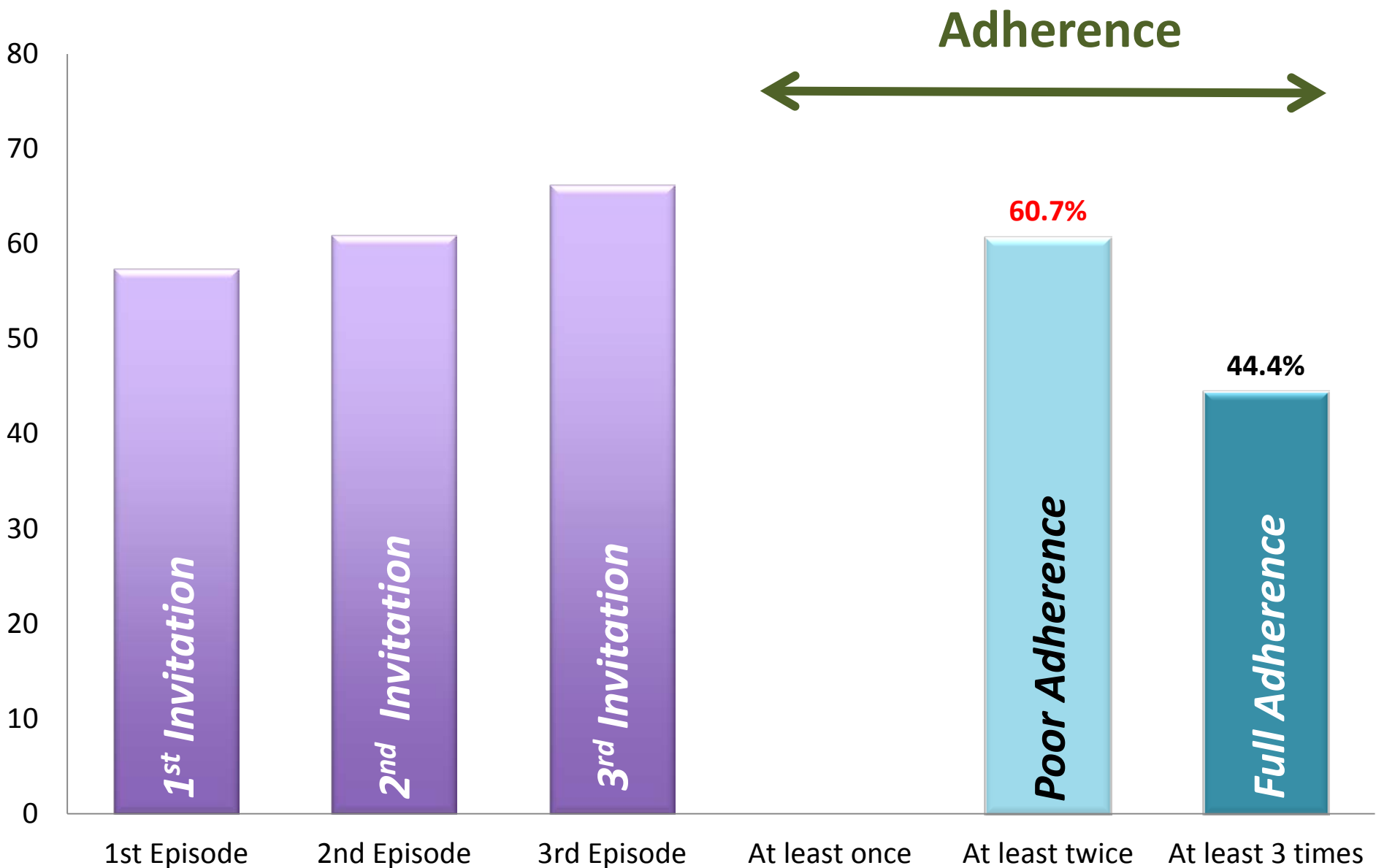
Adherence?



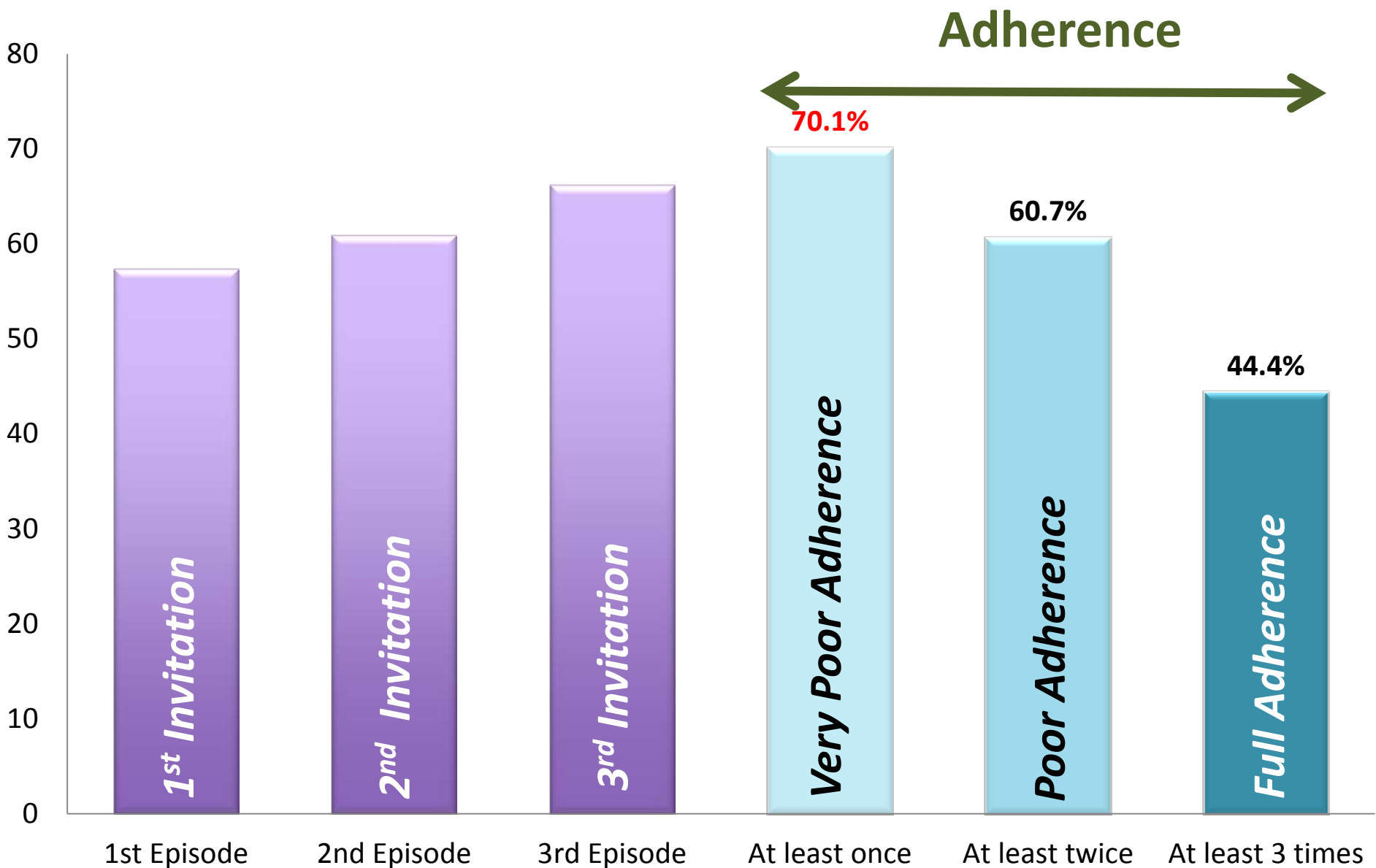
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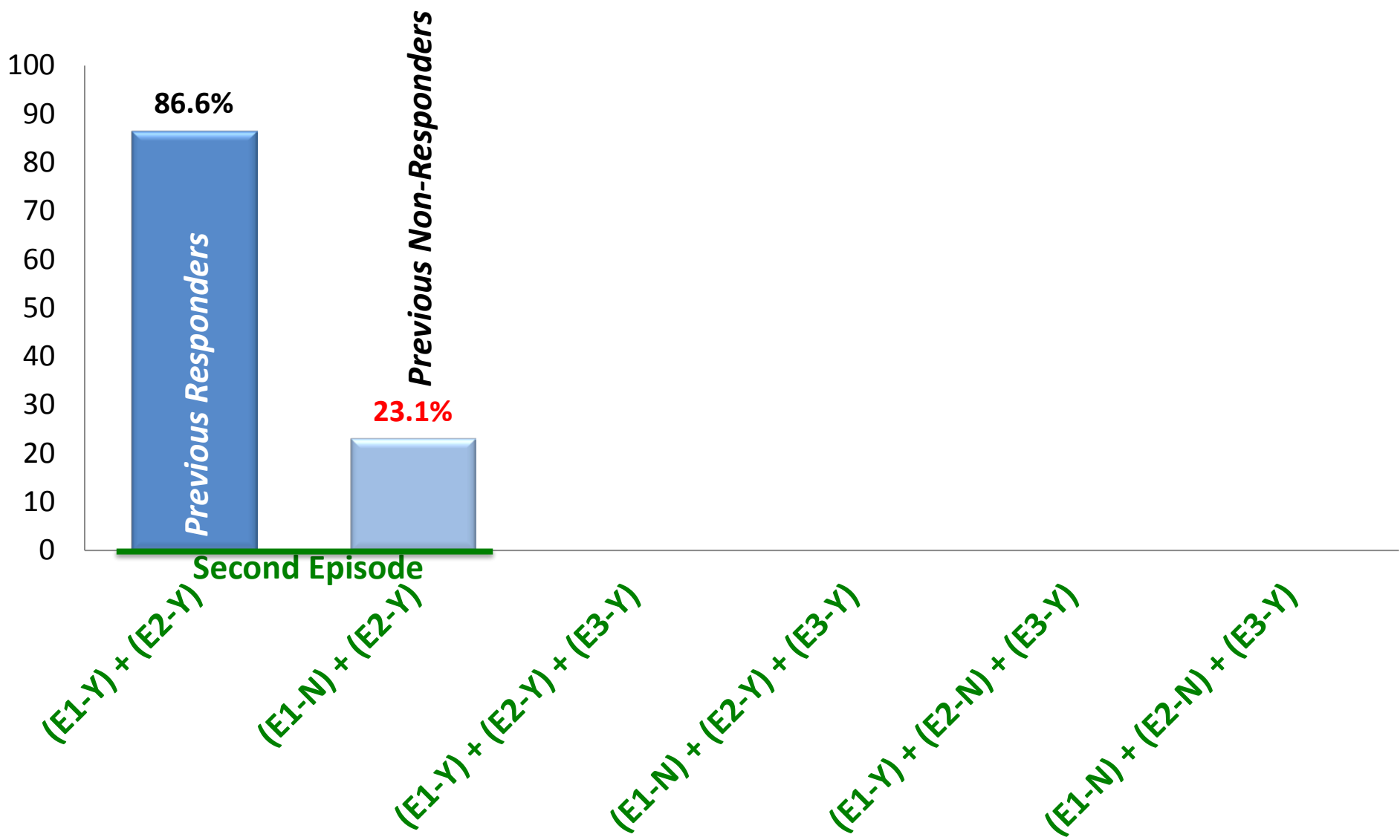
# Patterns & Predictions

