

Improving the early diagnosis of oesophago-gastric cancers: findings from the seven local Be Clear on Cancer pilots

Ella Ohuma^a, Emily Power^b, Jodie Moffat^c, Susan Formby^b, Nick Ormiston-Smith^a, Catherine S Thomson^a

a – Statistical Information Team, b – Health Evidence and Information Team, c – NAEDI evaluation team, Cancer Research UK

Background

- ▶ Estimates suggest nearly 1,000 deaths from oesophago-gastric (OG) cancer could be avoided each year if five-year survival rates matched the best in Europe.¹
- ▶ Seven local pilots across 25 PCTs in England were funded by the Department of Health to promote the early diagnosis of these cancers, targeting over 55s.
- ▶ Campaign materials were developed under the 'Be Clear on Cancer' brand.
- ▶ Main message: Tell your doctor if you have difficulty swallowing food or have had indigestion or heartburn most days for three weeks.
- ▶ Public-facing activity (e.g. local events, leaflet distribution, press activity) generally ran between April and July 2012.
- ▶ Health professionals were also targeted (e.g. GP practices and pharmacies issued with campaign packs).
- ▶ Evaluation of the campaigns involved a mix of locally and centrally led collection and analysis.

Objectives

- ▶ Evaluate the impact of the campaign on public awareness, and two-week wait (2WW) referrals and diagnoses (following these referrals).
- ▶ Collect feedback from pharmacists on the impact of the local pilots.

Methods

- ▶ Awareness data collected by five out of seven pilots, 'pre' and 'post' campaign.
 - ▶ Significance tested using two-sample test of proportions.
- ▶ Two-week wait (2WW) referrals for suspected upper GI cancer, and diagnoses following these referrals, (both provided by Trent Cancer Registry) in PCTs in the pilot areas (intervention PCTs) were compared with all other PCTs in England (control PCTs).
 - ▶ Calculated for months of the pilots (April to July 2012) and compared with the same months in the previous year.
 - ▶ Significance tested across periods using rate ratios.
 - ▶ Significance tested between areas, across periods, using rate ratios (assuming populations remained constant across periods).
 - ▶ Conversion rates tested for significance using two-sample test of proportions.
- ▶ Feedback from pharmacists in the pilot areas was also collected.

