

**Evaluation of the effects of the DH prostate awareness pilot on
consultation rates in primary and secondary care, and PSA testing**

Final report 2009

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1 EXECUTIVE SUMMARY

1. **Background:** The Department of Health (DH) Prostate Cancer Advisory Group approved a prostate awareness pilot communications programme developed by one of its sub-groups. It aimed to increase knowledge and awareness of problems with the prostate, including prostate cancer, in men aged 50 years or more and to promote reporting of symptoms to GPs. The pilot was launched in Coventry in October 2006 by ContinYou, a charity with expertise in educational programmes. The pilot aimed to reach men in all socio-economic groups and men considered at high risk of prostate cancer (those with a family history of the disease and those from African and African Caribbean populations), and to ensure that the messages were sustainable after the initial launch without causing unnecessary anxiety or increases in GP workload.
2. **Aims:** The main aim of the evaluation was to assess the initial impact of the pilot on workload in general practice through the use of data on consultation rates, on prescribing and by analysing data on PSA requests by GPs within the Coventry Teaching Primary Care Trust (PCT). The aims were tailored to meet the needs of the steering committee, by providing a timely report to help assess the initial impact of the pilot using a limited budget. Therefore follow-up data were only collected for a six month period after the start of the pilot, and are subject to certain limitations according to the characteristics of each data source. The results for Coventry were compared with those for three control areas: the PCTs of Croydon, Ealing and Harrow. In addition trends over time in the number of new urological appointments in men aged 50 or more years were studied.
3. **Publications:** A paper has been published reporting this study's main findings.[1]
4. **Data collection:** Data on GP consultations and prescriptions were collected from the General Practice Research Database (GPRD). Individual based data on PSA tests and collated data on new urological appointments were obtained from the main hospital serving each PCT. The time periods for which data were available varied by data source.
5. **GPRD data:** The GPRD is one of the largest computerized GP networks in the world, but the number of practices per PCT is small: four in Coventry, three in

Croydon and five in each of Ealing and Harrow. Data collection was restricted to two time periods at the same time of year because of budget limitations: 1st October 2005 to 31st March 2006 and 1st October 2006 to 31st March 2007. The study population was men aged 50-84 years registered at the general practices within each PCT.

6. **Data on PSA requests by GPs:** These were collected from the pathology laboratory at the main hospital in each PCT. Data were collected for an 18 month period from 1st October 2005 to 31st March 2007 for all consenting practices: 44/55 (80%) in Coventry, and collectively 102/158 (65%) in the control areas. The study population was men aged 45 to 84 years registered at the consenting practices. The lower age limit was set at 45 years because of restrictions on the availability of collated data on number of men registered per practice.
7. **Data on urological appointments:** These were obtained from the hospital appointment system of the main hospital serving each PCT. The data were monthly counts of new appointments in men aged 50 to 84 years of age. Data were requested from 1st October 2005 to 31st March 2006 and 1st October 2006 to 31st March 2007 but in Coventry they were only available from 1st April 2006.
8. **Sample size estimate:** The original estimate was based on the rate of GP PSA requests in a six month period, expected to be 3.0 per 100 men aged 50 to 84 years. In a population of 75,000 men in each of the target and each control areas, there would be 90% power to detect a difference of 3.0 vs. 3.3 per 100 men at the 5% level of significance either between areas or between time periods within areas. The rate of GP consultations for urological conditions was not known. Following observation of the trends in rates of PSA testing and consultations over time, the main analyses were in fact Poisson regression of time trends.
9. **Main outcome measures:** a) the rates of GP consultations per 100 person years associated with urological symptoms and rate of prescriptions issued for urological conditions in men with no prior diagnosis of benign or malignant prostate disease, b) the rate of PSA tests requested by GPs per 100 men registered at the study practices, c) the number of new urological appointments per six months.

10. **Time periods for analysis:** Three six month periods are presented according to availability of data: 1st October 2005 to 31st March 2006 (first non-pilot period), 1st April 2006 to 30th September 2006 (second non-pilot period) and 1st October 2006 to 31st March 2007 (pilot period). In graphs and Poisson regression analyses monthly data were studied.
11. **GP consultations:** The consultation rate for urological symptoms in Coventry did not change significantly in the pilot period (6.6 per 100 person years) compared with the first non-pilot period (6.1 per 100 person years), after adjusting for age. There appeared to be an increase in the rate of prescriptions issued for urological symptoms over time but both the graphs and Poisson regression using monthly data showed that the rise in the rate appeared to start before the pilot. There was no significant increase in the consultation rate for first ever reported symptoms or in prescribing.
12. **PSA testing:** The overall rate of PSA testing in Coventry increased significantly over the three six month periods from 3.3 per 100 men in the first non-pilot period to 4.1 per 100 men in the pilot period after adjusting for age ($p < 0.001$). However, significant increases were seen in Croydon and Harrow. Poisson regression of monthly rates showed that, in Coventry, there was no significant change in the relationship between the rate of testing and month in the pilot period compared with periods before the start of the pilot. The rate of testing increased significantly with age ($p < 0.001$) and was lower in practices associated with a high rather than a low proportion of African and African Caribbeans ($p < 0.001$).
13. **Hospital appointments:** There was no increase in the number of urological appointments in the pilot period compared with earlier periods.
14. **Study limitations:** The GPRD provided a unique set of data but only from a small number of practices in each area. Therefore the results for GP consultations and prescriptions cannot necessarily be considered representative of the whole PCT where the practices were located. The PSA data came from a larger number of practices representing 80% of practices in Coventry. The length of follow-up after the start of the pilot did not allow for any long-term effect of the pilot to be investigated. The impact of the pilot in high risk groups could not be studied.