*% Uptake - 3 Episodes (E1, E2 & E3)*



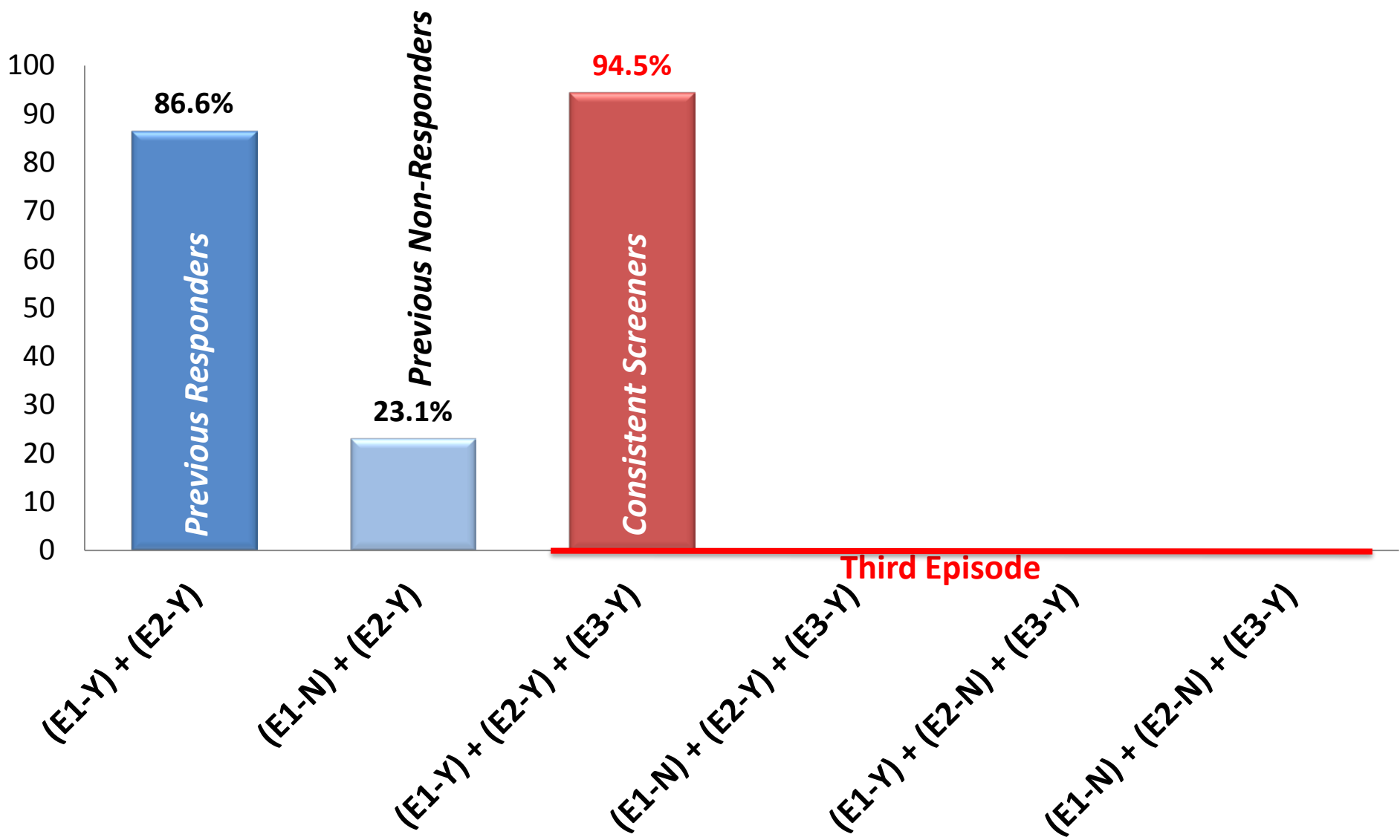
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# Patterns & Predictions

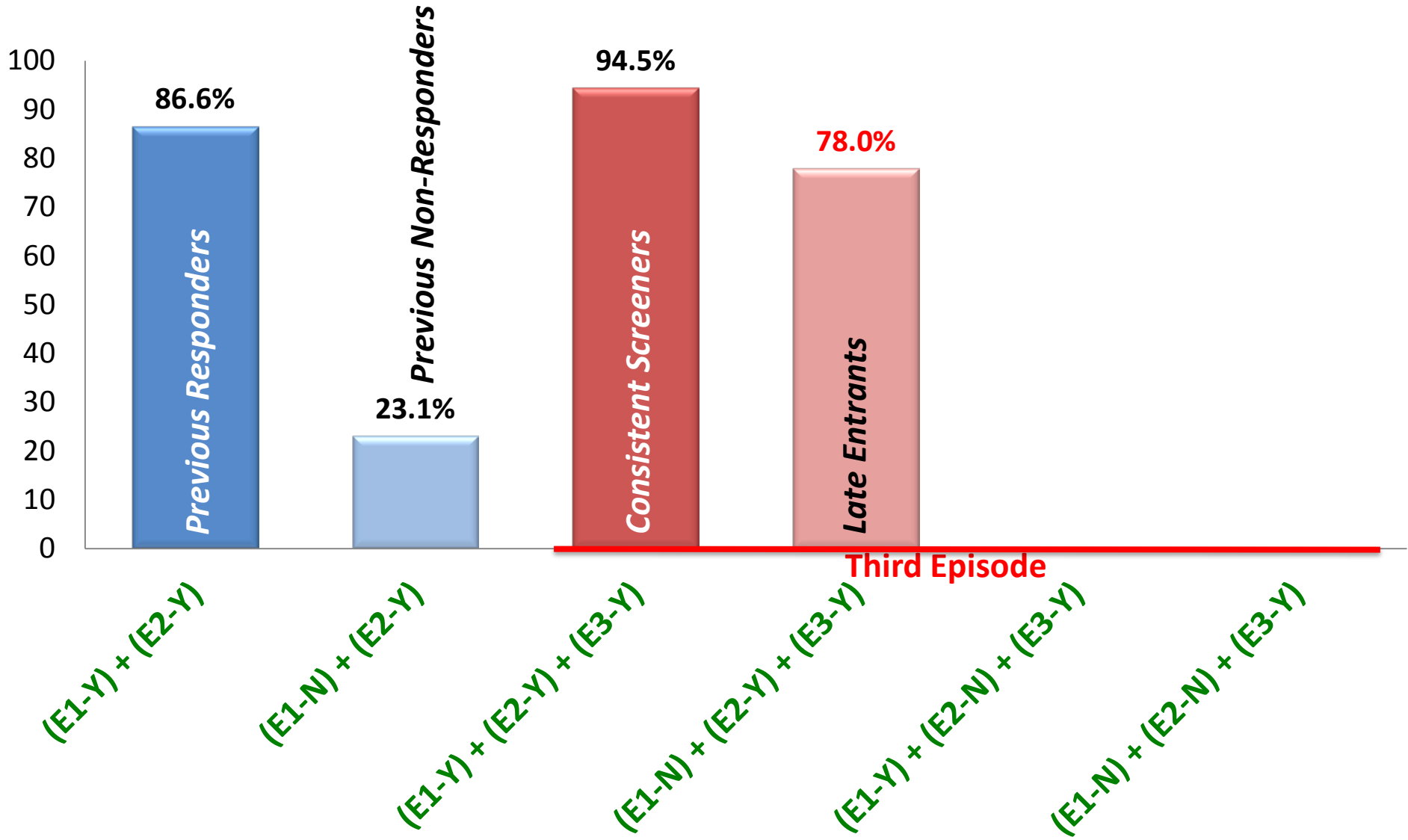
% Uptake - 3 Episodes (E1, E2 & E3)