Figure 1: Spontaneous awareness of difficulty swallowing as a symptom of cancer

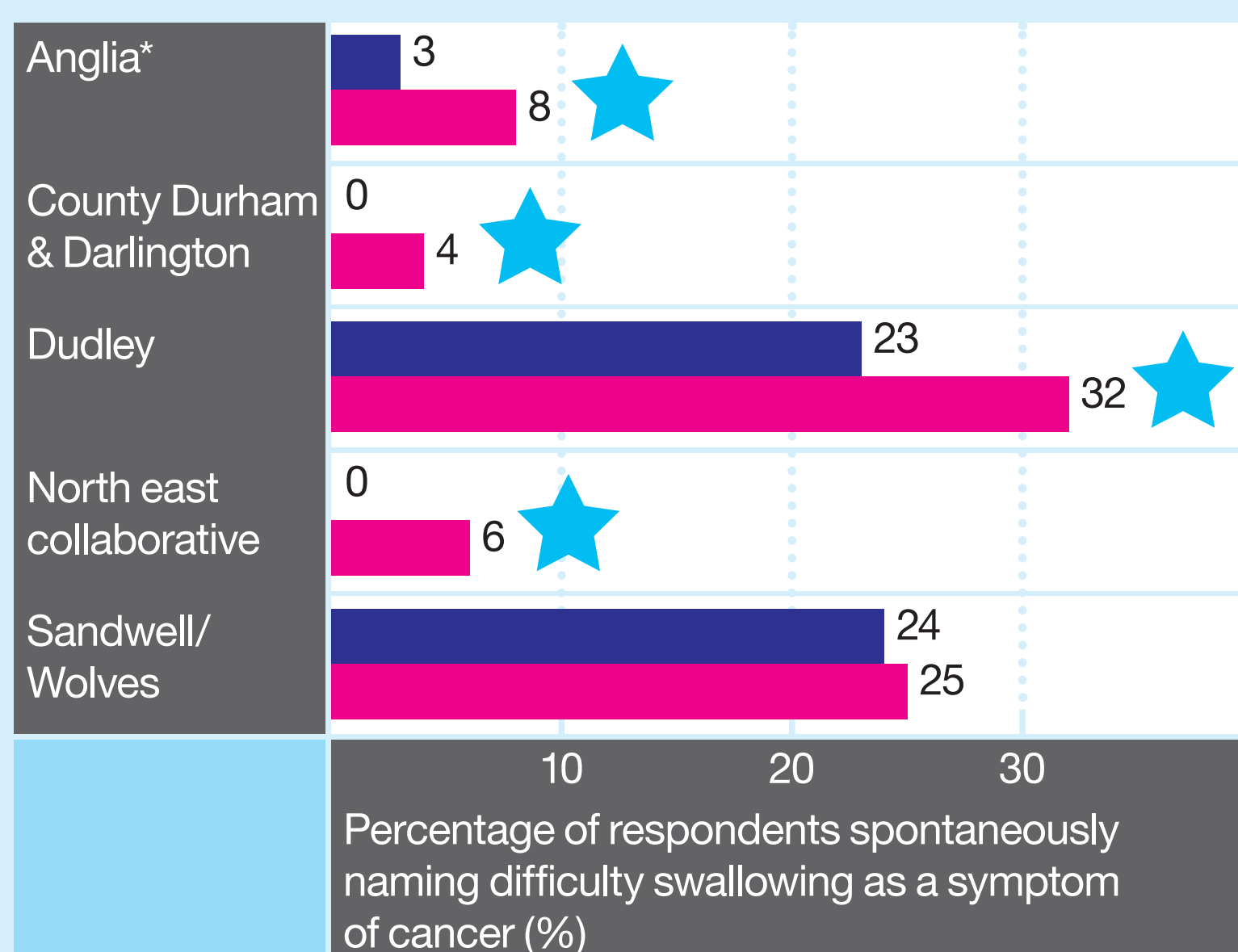
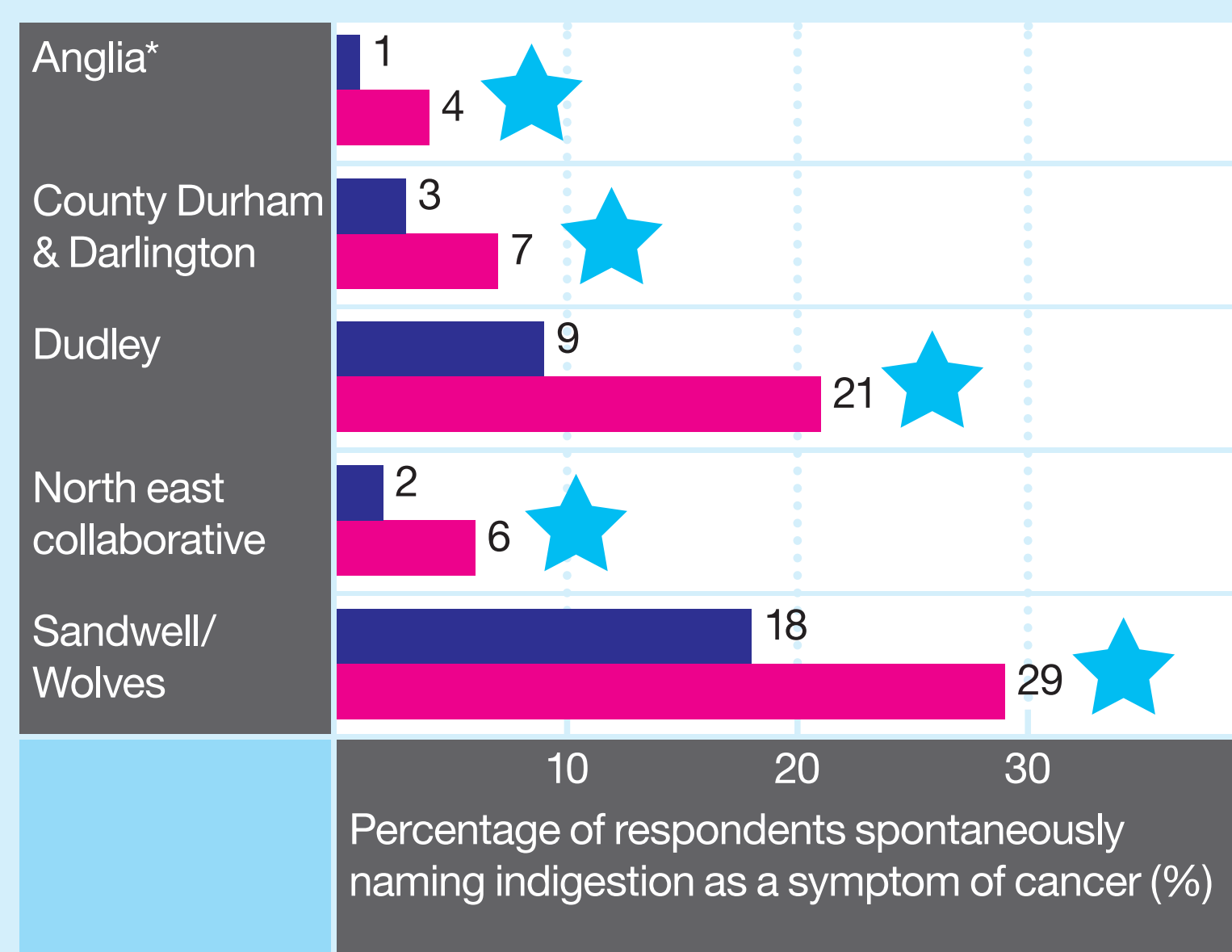