15. **Conclusions:** Within the limits of the selected populations studied, there was no sudden increase in the use of NHS services associated with urological symptoms, PSA testing or prescribing.
16. **Recommendations:** Individual based data would be required to investigate directly awareness of the pilot, and its effects on knowledge, attitudes and intentions, and on use of NHS services. Longer term follow-up is required to investigate the sustainability of any effects of the pilot. Alternative approaches to evaluating health education messages should be considered, for example, by using a randomized controlled trial. This would inform on the value of the materials prior to using more publicized mass media approaches and methods of delivery.

2 INTRODUCTION

Awareness about prostate cancer and the symptoms of prostatic diseases such as benign prostatic hyperplasia (BPH) has almost certainly been increasing in the UK, and will have contributed in part to the rise in prostate specific antigen (PSA) testing and diagnosis of prostate cancer. However, there has been no uniform set of messages provided by sources such as the media and charities, and levels of awareness and willingness to seek medical advice will vary between different sections of the population.

The measurement of PSA is used to test for prostate cancer both in asymptomatic men and in men presenting with prostatic symptoms, and to monitor both men with a raised PSA level who do not have cancer and men with the disease[2,3]. Part of the rise in testing will be due to asymptomatic men being screened. At present, there is no national screening programme for prostate cancer in the UK. The European randomized controlled trial of screening[4] showed a 20% relative reduction in the mortality rate for prostate cancer at a mean follow-up of nine years comparing the intervention arm with a control arm. However, 10,000 men needed to be screened for seven prostate cancer deaths to be prevented in this time period. Further results are expected in 2010/11. The US Prostate, Lung, Colorectal and Ovarian (PLCO) Cancer Screening Trial[5] did not show a mortality reduction but the study differed from the European trial in several ways, in particular the rate of PSA testing taking place outside the study protocol. Because of the rise in use of the PSA test, the NHS introduced guidelines in November 2002 to ensure that men who request screening make an informed decision about whether or not to proceed with the test.

(<http://www.cancerscreening.nhs.uk/prostate/index.html>).

The Department of Health (DH) Prostate Cancer Advisory Group (PCAG), chaired by Professor Mike Richards, approved a prostate awareness pilot communications programme which aimed to increase knowledge and awareness of problems with the prostate, including prostate cancer, in men aged 50 years or more (Appendix 1). The pilot was launched in Coventry in October 2006 by ContinYou, a national health and learning charity with expertise in educational programmes. The pilot aimed to reach all socio-economic groups, and those considered at high risk of prostate cancer (people with a family history of the disease and those from African and African

Caribbean populations). It also aimed to ensure the messages were sustainable after the initial launch of the pilot but did not cause a sudden increase in GP workload. Two research groups were invited to evaluate the pilot. Gillian Granville Associates, whose portfolio includes evaluation and participative research as well as design and delivery strategies, used qualitative techniques to investigate awareness of and views on the pilot[6]. The Cancer Screening Evaluation Unit (CSEU) at the Institute of Cancer Research (ICR) has used quantitative techniques to study medical outcomes associated with workload in primary and secondary care.

This report gives the findings of the quantitative evaluation which has investigated whether or not the pilot caused a rise in use of NHS services following the launch of the pilot. A paper on the main findings has been published.[7] Data were collected for time periods before and after the launch of the pilot to assess changes over time. Data were also collected from three control areas in a different part of the country with broadly similar demographic and socio-economic characteristics, as more wide spread events, particularly articles in the media, might have impacted on prostate awareness and could have coincided with the launch of the pilot.

There were three main constraints on the design of the evaluation.

1. Ideally evaluation of the effects of a health education initiative should be conducted within the framework of a randomized controlled trial. However, this is impractical for initiatives which involve the local media and publicity. Therefore the quantitative evaluation used an observational approach to assess the impact of the pilot.
2. It would have been preferable to conduct a population based survey of individuals living in the study areas to study awareness of the pilot in relation to seeking medical advice, subsequent medical investigations and hospital referral with particular reference to different socio-economic group, and the target groups: men aged over 50 years and those at high risk of prostate cancer. However, this was not feasible with the limited funds available, so routine data sources were used.
3. The nature of the pilot, designed to provide long-term impact on raising prostate awareness without causing anxiety, should ideally be evaluated over at least a year following the launch. However, this evaluation is restricted to six months

following the launch partly because of financial constraints and partly in order to provide timely feed-back to the DH PCAG.

3 AIMS

The aims of the evaluation were to study rates of:

1. consultations associated with urological symptoms in general practice
2. prescriptions issued for urological conditions in general practice
3. GP requests to pathology laboratories for Prostate Specific Antigen (PSA) measurements
4. urological hospital appointments

Comparisons have been made between time periods before and after the launch of the pilot, and between the target area, Coventry, and control areas.

4 STUDY APPROVAL

Ethical approval was given by the South East Multi-Centre Research Ethics committee (06/MRE01/56) and the study was also approved by the Patient Information Advisory Group (PIAG) so that identifiable data could be obtained from the pathology laboratories (PIAG 3-04(n)/2006).