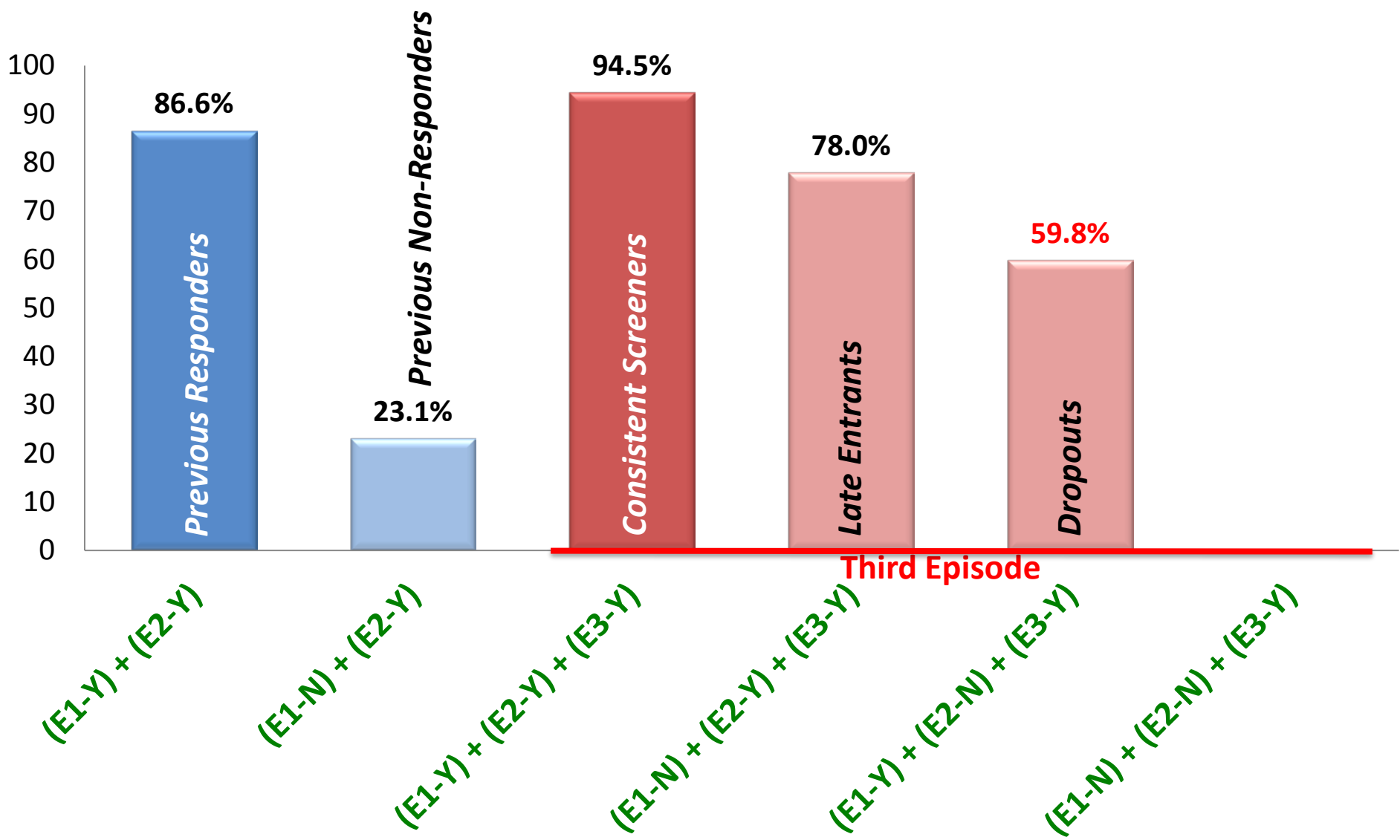
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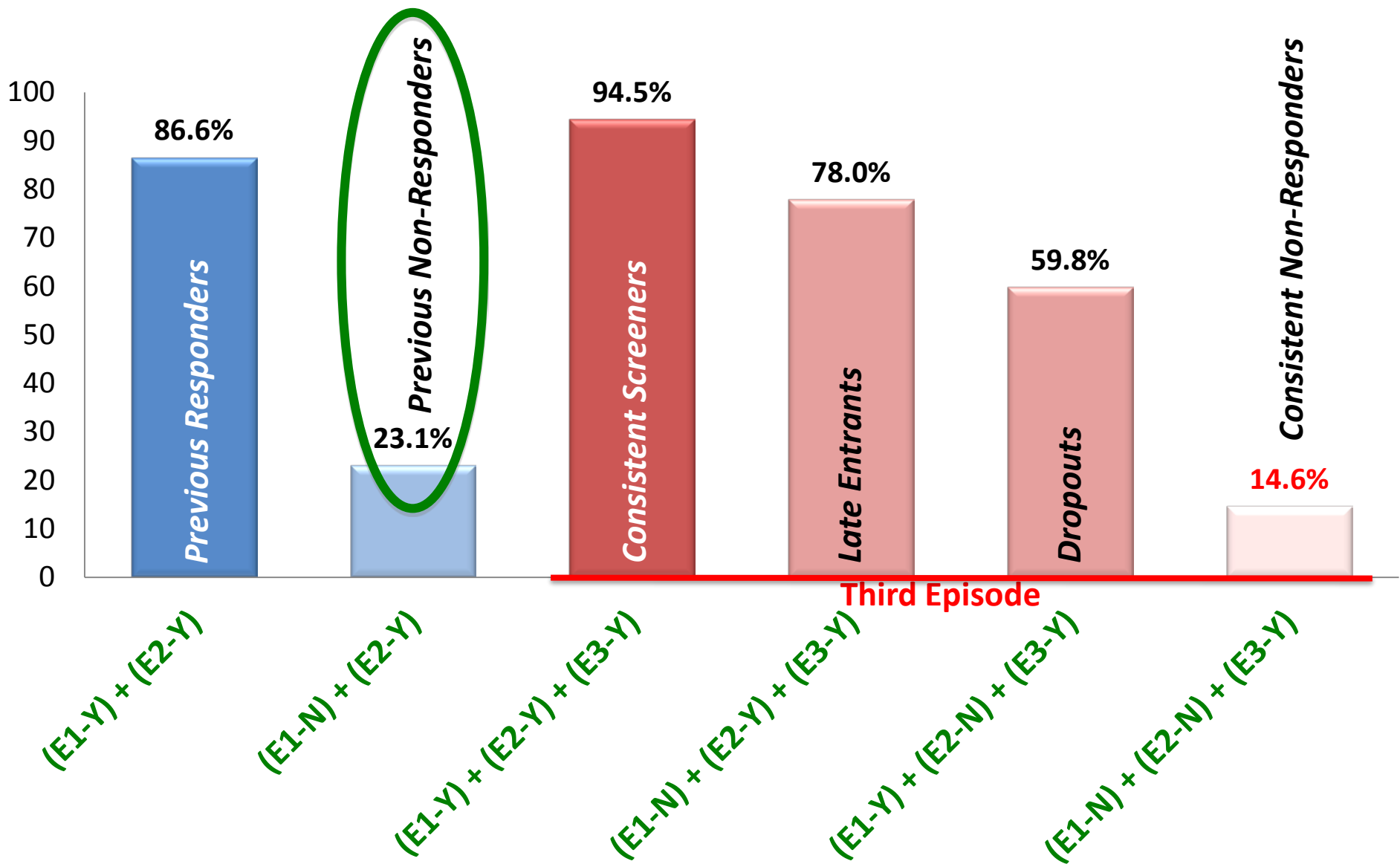
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