Figure 2: Spontaneous awareness of indigestion as a symptom of cancer



* Did not carry out a 'pre' survey – compared those who recalled seeing the campaign with those who didn't

Results

Table 1: Results from analysis of the 2WW data

	Intervention area (n=25 PCTs)				Control area (n=126 PCTs)			
	April–July 2011	April–July 2012	% change	p-value*	April–July 2011	April–July 2012	% change	p-value*
Referrals								
2WW referrals for suspected upper GI cancer	6,489	8,190	+26%	<0.001	28,127	32,761	+16%	<0.001
Diagnoses								
Diagnoses of any upper GI cancer (ICD-10 C15, C16, C22–C25) following a 2WW referral for suspected upper GI cancer	355	387	+9%	0.24	1,535	1,607	+5%	0.20
Diagnoses of oesophageal cancer (ICD-10 C15) following a 2WW referral for suspected upper GI cancer	177	212	+20%	0.08	827	853	+3%	0.53
Conversion rate								
% of referrals for suspected upper GI cancer which resulted in a diagnosis of upper GI cancer (ICD-10 C15, C16, C22–C25)	5.5%	4.7%	-0.7	0.04	5.5%	4.9%	-0.6	0.002
% of referrals for suspected upper GI cancer which resulted in a diagnosis of oesophageal cancer (ICD-10 C15)	2.7%	2.6%	-0.1	0.60	2.9%	2.6%	-0.3	0.01

* Calculated from rate ratios, using 82 working days (between both April and July 2011, and April and July 2012) as the time at risk
** Two-sample test of proportions