5 METHODS

5.1 The programme

The aim of the programme was to reach men aged 50 or more including men from all socio-economic groups, and those considered at high risk of prostate cancer: people with a family history of the disease and those from African and African Caribbean populations. The pilot was launched on 2nd October 2006, and was designed so that the health message and its impact should be sustainable in the community. Aspects of the programme are summarized in Appendix 1, and further details are provided in the qualitative report by Gillian Granville[6].

5.2 Study areas and data sources

The target area of Coventry Teaching Primary Care Trust (PCT) was chosen by ContinYou and DH as it represents a broad mix of socio-economic groups for this

evaluation. The selection of control areas (PCTs) were determined by the availability of data and the demographic profiles of the PCTs.

Data were collected from three sources:

1. the GPRD sample of GP practices which has computerized records of patients to allow retrospective analysis of consultations defined by symptoms, disease diagnosis and prescribing
2. the pathology laboratory at the main hospital serving each PCT
3. hospital appointment system in the main hospital serving each PCT

Three control areas were selected from PCTs covered by the General Practice Research Database (GPRD, <http://www.gprd.com/intro/default.asp>) which provided data on GP consultations[8]. A criterion of the GPRD to provide data for a given area is that there should be a minimum of three participating practices. Of those meeting this criterion, the PCTs of Croydon, Ealing, and Harrow were selected because they have some similarities to Coventry according to their demographic profiles derived from the 2001 Census (Appendix 2). The mean socio-economic status of the GPRD practices are also given in Appendix 2. The same PCTs were chosen to study rates of PSA testing.

5.3 Selection of GP practices and time periods

GPRD data: The GPRD is one of the largest computerized GP networks in the world, but the number of practices per PCT is small: The practices were limited to four out of 63 practices in the Coventry Teaching PCT, three out of 63 in Croydon, five out of 82 in Ealing and five out of 39 in Harrow. Data collection was restricted to two time periods at the same time of year because of budget limitations: 1st October 2005 to 31st March 2006 and 1st October 2006 to 31st March 2007. The study population was men aged 50-84 years registered at the general practices within each PCT.

Data on PSA requests by GPs: These were collected from the pathology laboratory at the main hospital in each PCT. The practices providing PSA data were those within each PCT which sent $\geq 90\%$ of their PSA requests to the selected pathology laboratory. Data were collected for an 18 month period from 1st October 2005 to 31st March 2007 for all consenting practices. The study population was men aged 45 to 84 years registered at the consenting practices. The lower age limit was set at 45

years because of restrictions on the availability of collated data on number of men registered per practice.

Data on urological appointments: These were obtained from the hospital appointment system of the main hospital serving each PCT. The data were monthly counts of new appointments in men aged 50 to 84 years of age. Data were requested from 1st October 2005 to 31st March 2006 and 1st October 2006 to 31st March 2007 but in Coventry data were only available from 1st April 2006.

5.4 Data collection

GP consultations and prescribing: To ensure timely submissions the GPRD wrote to each of their practices in the selected PCTs to notify them that their data were required for a specific study. The GPRD collated the data by month, area, age group (50-59, 60-69, 70-79, and 80-84 years), and type of consultation. GP consultations associated with urological symptoms likely to have been reported in men who were prompted to seek medical attention by the pilot messages were identified using the standardized codes for urological symptoms (Appendix 3). Prescriptions issued for urological conditions were identified using standard product and generic names (Appendix 3).

Men were excluded if their age was outside the age range 50-84 years, if they had been registered at the study practices for less than 6 months prior to the month of consultation, or if they had any record of prostate disease or prostate cancer prior to each month under analysis. In addition the GPRD limited the data to men with an acceptable quality of data in their registration details. Only data following the Practice Up-To-Standard (UTS) date were included. For each practice this is the date when it meets a defined minimum number of criteria for data quality covering completeness, continuity and plausibility of data recorded.

PSA data: The South East MREC committee agreed that each GP lead could provide signed consent for their whole practice to allow data on all PSA requests to the pathology laboratories during the study period to be sent to the CSEU. The GP lead completed a proforma confirming whether or not the practice sent at least 90% of its PSA tests to the study laboratory. The laboratories prepared a data file of PSA

requests from the participating practices. The data took the form of pseudo-anonymised individual records with specimen number, date of test, month and year of birth, sex, GP practice code, NHS/Private testing, and PSA result.

Urology hospital appointments: The consultant urologists at the study hospitals advised on the availability of data on urological referrals during the study period. The hospital staff responsible for the analysis of appointment data were asked to provide summary tables of the monthly counts of new urological appointments, restricted to men aged 50 or more for the two six month periods 1st October 2005 to 31st March 2006 and 1st October 2006 to 31st March 2007. In Coventry data were not available prior to 1st April 2006 so data were requested from this date until 31st March 2007.

Social deprivation and ethnicity: The postcode of each general practice was linked to values of the Index of Multiple Deprivation[9]. The proportion of men in each of the ethnic groups white, African or African Caribbean and Asian (comprising Indian, Pakistani, Bangladeshi, and other Asian populations) were calculated from the 2001 Census data for each ward, and these values were assigned to each general practice by means of practice postcode. As the distributions of practices by percentage of Irish and percentage of Chinese were highly skewed with few having a large percentage, these ethnic groups were not considered separately in the analyses.