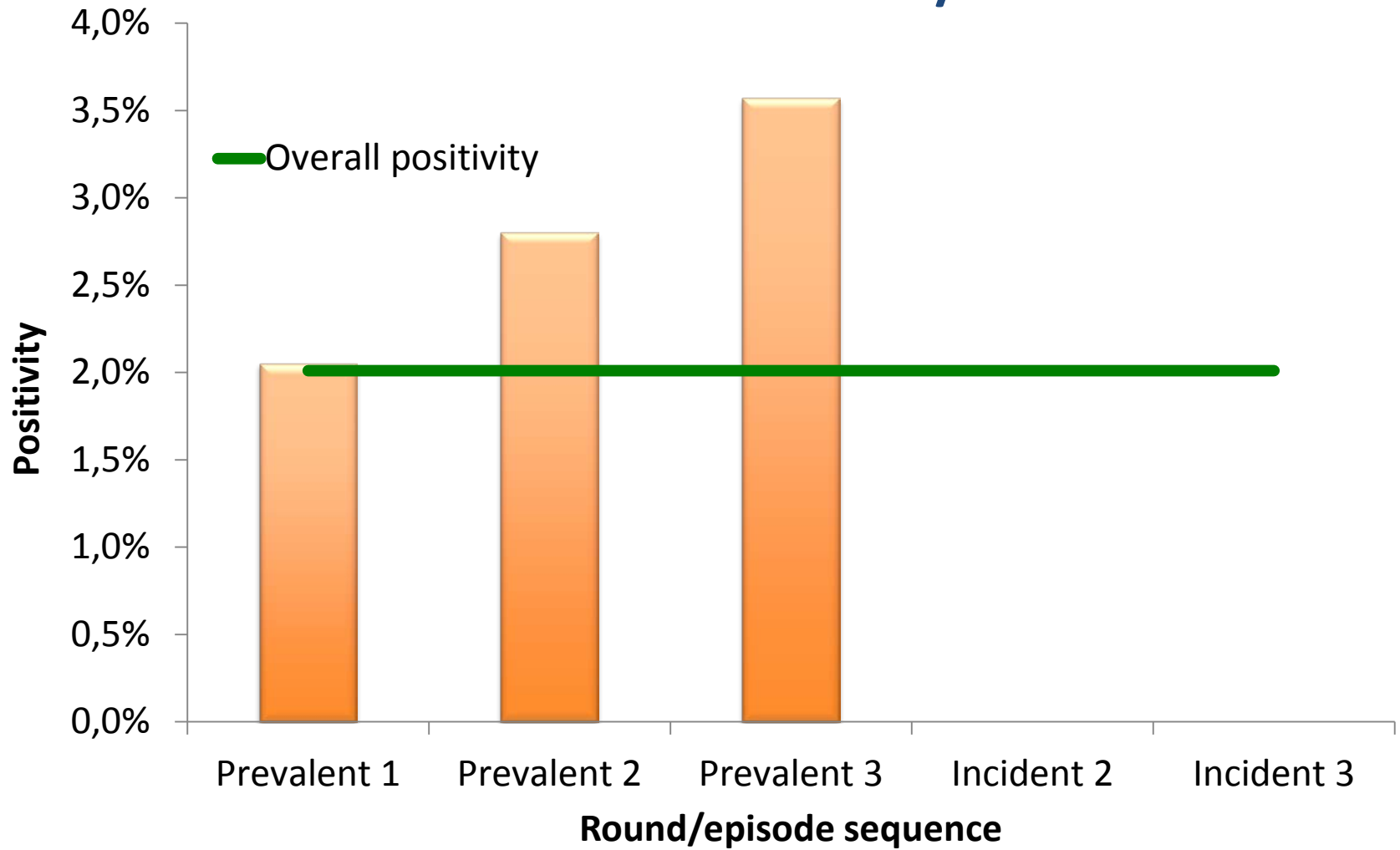
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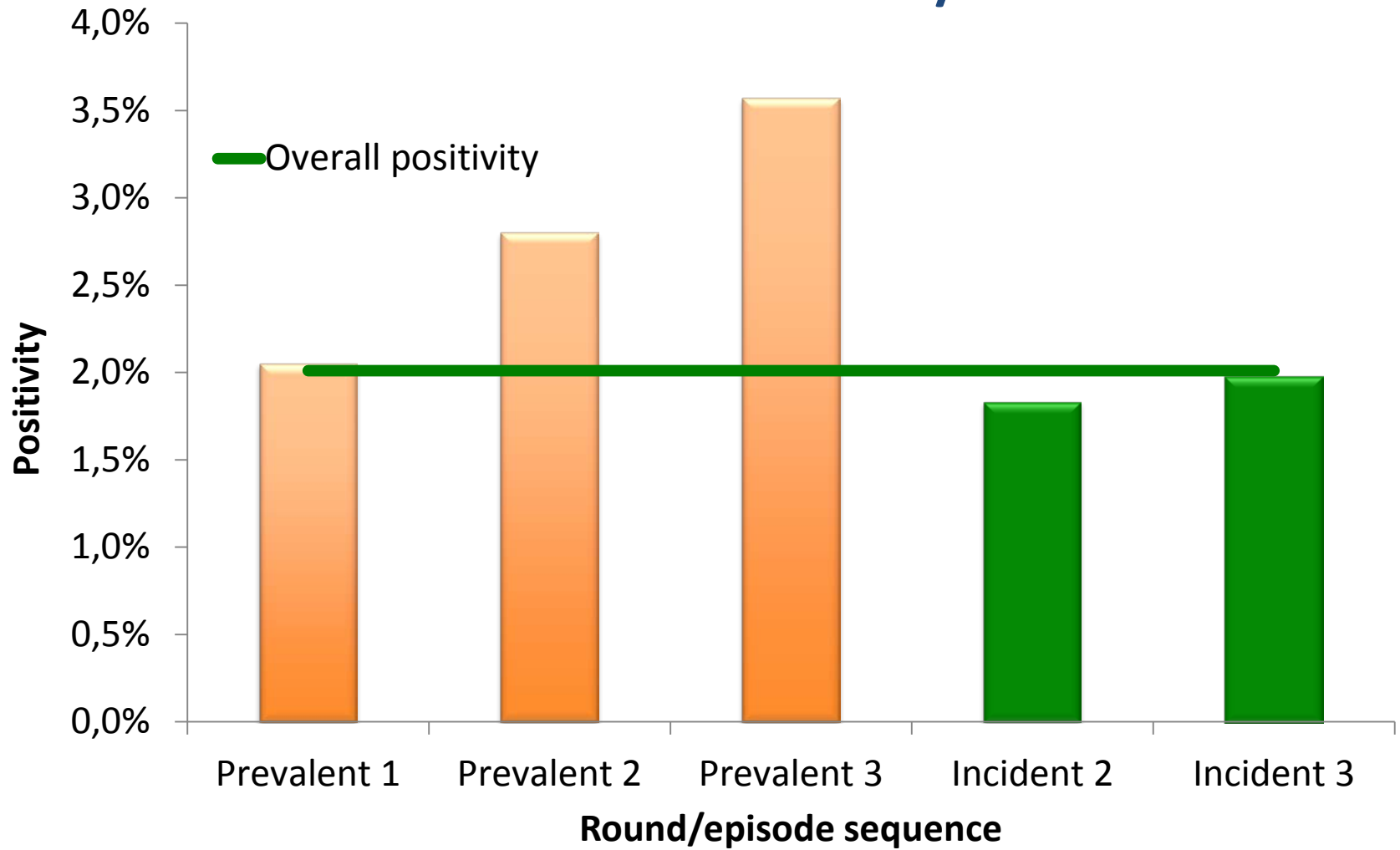
# Positivity by Screening Episode