Figure 3: 2WW referrals for suspected upper GI cancer in the intervention area

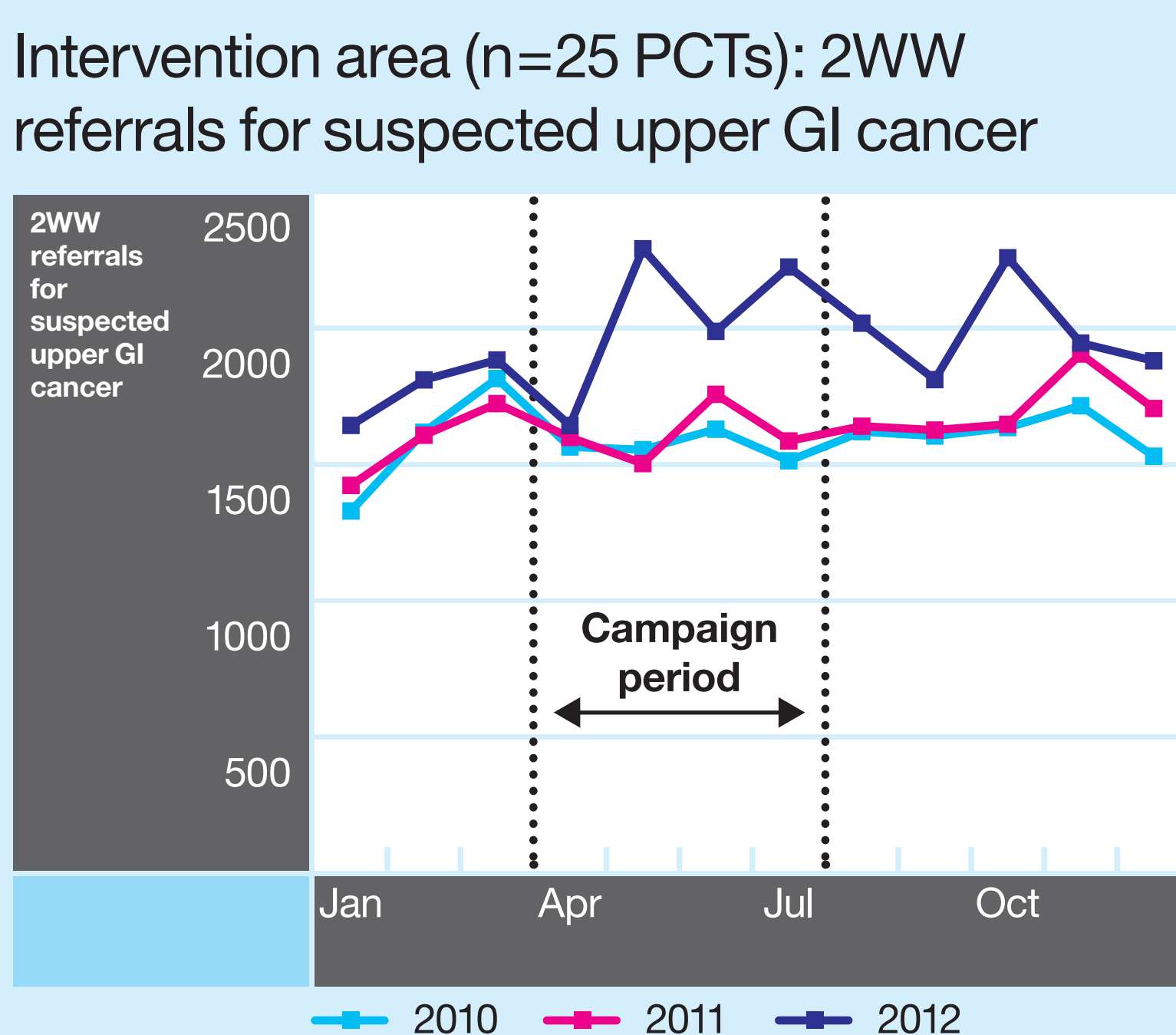
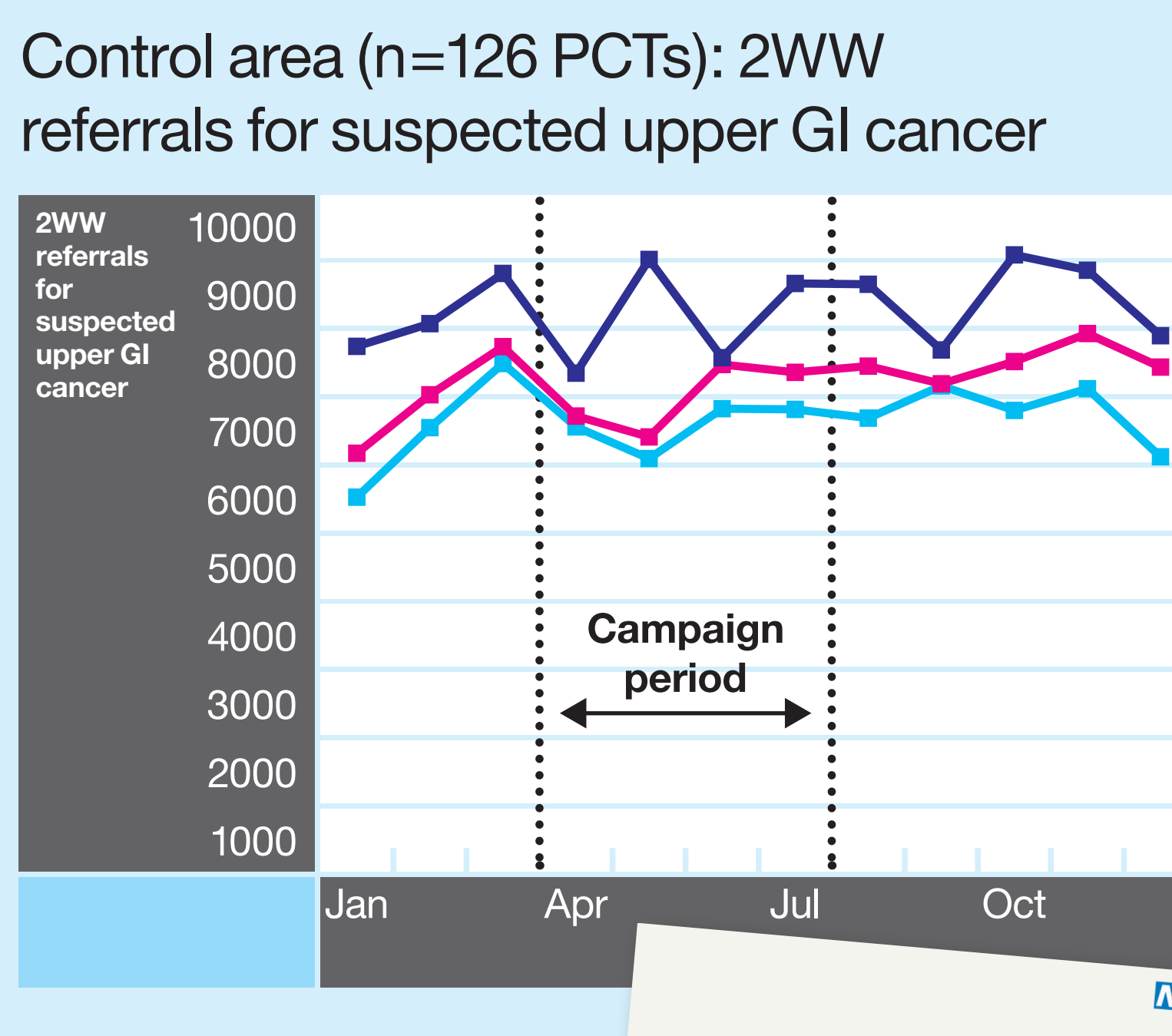