Quality and Outcomes Framework (QOF) points: The website for Quality and Outcomes Framework for GP Practices provided points for each general practice in the 'Online GP Results Database' Results 2006[10]. To investigate whether rate of PSA testing varied by QOF points, data were obtained on Total achievement results, a points score out of a total of 1050 which includes points for clinical care, good organisation, positive patient experience, and extra services.

Family history: There are no routinely available, reliable data on family history of prostate cancer, a risk group originally planned to be targeted by the pilot.

5.5 Outcome measures

The main outcome measures, which were studied per month and per six months, were:

1. the rates of GP consultations and rates of prescriptions issued for urological symptoms or conditions per 100 person years in men with no prior diagnosis of benign or malignant prostatic disease. Person years was calculated by the GPRD summing each patient's contribution (in days) for that particular month. (e.g. For March all patients that were registered the entire month contribute 31 days whereas a patient that registered or left the GPRD practice on the 15th of March will only contribute 15). The sum of all patient contributions (stratified by age, time period and study area) was then divided by 365.25 to give the Total Person Time in person years.
2. the rate of 'first ever' GP consultations and prescriptions issued for urological symptoms or conditions per 100 person years in men with no prior diagnosis of benign or malignant prostatic disease. 'First ever' was defined for each man as having had no previous consultations for specific urological symptoms or diseases (Appendix 3) in the period for which they had been registered at the study practice prior to the month being analyzed.
3. the rate of GP PSA testing per 100 men registered at the practices providing PSA data. To calculate the population based rate of PSA requests, the number of PSA requests for a given age group and practice was divided by the number of registered men in 2005 in each practice. These figures were provided by age (45-64, 65-74 and 75-84 years) and practice by General Medical Services Statistics, National Primary Care Trust (PCT) Database, National Primary Care Research and Development Centre, University of Manchester.
4. the number of urological appointments.

5.6 Analysis

In simple tabulations three six month periods are presented according to availability of data: 1st October 2005 to 31st March 2006 (first non-pilot period), 1st April 2006 to 30th September 2006 (second non-pilot period) and 1st October 2006 to 31st March 2007 (pilot period). In graphs and Poisson regression analyses monthly data were studied.

A Poisson regression model was used to study the relation between the outcome variables and time after adjusting for age. For the PSA data, the relation between the rate of PSA testing and time may have changed between time periods, in particular

after the start of the pilot. We designed the model with three segments of time related to the three periods above (a piecewise function was used: mkspline, STATA, release 7). Poisson regression analyses were conducted on rates of PSA testing according to PSA level: <2ng/mL, 2-3.9ng/mL, and \geq 4ng/mL. In addition the relation of rate of testing to characteristics of the general practices was studied across all study areas. The distributions of percentages of population which were African and African Caribbean, and Asian were not normally distributed. The square root was found to provide an approximate normal distribution.

5.7 Sample size estimates

The original estimate, based on the rate of GP PSA requests in a six month period, was expected to be 3.0 per 100 men aged 50 to 84 years. In a population of 75,000 men in each of the target and each control areas, there would be 90% power to detect a difference of 3.0 vs. 3.3 per 100 men at the 5% level of significance either between areas or between time periods within areas. The rate of GP consultations for urological conditions was not known. Following observation of the trends in rates of PSA testing and consultations over time, the main analyses were in fact Poisson regression of time trends.

6 RESULTS

6.1 GPRD analyses

Rates of GP consultations associated with urological symptoms

The rates of consultations for urological symptoms and of first ever consultations for urological symptoms were compared between time periods and between areas in men aged 50 to 84 years with no prior diagnosis of prostate cancer or benign prostatic disease (Table 1, details of diagnosis codes given in Appendix 3). There was no significant increase in the rate of consultations for urological symptoms or of first ever consultations in Coventry or in the other areas over time.

The rate of consultations for urological symptoms over time for each area is shown in Figure 1 and by age groups in each area in Figures 2a, b, c and d. The monthly variation in the consultation rates for each age group in Coventry was also seen in the other areas, and similar findings are shown for the consultation rate of first ever reported urological symptoms in Coventry (Figure 3).

In Poisson regression analyses, there was no significant interaction between study area and time period for the consultation rates for urological symptoms (Table 2a). The consultation rate increased significantly with age ($p < 0.001$). Similar results were found for first ever symptoms (Table 2b).

Rates of prescriptions issued for urological conditions

There was a significant increase in the rates of prescriptions issued for urological conditions in Coventry in the pilot period (22 per 100 person years) compared with the first non-pilot period (19 per 100 person years) ($p = 0.03$, after adjusting for age in men 45 to 84 years with no prior diagnosis of prostate cancer or benign prostatic disease (Table 3). However, the results of Poisson regression analyzing monthly rates of consultations for prescribing showed that the rate increased over time during the non-pilot period and then reached a plateau during the pilot period. The monthly rate of first ever prescriptions issued for urological conditions was very low and showed no change over time when plotted in graphs in Poisson regression (Figures not shown).

The rates of prescribing were overall higher than the consultations rates for urological symptoms because prescribing is routinely recorded and includes repeat prescriptions which are issued, whereas a continuation of symptoms will not necessarily be recorded at each follow-up consultation for an episode of illness.

6.2 PSA testing

Uptake and characteristics of general practices

Overall 69% (146/213) of practices agreed for their PSA data to be analyzed: 80%, 74%, 56% and 64% in Coventry, Croydon, Ealing and Harrow respectively (Table 4). Of the 146 practices, 44 were in Coventry. The uptake rate was lowest in Ealing but this is probably due to the fact that a higher proportion of the practices invited used other neighbouring laboratory services and would not have been eligible. Eight practices in Ealing were situated close to the border with Harrow and used the pathology laboratory in Harrow. Therefore their results on uptake and PSA testing have been included in those for Harrow.