## Southern Hub – 2012/13



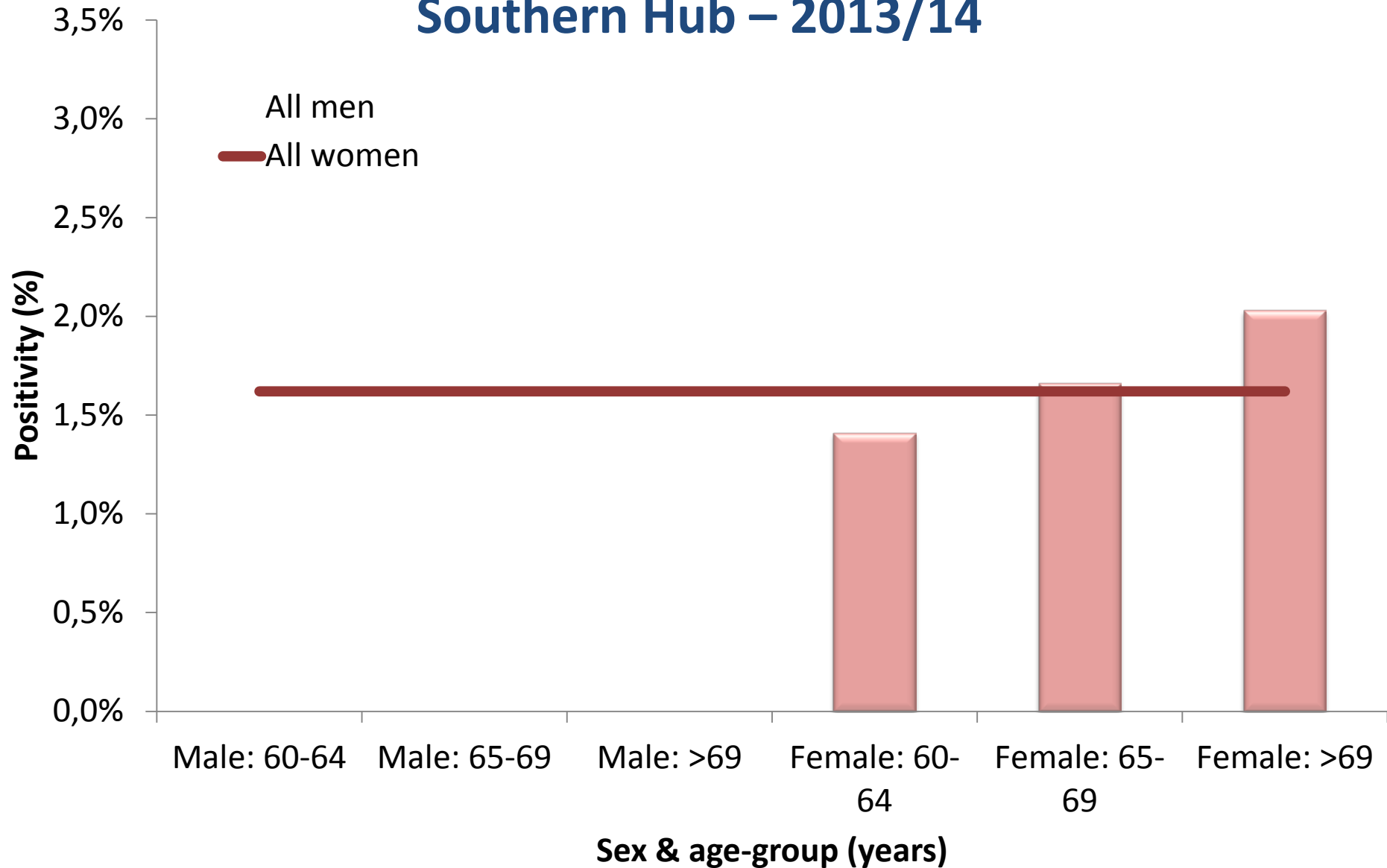
# Positivity by Screening Episode

## Southern Hub – 2012/13



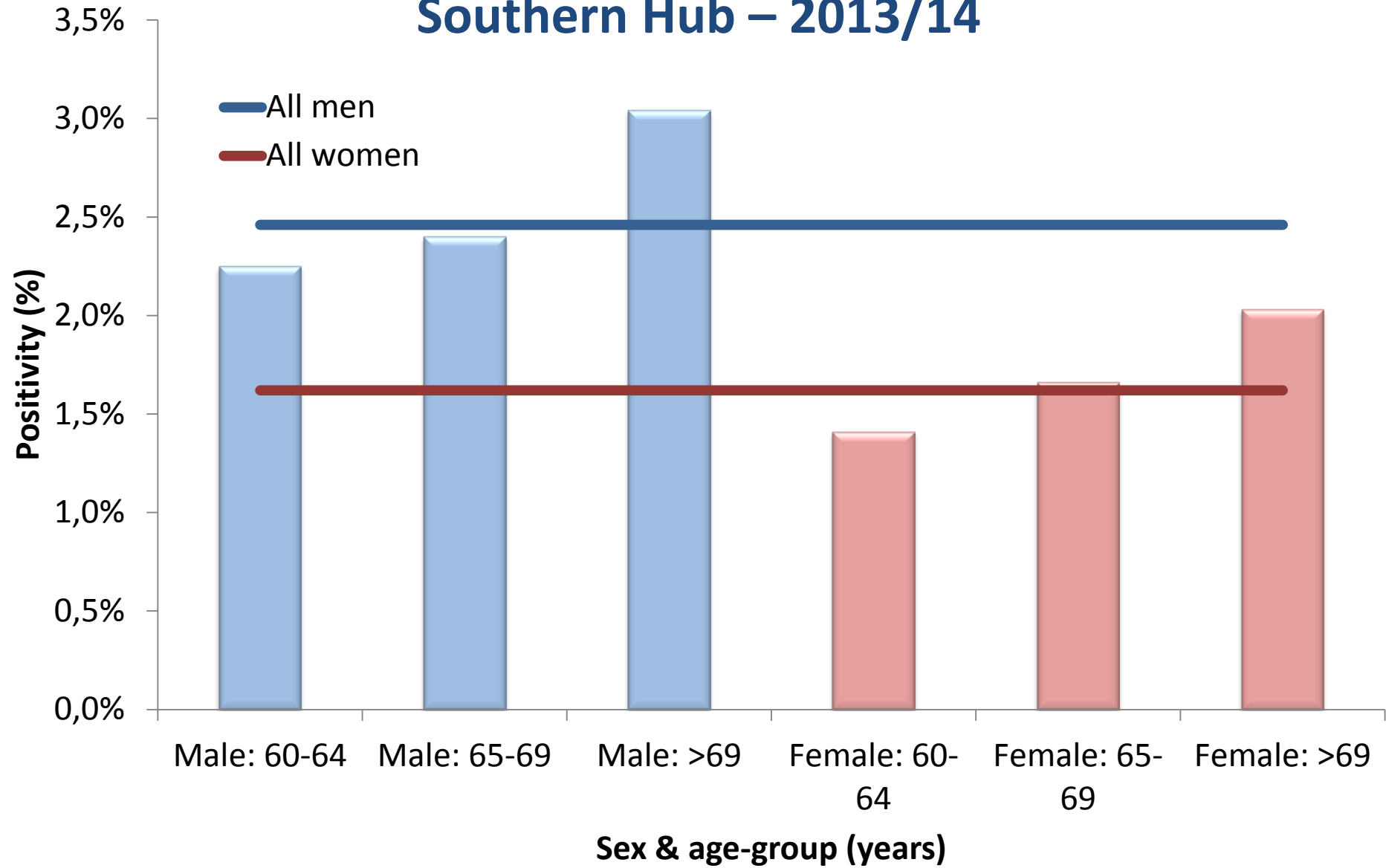
# Positivity by Age & Sex

## Southern Hub – 2013/14



# Positivity by Age & Sex

## Southern Hub – 2013/14



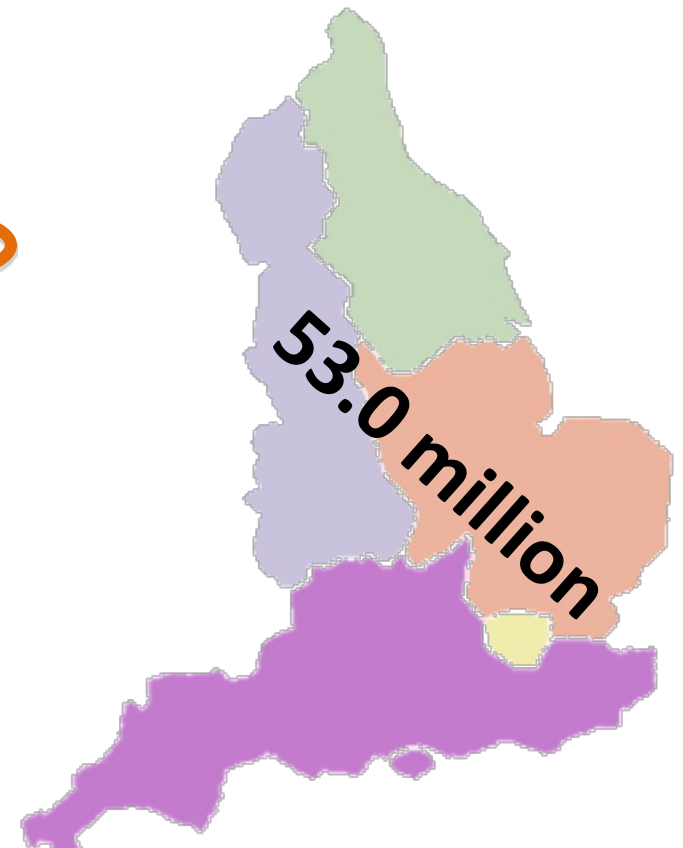
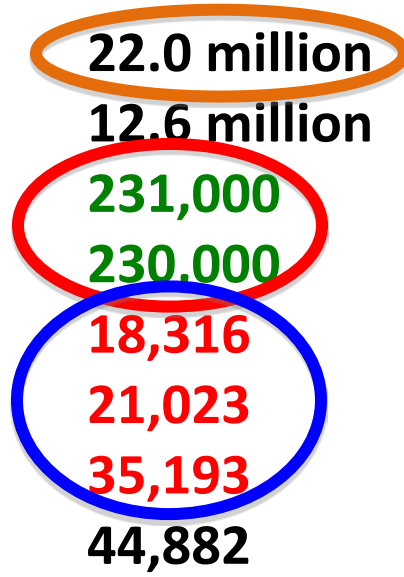
# Headline Statistics – England

## Diagnostic Test Carried Out

- Colonoscopy 230,161
  - Flexible Sigmoidoscopy 10,550
  - Barium Enema 1,053
  - **CT colonography 8,560**
  - Abdominal CT 1,382
  - Limited Colonoscopy 1,358
  - Scan (x-ray) 4
- Total 253,068**

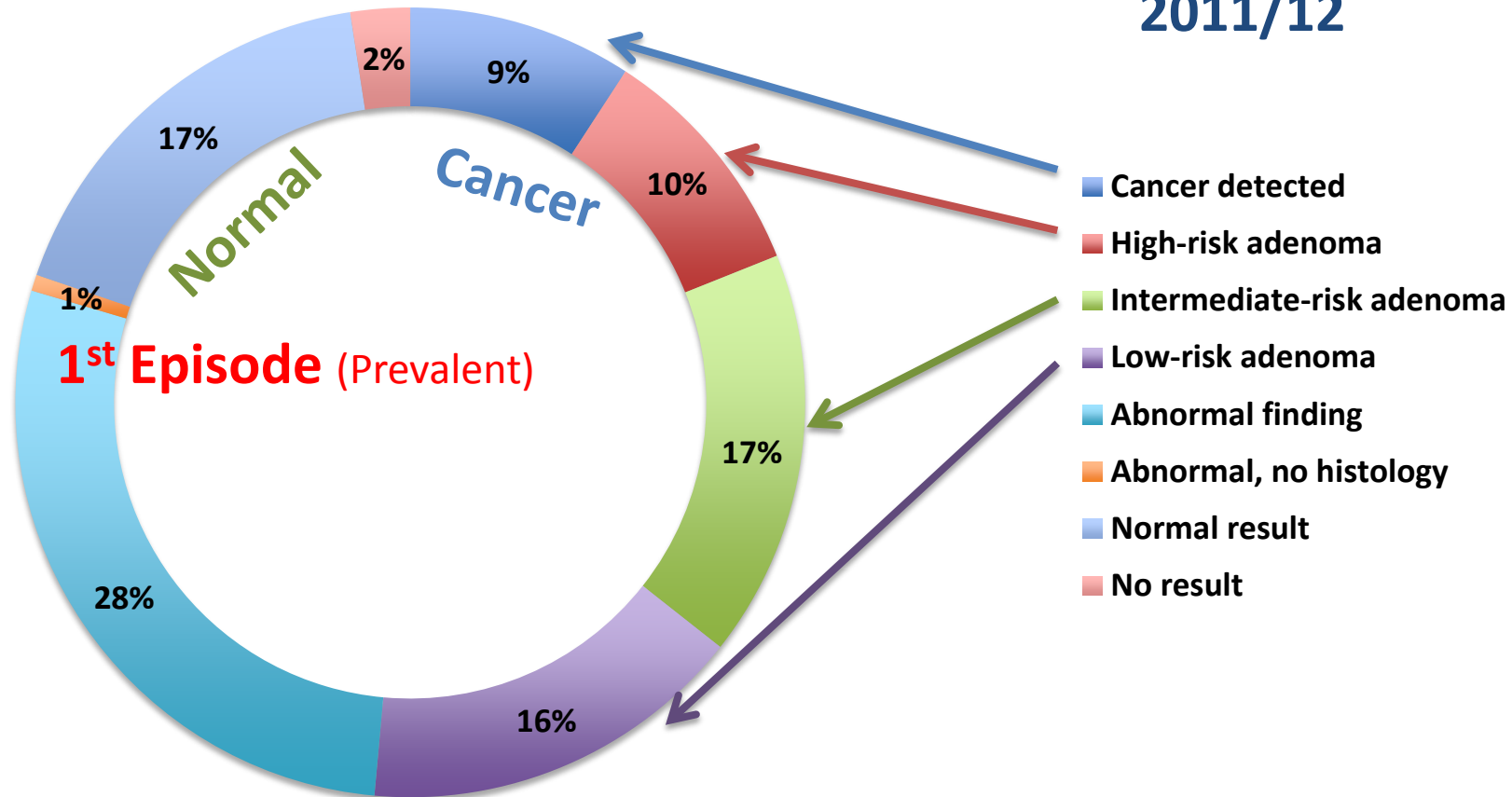
## Story so far (Feb 2014)...