Figure 4: 2WW referrals for suspected upper GI cancer in the control area



Key Findings

Awareness (Figures 1 and 2)

- ▶ Prompted and spontaneous awareness of indigestion, and difficulty swallowing, saw statistically significant increases across many projects.

2WW referrals for suspected upper GI cancer (Table 1, Figures 3 and 4)

- ▶ 26% increase in intervention area vs. 16% increase in control area; intervention area had a significantly larger increase (p<0.05).
- ▶ Intervention area: Increase from 3.2 to 4.0 referrals per PCT, per working day (p<0.001). (Data not shown)
- ▶ Control area: Increase from 2.7 to 3.2 referrals per PCT, per working day (p<0.001). (Data not shown)

Diagnoses of upper GI cancer following a 2WW referral for suspected upper GI cancer (Table 1)

- ▶ 9% increase in intervention area vs. 5% increase in control area; no evidence that the intervention area had a statistically significantly larger increase.
- ▶ Small and significant decrease in conversion rate to all upper GI cancers following a 2WW referral for suspected upper GI cancer in both the intervention (5.3% to 4.7%, p=0.04) and control area (5.5% to 4.9%, p=0.002).

Diagnoses of oesophageal cancer following a 2WW referral for suspected upper GI cancer (Table 1)

- ▶ 20% increase in intervention area vs. 3% increase in control area; no evidence that the intervention area had a statistically significantly larger increase.
- ▶ No change in conversion rate to oesophageal cancer following a 2WW referral for suspected upper GI cancer in the intervention area (2.7% to 2.6%, p=0.60), but a small and significant decrease in the control area (2.9% to 2.6%, p=0.01).

Feedback from pharmacists (Data not shown)

- ▶ 56% of pharmacists interviewed reported that staff had conversations with customers about OG cancer.
- ▶ 52% of pharmacists interviewed said they had talked to customers about making an appointment to see their GP.

Conclusions

Encouraging results in both prompted and spontaneous awareness of the campaign symptoms were seen. The campaign also had an impact on behaviour with more people being referred via the 2WW referral route for suspected upper GI cancer. There also appeared to be an increase in the number of diagnoses of oesophageal cancer made from these referrals although numbers were small and this did not reach statistical significance. Positive feedback from pharmacists involved in the activity indicated support for this campaign.

Acknowledgements: Trent Cancer Registry and Department of Health

References:
1 Abdel-Rahman M, Stockton D, Rachet B, Hakulinen T, Coleman MP. What if cancer survival in Britain were the same as in Europe: how many deaths are avoidable? Br J Cancer 2009; 101: S115–S124

For more information about the Be Clear on Cancer programme of work, email projectsupport@cancer.org.uk

NAEDI is a public sector/third sector partnership which is led by the Department of Health, Public Health England, NHS England and Cancer Research UK, working with partners from other public and voluntary organisations, to support and drive forward work on early diagnosis.