The characteristics of general practices which agreed for their PSA data to be used in the study are summarized in Tables 5 and 6. The age distribution of the registered male populations was very similar between areas with over 69% being aged 45 to 64 years. The percentage of practices with one partner was similar in Coventry and Croydon (30% and 33% respectively), 47% in Ealing and 14% in Harrow (Table 5). The distribution of QOF points for overall performance was high in all areas (Table 6). The maximum value for QOF points is 1050 and the median value was over 1000 in all four areas. The practices in Coventry were associated with a slightly higher deprivation score than the other areas (median IMD scores 36, 22, 25 and 13 in Coventry, Croydon, Ealing and Harrow respectively). There were also differences in the distribution of ethnic groups between the areas with practices in Croydon being associated with the highest proportion of African and African Caribbeans, and practices in Harrow having the highest proportions of Asians.

Completeness of data

There were a total of 20528 PSA records received from the laboratories. Before sorting these into individual based records of PSA testing, 78 duplicates, 130 recorded as female or gender not known, and six with missing date of birth were excluded. After restricting age to 45 to 84 years at date of test, the number of men with at least one PSA test aged 45 to 84 years increased from 5360 to 5923 in the first non-pilot and pilot periods respectively.

PSA results

The six monthly rates of PSA testing in men aged 45 to 84 years were compared between time periods and between areas (Table 7). The rate of testing in Coventry increased significantly from 3.3 per 100 men in the first non-pilot period to 4.1 per 100 men in the pilot period ($p < 0.001$) after adjusting for age. Similar significant increases were seen in the control areas Croydon ($p < 0.001$) and Harrow (< 0.05 after adjusting for age), and there was no change in Ealing.

The monthly rate of PSA testing in men aged 45 to 84 years plotted over time in Coventry (Figure 4) showed no change in the rate following the start of the pilot in October 2006. There was neither a sudden nor gradual increase in the rate of testing in the six months following the launch of the pilot. In fact the rate of testing appeared

to level off compared to the period before the start of the pilot. There was also no change in the monthly rate of testing within any of the age groups 45-64, 65-74 and 75-84 years in the pilot period (Figure 5a). The relation between monthly rates of PSA testing and time was studied by age group within each control area (Figures 5b, c and d) In all three control areas there was no marked change in the relation between rate of testing and time in the pilot period compared with the period before October 2006.

In Poisson regression analyses, the change in the rate of PSA testing in Coventry over time was compared between the three six month periods, after adjusting for age (Table 8). The regression coefficient for the first non-pilot period is a measure of the change in PSA rate by month during this period. The regression coefficients for the second non-pilot and pilot periods measure the change in their slopes relative to the slope for the first non-pilot time period. In Coventry (Table 8a), there was no significant change in the slope of rate of testing by month in the pilot period compared with the first non-pilot period. In the control PCTs (Table 8b) there was a significant increase in the slope in the pilot period compared with the first non-pilot period ($p=0.01$).

Poisson regression analysis was also used to study the relationship between the rate of PSA testing, age, area, characteristics of the practices and factors associated with practice postcodes in the pilot period (Table 9). The rate of PSA testing increased significantly with age ($p<0.001$), and was significantly different between areas after allowing for practice characteristics. Rates of testing were raised in practices associated with more affluent areas ($p=0.003$) and slightly lower QOF points ($p<0.001$), with a high percentage of Asian population ($p=0.02$) and with a low percentage of Africans and African Caribbeans ($p=0.003$). When the Poisson analysis was run separately for Coventry, there was no significant increase in the monthly rate of PSA testing in the pilot period after adjusting for age, and characteristics of the practices and factors associated with the practice postcodes.

The rate of testing was also studied by PSA level as the pilot may have resulted in more men with symptoms, and possible raised levels of PSA seeing their GP (Table 10). In Coventry there was a significant increase in the rate of testing for each group

of PSA levels ($p < 0.001$, $p < 0.001$ and $p = 0.052$ for rates for PSA levels < 2 , $2 - < 4$ and 4 or more ng/mL respectively) but these trends were also seen in some control areas.

6.3 Hospital urological appointments

Monthly counts of new urological appointments, restricted to men aged 50 or more were compared between the first non-pilot and pilot periods in the control areas. In Coventry data could only be compared between a six month period, 1st April to 30th September 2006, and the pilot period. It is unlikely that the underlying populations changed in these areas, particularly in Coventry, during the 12 months studied.

6.4 Awareness of pilot

As requested by the Steering group, we asked the GP leads, on the PSA consent form, if they were aware of the pilot. We were able to do this for 15 GP leads, at practices contacted after the start of the launch. Of seven senior partners in eligible practices who responded, 100% said they were aware of the Prostate Awareness pilot.

7 DISCUSSION

The main aim of this study was to investigate whether there was an immediate effect of the pilot on use of NHS services in Coventry associated with increased reporting of urological symptoms. There was no significant increase in the monthly rate of GP consultations or GP prescriptions issued for urological symptoms or the rate at which GPs requested PSA measurement, and the overall trend of increasing rate of PSA testing was probably part of the national trend for increasing testing[11,12]. There was no change in the consultation rate for first ever presentation or the rate of first ever prescribing for urological symptoms. The number of new hospital appointments in urology also showed no increase after the start of the pilot in Coventry. It was possible that other factors such as national publicity or another intervention could have interfered with the evaluation of the pilot so the same outcome measures were studied in three control areas chosen because they covered a range of similar demographics to Coventry. However, there were no marked differences in the trends for the main outcome measures in the control areas compared with Coventry.