- Total Test Kits Out
- Test Kits In (59%)
- Positive Screen (2.0%)
- Colonoscopies
- Cancers
- High-Risk Adenomas
- IR Adenomas
- LR Adenomas





# England Screening Outcomes Episode 1 2011/12



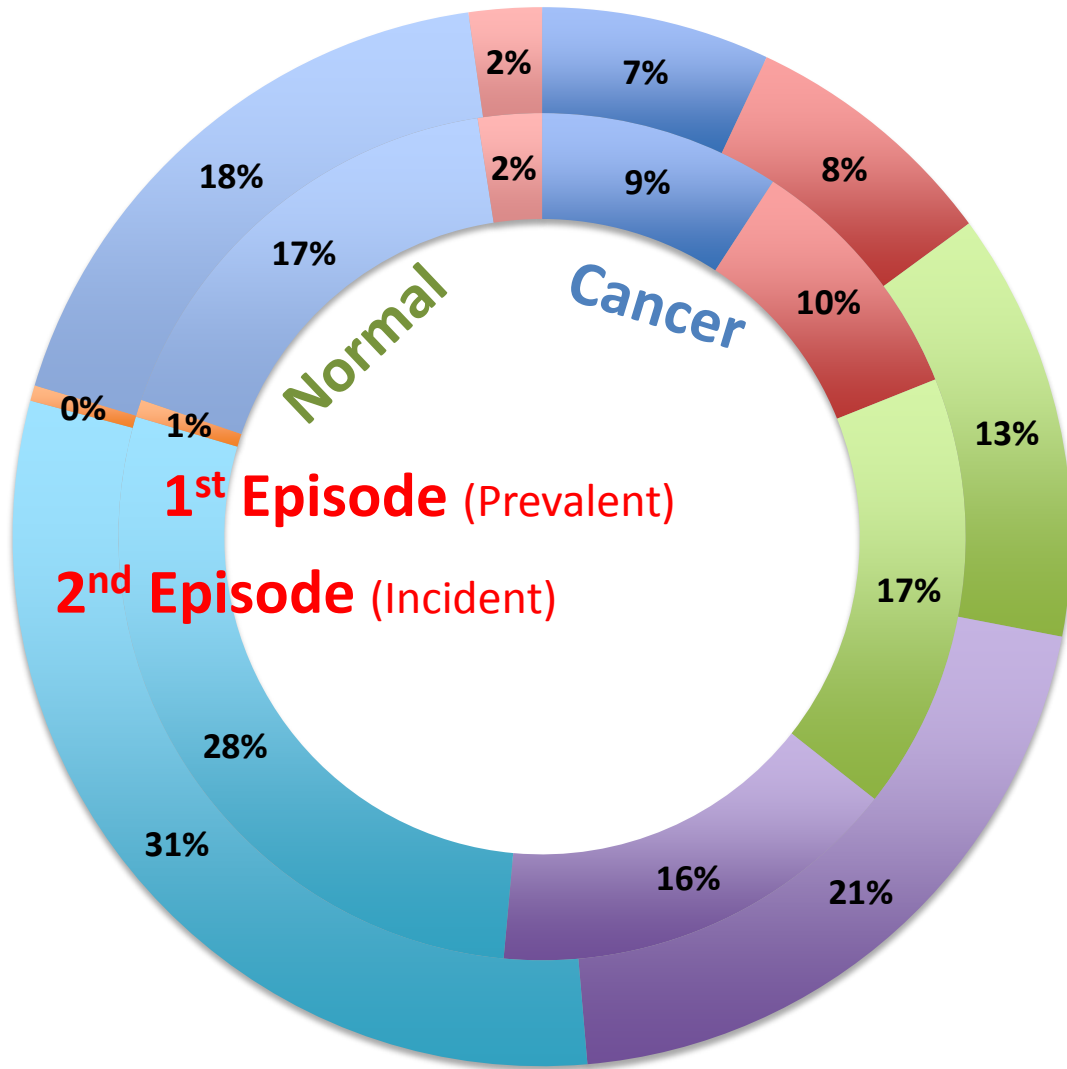
## BSG Guidelines

**High Risk:** -  $\geq 5$  adenomas /  $\geq 2$  cm adenoma

**Intermediate Risk:** 3/4 small adenomas /  $\geq 1$  cm adenoma

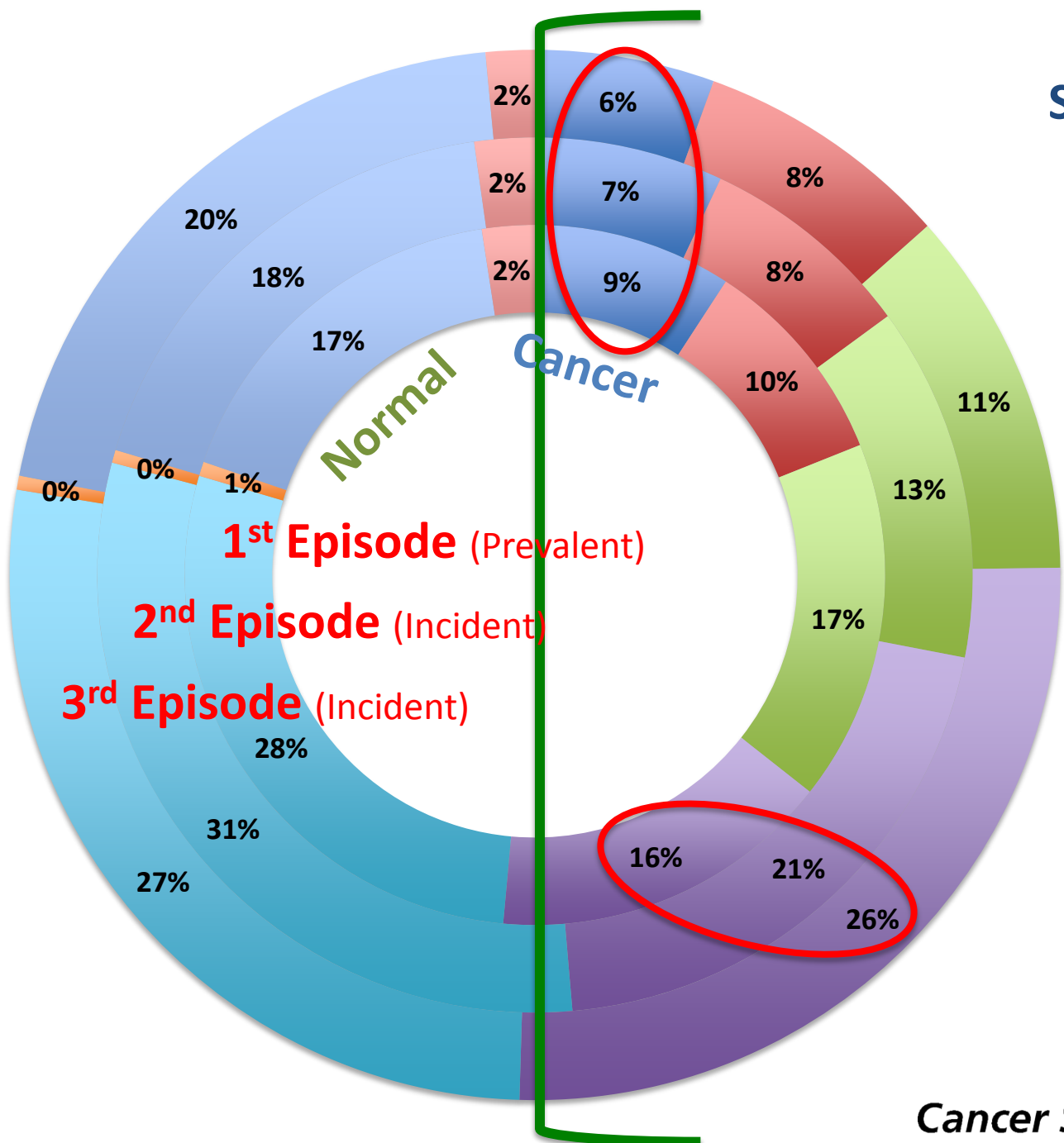
**Low Risk:** 1-2  $< 1$  cm adenomas

# England Screening Outcomes Episode 1, 2 2011/12



- Cancer detected
- High-risk adenoma
- Intermediate-risk adenoma
- Low-risk adenoma
- Abnormal finding
- Abnormal, no histology
- Normal result
- No result

