Improving early diagnosis of bladder and kidney cancers; findings from the regional ‘blood in pee’ Be Clear on Cancer pilot

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Introduction

- In England, nearly 1000 deaths a year from bladder and kidney cancers could be avoided if five-year survival rates met the best in Europe.
- Promoting earlier diagnosis could help to save lives.
- Be Clear on Cancer is a Public Health England campaign run in collaboration with NHS England and the Department of Health.
- Following the local Be Clear on Cancer ‘blood in pee’ pilots, a regional campaign took place across the former North of England Cancer Network from January to March 2013.

The aim was to increase earlier diagnosis through raising awareness of macroscopic haematuria, a symptom of bladder and kidney cancers. The campaign used the message ‘if you notice blood in your pee, even if it’s just once, tell your doctor’.

The campaign was targeted at men and women aged 50 and over from lower socioeconomic groups.

Objectives

- To assess the impact of the regional ‘blood in pee’ campaign on public awareness, GP presentations, two week wait (2WW) referrals and subsequent diagnoses, as well as diagnostic testing.

Methods

- Awareness data collected via pre and post campaign surveys.
- GP visits for macroscopic haematuria assessed for 5 weeks pre, 9 weeks during and 8 weeks post campaign, compared to the same period in the previous year.
- Data collected via Read codes from 54 GP practices with the campaign area, compared to a geographic control of 424 GP practices outside the campaign area and to visits for some control symptoms. Data adjusted for working days.
- Two week wait referrals (2WW) and diagnoses following the referrals assessed for January–April 2013 across the campaign area and compared to the same period in the previous year as well as a geographical control of the rest of England.
- Cystoscopy activity collected from Hospital Episodes Statistics (HES) and the Diagnostic Waiting Times and Activity dataset (DM01) for January–May 2013 and a post-campaign period (June–September 2013) across the campaign area, and compared to the same period in the previous year. Data adjusted for working days and compared to a geographical control of the rest of England.
- Significance tested across periods using chi squared tests or tests of two proportions.
- Significance tested between pilot and control areas using Poisson regression.

Key Findings

Awareness (Figure 1)

- Between pre and post campaign:
  - Prompted awareness of ‘blood in pee’ as a definitive warning sign rose from 41% to 65% (p<0.001), whilst as a probable warning sign decreased from 50% to 36% (p<0.001).
  - Recall of bladder/kidney cancer advertising rose from 7% to 17% (p<0.001).
- GP attendance (Figure 2)
  - Pre-campaign: 4.2% increase (p=0.54) in pilot areas, compared to a 17.1% increase (p<0.001) in control areas. No significant difference between pilot and control areas (p=0.12).
  - During the campaign: 32.4% increase (p<0.001) in pilot areas, compared to a 12.8% increase (p<0.001) in control areas. Increase in pilot areas significantly higher than increase in control areas (p<0.001).
  - Post-campaign: 29% increase (p<0.001) in pilot areas, compared to a 15% increase (p<0.001) in control areas. No significant difference between pilot and control areas (p=0.16).
  - Increase for campaign symptom significantly higher than changes for all control symptoms (p<0.001), with 1.6% increase in visits for UTI, 7% decrease in visits for neck pain, 4% decrease in visits for shoulder pain and 16% decrease in visits for knee pain.

2WW referrals and diagnoses (Table 1)

- 28% increase in 2WW referrals for suspected urological cancer in pilot areas (p<0.001) and 9% increase in control areas (p<0.001). Significant difference between pilot and control areas (p<0.001).

- Following a 2WW referral:
  - 48% increase (p<0.001) in bladder cancer diagnoses in pilot areas and 12.8% decrease (p<0.001) in control areas.
  - 47% increase(p=0.049) in kidney cancer diagnoses in pilot areas and 8.5% increase (p=0.019) in control areas. No significant difference between pilot and control areas (p=0.47).

Cystoscopy (Figures 3 & 4)

DM01

- Jan–May 2013: 7% decrease (p<0.001) in pilot areas and 6.9% decrease (p<0.001) in control areas.

- June–July 2013: 13% increase (p<0.001) in pilot areas and 0.4% decrease (p=0.41) in control areas.

HES

- Jan–May 2013: 5% increase (p<0.001) in pilot areas and 0.7% increase in control areas (p=0.04).

- June–July 2013: 8% increase (p<0.001) in pilot areas and 3% increase in control areas (p>0.001).

Results

- Percentage of respondents positively responding to each question

Discussion

Positive impacts were seen across all of the available metrics, with an increase in public awareness of bladder and kidney cancers, GP presentations for macroscopic haematuria, urgent referrals and subsequent diagnoses and diagnostic tests. Where post-campaign periods have been assessed, results show a sustained impact. All of these suggest that the campaign could have a positive impact on cancer outcomes, but analysis of staging and survival data, when available, is needed to be sure. Analysis of data from the national ‘blood in pee’ campaign that followed will hopefully reinforce the results seen at a regional level.

Acknowledgements:


References:

1. Abdel-Rahman M, Stockton D, Rachet B, Hakulinen T & Coley NP (2009). What if cancer survival in Britain were the same as in Europe: how many deaths are avoidable? British Journal of Cancer. 101: S115-S24