The rise and fall in monthly rates of PSA testing over time were very similar in all four areas. The fall in rates were most evidently during holiday periods: Christmas,

Easter and bank holidays (Figure 4). A similar pattern of changing monthly PSA rates has been observed on data from other laboratories in different time periods, for example in our recent study of PSA testing and urological referral (DH funded study, Melia personal communication, 2007).

The results provide indirect evidence that the pilot is unlikely to have caused anxiety in a large proportion of people which might in turn have led to a surge in use of NHS services. At the same time by increasing awareness about prostatic symptoms the pilot should in theory raise the rates of consultations and of associated tests, although perhaps at a slow rate of increase which could take more than six months to emerge.

There are a number of limitations with the study design and data which need to be considered. There was a maximum of six months' follow-up after the start of the pilot. It was not feasible for the long-term effects of the pilot to be studied. In a study using routinely available data, it is not possible to determine whether the pilot increased awareness and knowledge which, in turn, might have gradually led more men to consult their GP. As stated in the introduction, ideally the effects of interventions should be studied in randomised controlled trials but this was not possible given the design of the pilot. We are unaware of any significant local or national initiatives which would have affected either awareness of prostate symptoms or demand for the PSA test during the pilot period, but a special survey would be needed to investigate this thoroughly.

The age range for men with PSA data (45 to 84 years, restricted by the collated numbers of men registered per practice provided by the PCT database) had a slightly lower limit than that for men included in the GPRD data (50 to 84 years). Given that the pilot was aimed at men aged 50 or more and assuming that there was no effect in men below this age, it is possible that studying the wider age range could have diluted any effect from the pilot. However, the PSA data were analysed within age bands, and no effect from the pilot could be detected by age. Moreover, it is very likely that the pilot messages would have been seen by younger men so it cannot be assumed that any effects could only be detected in men aged 50 or more.

The GPRD could only provide data on a very small number of practices so these cannot be considered representative of the PCTs in which they are found. However, the data do provide a unique, readily available data set which allows a preliminary assessment to be made of whether the pilot did have some impact on use of GP services. Health initiatives are reported to be most readily taken up by less deprived populations as seen in screening, for example[13]. GPRD provided information on the mean socio-economic status score for the practices within each area. This showed that the scores were slightly high for the study practices relative to the whole PCT in Coventry, Ealing and Harrow, and slightly low in Croydon (Appendix 2). Therefore despite the potential bias of populations served by the GPRD practices towards less deprived sections of the PCT community, there was nevertheless merit in investigating whether the pilot had an impact on services within this select group.

Despite the limitations of the GPRD in this particular study, the validity of data from the GPRD has been assessed and is generally good[8] [14]. The potential for this data source to be used to study aspects of disease presentation and cancer care within the GP setting is considerable as has been demonstrated in recent publications[15]. The paper by Jones et al[15] demonstrated how data on specific symptoms, such as haematuria, recorded in GP consultations were related to subsequent diagnosis of cancer and provide support for the early evaluation of alarm symptoms to identify underlying cancers at an early stage. Although the paper did not investigate prostate cancer, and there remains uncertainty about the predictive power of prostate symptoms to help detect prostate cancer, the paper by Jones et al demonstrates how these issues might be explored further.

Other studies have shown the value of using data from general practice to investigate the relation between prostate symptoms and prostate cancer[16,17]. GP clinical data from a two year period were used to identify pathways leading to a diagnosis of prostate cancer. Records were studied for 271 prostate cancers diagnosed between 1998 and 2000[16]. To assess the value of such symptoms in diagnosing prostate cancer, as opposed to other benign conditions, however, further work is needed to compare patterns of symptoms and GP consultations between patients with different conditions as carried out by Jones et al[15].

The rate of consultations for urological symptoms in our study are comparable with those reported elsewhere. The GPRD reported the incidence of urinary tract ‘alarm’ symptoms was 0.2 per 100 person years in 128 general practices using data from 1994 to 2000[15]. Other studies in the UK have reported the proportion of men with symptoms in those subsequently diagnosed with prostate cancer. In Sydney Australia[18], a telephone survey of lower urinary tract symptoms was conducted in 340 randomly selected men aged 40 to 80 years. Only 26% of men inconvenienced by urinary symptoms had seen a GP in the last 5 years about the symptoms, representing 37 out of a total of 340 (11%) in 5 years, leads to an estimate of 1% in six months.

The PSA data were available from a larger number of practices than from the GPRD. The uptake rate was highest in Coventry (80%) but lower elsewhere. The lack of response from some practices (only one practice actively replied as a refuser) is somewhat puzzling in Coventry. There was no work involved at the practices as all data were to be extracted from the laboratory. We also emphasised in our letter to the GPs that no data would be reported on individual practices or individual patients, and that the data would not contain patient names. As a criterion for participation was that the practices should have been sending more than 90% of their PSA requests to the laboratory at the main hospital within their PCT, it was very likely that some of the practices which did not reply were in fact those using more than one laboratory. This was almost certainly the case in Ealing which had a particularly low response rate. It was not feasible in this study to involve laboratories in neighbouring areas. The PCT age groups were preset at 45-59, 65-74 and 75-84 years by the availability of data on the numbers of men registered at each practice. Although the pilot targeted men over 50 years, it is unlikely that the inclusion of men aged 45-49 years will have had a major effect on the results.