# England Screening Outcomes Episode 1, 2 & 3 2011/12

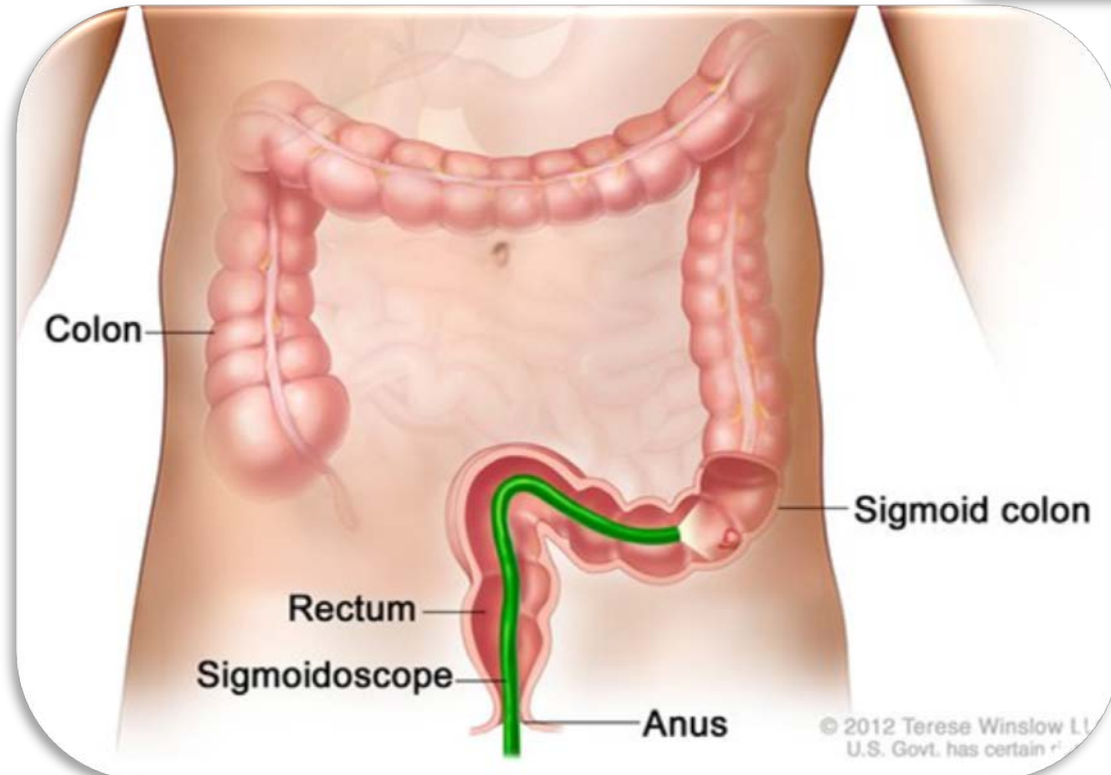
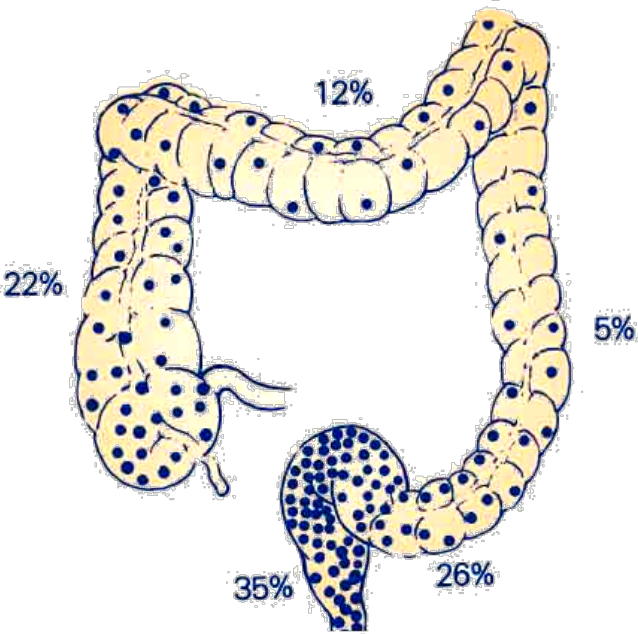


**Polypectomy Rate 48%**



# Once in a lifetime flexisigmoidoscopy

- England – July 2006
  - Phase 1 60 - 69 year olds
  - Phase 2 70 – 74
  - Phase 3 <60 ???