To assess whether the uptake rate of the practices led to a bias in the characteristics of the populations registered at these practices, some variables which could be linked to the practice either directly (number of partners, and QOF points) or indirectly (IMD and census data on ethnicity) were studied. The practices in Coventry represented a similar proportion of practices with one partner to that found nationally (30% in the present study and 27% nationally in 2004[19]). The proportions of practices with one

partner varied in the control areas from 14% in Harrow to 47% in Ealing. The QOF points were generally high in all areas with the median ranging from 1019 in Croydon to 1045 in Harrow (the maximum potential value being 1050). The range of levels of social deprivation, using the IMD score, indicated that a higher proportion of participating practices in Coventry were associated with high levels of deprivation than practices in the other areas, but this reflects the overall distribution in the Coventry teaching PCT. This bias should in theory be an advantage allowing this evaluation to study the impact of the pilot in more deprived groups. Although a remit of the pilot was that it should reach Africans and African Caribbeans, the numbers in Coventry are not particularly high, and so any effect of the pilot on this population could not be readily detected by the methods of the present evaluation. (The maximum percentage of Africans and African Caribbeans associated with the general practices in Coventry was 4% whereas it was higher in other areas such as Croydon (32%)).

In a future evaluation it would be helpful to link consultation data directly to requests for diagnostic tests including PSA. It was not feasible to perform such analyses in the present study because the number of GPRD practices within each area was too small for the number of consultations to provide adequate numbers of PSA tests for analysis.

The main limitation with the hospital appointment data is that the effect of the pilot may not be detected in these data until a longer period after the start of the pilot.

There is very little information available in the research literature on the effects of initiatives about prostate symptoms and cancer designed to improve men's knowledge and change their use of health services. The design and evaluation of initiatives specifically concerned with informed consent about prostate symptoms were reviewed by Hewitson and Austoker[20]. In England and Wales a study investigated the impact of a brief patient decision aid on men's knowledge, attitudes and intention to have a PSA test[21] by using a randomised controlled trial design. The study showed that knowledge was increased but men did not alter their behaviour[21]. In the early 1990's a Mole Watcher campaign was launched in seven areas of England and Scotland to inform the public about the early signs of melanoma. The evaluation

study used an observational approach similar to the present study and showed that there was a sharp rise in use of GP[22] and hospital services[23] in the first few weeks after the start of the campaign but these effects gradually decreased.

8 CONCLUSIONS

The aims of this evaluation were tailored to meet the needs of the steering committee by providing a timely report to help assess the initial impact of the pilot using a limited budget. Therefore data were only collected for a six month period from the start of the pilot, and are subject to certain limitations according to the characteristics of each data source.

The evaluation was designed to assess the impact of the pilot in Coventry on general practice services through the use of data on consultation rates at four practices within the GPRD, and through the analysis of data on PSA tests from 44 practices within the Coventry Teaching PCT. The results in Coventry were compared with those in three control areas.

The objective of the pilot was to ensure that it did not raise anxiety, one outcome of which might have been to cause a sudden increase in use of NHS services. Within the populations covered by the GPRD, there was no sudden increase in GP consultations or prescribing for urological symptoms or conditions. Within the broad range of deprivation groups covered by the practices providing data on PSA requests, there was also no sudden increase in rates of PSA testing. In addition data were collated on new urological hospital appointments in men aged 50 or more years. Although there was no increase in appointments in Coventry, these data should be studied over a longer period as the impact of the pilot may take longer to emerge than for the other outcome measures.

The trends observed in this study seem to be part of a national trend towards increase PSA testing, in part associated with increased reporting of urological symptoms.

9 RECOMMENDATIONS

1. Further evaluation of the effect of the communication programme on knowledge, attitudes and intention to use NHS services to report prostatic symptoms should ideally be conducted using a randomized controlled trial.
2. The methods of distribution of the healthcare messages would merit a separate evaluation using both quantitative and qualitative techniques.
3. Ideally individual based data are required to study the impact of the pilot.
4. Future evaluation should be conducted using data collected for at least a year following the launch.

10 ACKNOWLEDGMENTS

Funding was provided by the NHS Cancer Screening Programmes. For the provision of data on PSA requests and urological appointments we are grateful to Dr.S Smith and M.Fordyce in Coventry, Dr. I Moniz, G Browning and in Croydon, Dr. F Geoghegan and Neil Bridgeman in Ealing, and Dr.D Wright and in Harrow. We thank Professor Mike Kirby for advice on the definitions of urological consultations and Dr. Tim Williams, GPRD, and Ms. Efrosini Setakis for the extraction and collation of the GPRD data. We wish to acknowledge the use of the National Primary Care Database managed at the National Primary Care Research and Development Centre. The Database was devised by Professor Deborah Baker and constructed by Justin Hayes at the Regional Research Laboratory, School of Geography, University of Manchester (Director: Dr Robert Barr); SEE IT consultancy designed and built the map interface. The database is currently maintained by Evangelos Kontopantelis and Sylvia Wright at NPCRDC. We would like to thank the project team at ContinYou for their help with the evaluation process. We acknowledge NHS funding to the National Institute for Health Research Biomedical Research Centre.