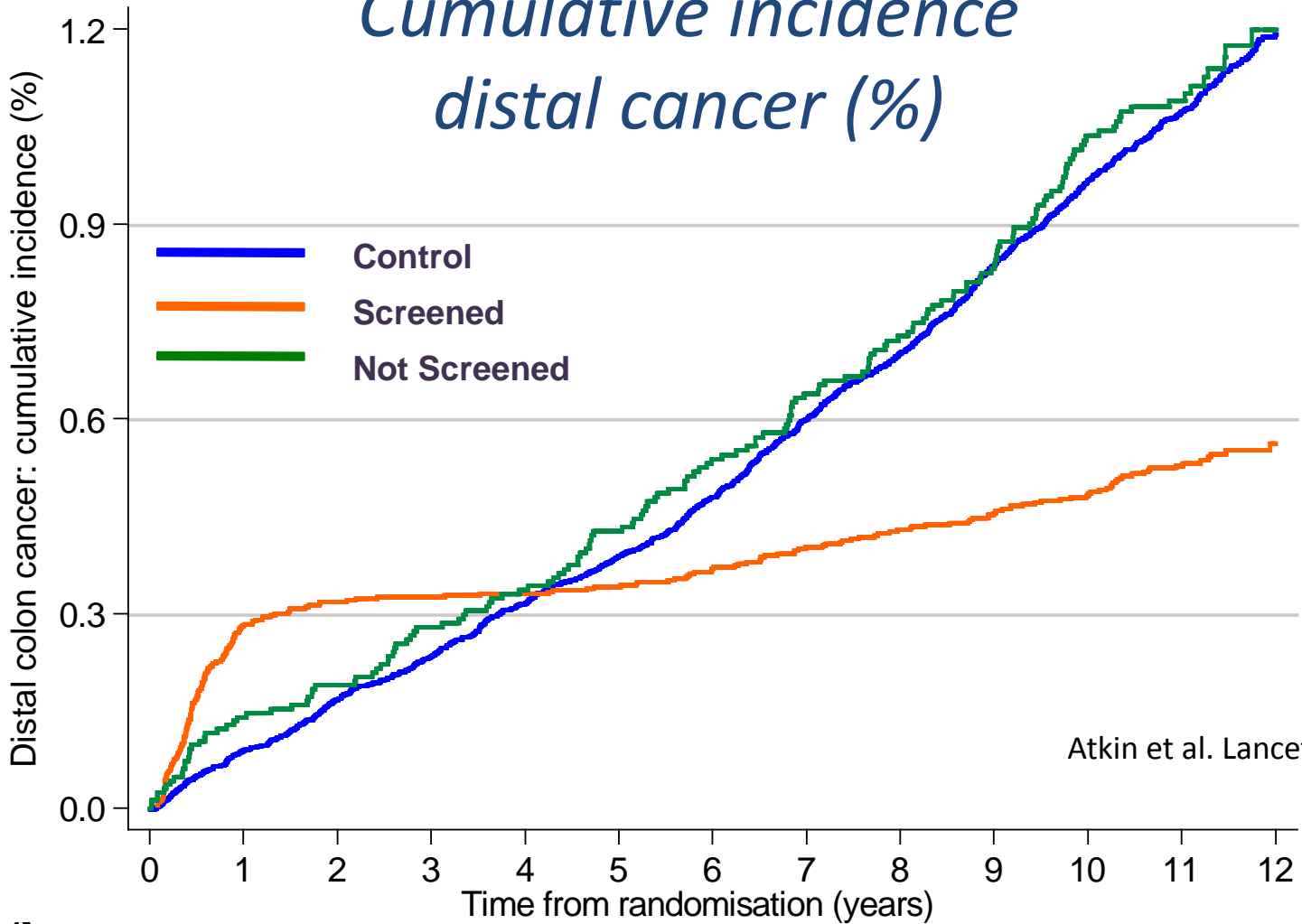




# Once in a lifetime flexisigmoidoscopy



*Cumulative incidence  
distal cancer (%)*



Atkin et al. Lancet. 2010;375: 1624-33

# Once in a lifetime flexisigmoidoscopy



Prof. Wendy Atkin

*Cumulative incidence  
distal cancer (%)*



## **NHS** Cancer Screening Programmes Bowel Scope Screening - Started 2013

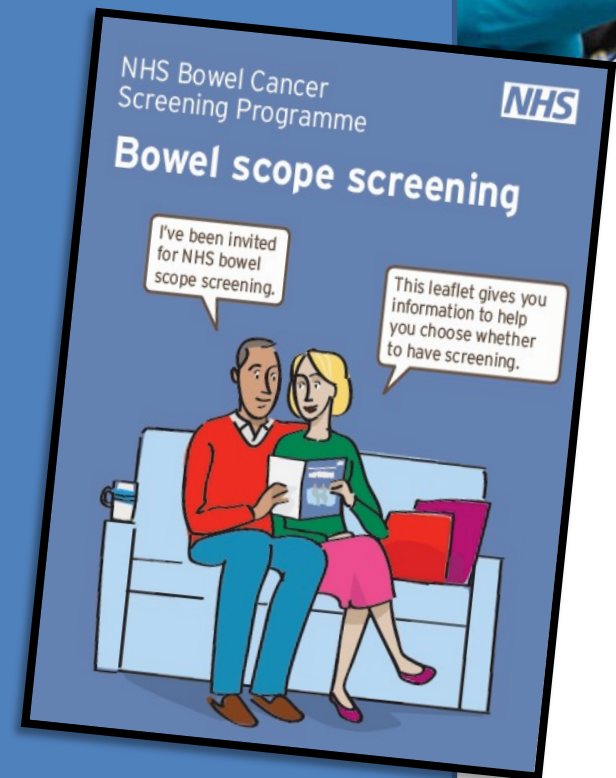
*Statistics shared with the Public*

**If unscreened...**

- *5 in 300 will get bowel cancer*
- *2 in 300 will die of it within 10 years*

**If screened...**

- *2 in 300 will avoid getting bowel cancer*
- *1 in 300 will avoid dying of it*



# Bowel scope



**Week - 8**

**Send FS  
Pre-invites**



# Bowel scope



**Week - 8**

**Send FS  
Pre-invites**

**Week - 6**

**Send FS  
Invitations  
*Appt in 6 weeks***





# Bowel scope



**Week - 8**

**Send FS Pre-invites**

**Week - 6**

**Send FS Invitations**  
*Appt in 6 weeks*

**Week - 4**

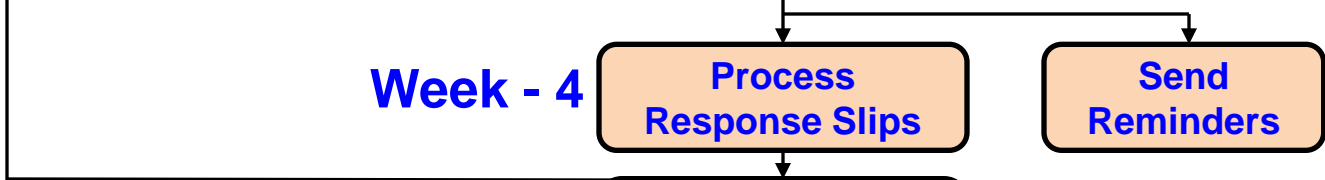
**Process Response Slips**

**Send Reminders**

**Week - 4**

**Manage Over & Under Booked FS Lists**

**Opt-in requests**  
**55-59 years**



# Bowel scope



**Week - 8**

**Send FS Pre-invites**

**Week - 6**

**Send FS Invitations**  
*Appt in 6 weeks*

**Week - 4**

**Process Response Slips**

**Send Reminders**

**Week - 4**

**Manage Over & Under Booked FS Lists**

**Week - 2**

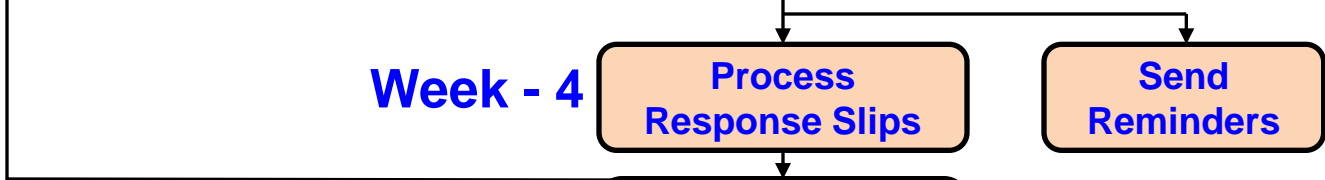
**Confirm Clinic Lists**

**Week - 2**

**Send Confirmation**  
*Appt in 2 weeks*

**Send Enema**

**Opt-in requests**  
**55-59 years**



# Bowel scope



Opt-in requests  
55-59 years

**Week - 8**

**Send FS Pre-invites**

**Week - 6**

**Send FS Invitations**  
*Appt in 6 weeks*



**Week - 4**

**Process Response Slips**

**Send Reminders**

**Week - 4**

**Manage Over & Under Booked FS Lists**

**Week - 2**

**Confirm Clinic Lists**

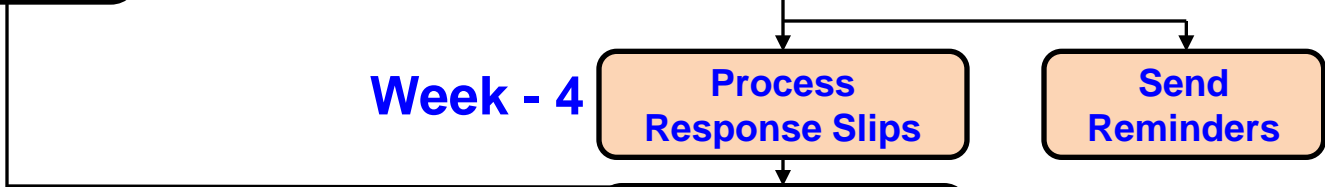
**Week - 2**

**Send Confirmation**  
*Appt in 2 weeks*

**Send Enema**

**Week - 0**

**Bowelscope Appointment**



# Once in a lifetime flexisigmoidoscopy

## Southern Hub Update

- Pilot complete **March - 2014**
- Rollout to be completed – **2016!**



- Data from 2/18 Screening Centres

Centres	Invitations	Responses	Completed FS Rate	Re-Scheduled Rate	Index Colonoscopies
West Kent	2135	57%	48%	39%	44
Surrey	1043	61%	52%	41%	21

Centres	Cancer	Adenoma High Risk	Medium	Low	Abnormal Not Polyp	Normal	Inadequate Outcome
West Kent	2	7	9	18	615	644	39
Surrey	1	3	7	5	302	346	13

# Good Screening Programme... ...Bottom Line?



- **Organisation** - Centralised
- **Quality** not optional
- Design for **Deprived Population**
- Strong **Leadership**
  
- Integrated *Organisation and Information system*
- Provides power to...
  - Monitor & QA
  - Evaluate
  - Knowledge to challenge and change
  - Share experience with others...

# The Language of Screening...

## *...faeces, poo, stool?*





# Good Screening Programmes... ...Bottom Line?



- **Evidence-based**
- **Leadership**
- **Organisation**
  - **Key Objectives**
    - *Affordable*
    - *Sustainable*
    - *Population-based (deprived)*
    - *Effective*
    - *Efficient*
    - *Robust*
- **Agreed and Enforced Quality Standards**
- **Performance Monitoring - Internal & external**
  - **Peer Review** - *Organisation, laboratory, endoscopy, IT*
  - **Programme Review** - *Challenge and Change*
- **Research & Development**

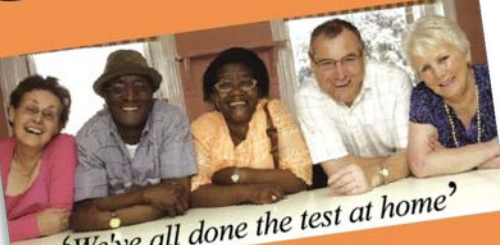
**Essential - *Integrated Organisation and Information system***



# Locally Produced Promotion

NHS  
Bowel Cancer Screening Programme

## Bowel Cancer Screening Programme



*'We've all done the test at home'*

the bottom line is...  
Screening for bowel cancer saves lives

Remember:

- Use Bowel Screening Kit.
- Return Kit.

NHS

**60 or OVER?**



**If for the last 3 weeks you've had blood in your poo or it's been looser, don't sit there, just tell me.**

Chances are it's nothing to worry about, but it could be the early signs of bowel cancer. Tell your doctor. Finding it early makes it more treatable, and could save your life.

Then talk to your GP

Just tell me

**YOU CAN'T ALWAYS SEE THE SIGNS**

**60+**  
take the test

Bowel cancer is the third most common cancer in the UK. The earlier it's found, the more effectively it can be treated.

If you are aged 60-69 and registered with a GP, you will automatically be sent a free kit that can detect early signs of bowel cancer. If you are aged 70 or over, you can request a kit by calling freephone 0800 707 60 60.

**EAT WELL KEEP FIT USE THE TEST KIT**



Did you know that bowel cancer is the third most common cancer in the UK?

If you are aged 60-69 and registered with a GP, you will automatically be sent a free test kit that can detect early signs of bowel cancer.

Aged 70 or over? You can request a kit by calling freephone 0800 707 60 60.

ADVANTAGE

## bowel screening test

Don't forget to use and return your bowel screening sample kit.

60PLUS

freephone 0800 707 60 60



help reduce the number of deaths due to bowel cancer use and return the screening sample kit today

Bowel cancer claims 16,000 lives each year. Don't add to the number.

60PLUS

freephone 0800 707 60 60



# Impact of deprivation – Prevalent Episodes

*% Uptake - 3 Episodes (E1, E2 & E3)*