TABLES

Table 1: Rate (per 100 person years) of consultations for urological symptoms and for first ever consultations for urological symptoms in the first non-pilot (1st October 2005 to 31st March 2006) and pilot (1st October 2006 to 31st March 2007) periods in men aged 50 to 84 years with no prior diagnosis of prostate cancer or benign prostatic disease by area

Area		Coventry	Croydon	Ealing	Harrow
Consultations for urological symptoms					
First non-pilot period	No.	112	35	71	131
	Person years	1842.0	833.7	1709.6	2593.6
	rate	6.1	4.2	4.2	5.1
Pilot period	No.	122	31	64	119
	Person years	1844.8	846.6	1729.4	2598.9
	rate	6.6	3.7	3.7	4.6
Rate ratio of rate in pilot period compared with first non-pilot period adjusted for age at consultation*	Rate ratio	1.09	0.87	0.89	0.91
	95%CI	0.84,1.41	0.54,1.41	0.63,1.24	0.71,1.17
	p	0.51	0.57	0.48	0.46
First ever consultations for urological symptoms					
First non-pilot period	No.	42	17	32	57
	Person years	1756.2	794.9	1610.5	2453.7
	rate	2.4	2.1	2.0	2.3
Pilot period	No.	57	18	29	50
	Person years	1742.1	809.12	1631.7	2443.5
	rate	3.3	2.2	1.8	2.0
Rate ratio of rate in pilot period compared with first non-pilot period adjusted for age at consultation*	Rate ratio	1.34	1.04	0.89	0.88
	95%CI	0.92,2.04	0.53,1.47	0.54,1.47	0.60,1.29
	p	0.125	0.916	0.650`	0.521

Table 2: Results of regression analysis of the relation between the rate of consultations (per 100 person years) for urological symptoms in men with no prior diagnosis of prostatic disease, and age, time period and study area (Coventry compared with the Controls: Croydon, Ealing and Harrow combined)

2a - Urological Symptoms

	Rate ratio	Significance	95% Conf. Interval	
Time period				
First non-pilot	1.0			
Pilot	0.90	0.240	0.74	1.08
Study arm				
Controls	1.0			
Coventry	1.25	0.06	1.0	1.56
Interaction between Time period and Study arm				
Time x Controls	1.0			
Time x Coventry	1.22	0.223	0.89	1.67
Age group (yrs)				
50-59	1.0			
60-69	1.85	<0.001	1.51	2.26
70-79	2.71	<0.001	2.21	3.32
80-84	3.35	<0.001	2.56	4.39

2b - First ever urological symptoms

	Rate ratio	Significance	95% Conf. Interval	
Time period				
First non-pilot	1.0			
Pilot	0.91	0.507	0.69	1.20
Study arm				
Controls	1.0			
Coventry	1.06	0.737	0.74	1.52
Interaction between Time period and Study arm				
Time x Controls	1.0			
Time x Coventry	1.50	0.10	0.93	2.44
Age group (yrs)				
50-59	1.0			
60-69	1.41	0.014	1.07	1.84
70-79	1.43	0.026	1.04	1.95
80-84	2.27	<0.001	1.50	3.43

Table 3: Rate (per 100 person years) of prescriptions issued for urological conditions and for first ever prescribing for urological conditions in the first non-pilot (1st October 2005 to 31st March 2006) and pilot (1st October 2006 to 31st March 2007) periods in men aged 50 to 84 years with no prior diagnosis of prostate cancer or benign prostatic disease by area

Area		Coventry	Croydon	Ealing	Harrow
Prescriptions issued					
First non-pilot period	No.	349	143	434	782
	Person years	1842.0	833.7	1709.6	2593.6
	rate	18.9	17.2	25.4	30.2
Pilot period	No.	412	143	430	846
	Person years	1844.8	846.6	1729.4	2598.9
	rate	22.3	16.9	24.9	32.6
Rate ratio of rate in pilot period compared with first non-pilot period adjusted for age at consultation*	Rate ratio	1.18	0.98	0.97	1.09
	95%CIs	1.02,1.36	0.78,1.24	0.85,1.11	0.99,1.20
	p	0.03	0.86	0.65	0.08
First ever prescriptions					
First non-pilot period	No.	15	10	17	16
	Person years	1756.2	794.9	1610.5	2453.7
	rate	0.85	1.26	1.06	0.65
Pilot period	No.	11	4	8	12
	Person years	1742.1	809.2	1631.7	2443.5
	rate	0.63	0.49	0.49	0.49
Rate ratio of rate in pilot period compared with first non-pilot period adjusted for age at consultation*	Rate ratio	0.74	0.40	0.46	0.75
	95%CIs	0.34,1.61	0.12,1.26	0.20,1.07	0.36,1.59
	p	0.452	0.117	0.071	0.460

Table 4: Uptake rate of GP practices agreeing for their PSA data to be analyzed by area

Area	Coventry	Croydon	Ealing	Harrow	Total
No. practices identified by laboratories as users and sent invitation letters	63	63	74	47	247
No. practices replied and found to be ineligible*	8	6	17	3	34
No. practices potentially eligible	55	57	57	44	213
No. did not reply	7	15	25	16	63
No. replied and refused	4	-	-	-	4
No. consenting	44 (80%)	42 (74%)	32 (56%)	28 (64%)	146 (69%)

* send <90% of PSA request to study laboratory

Table 5: Age distributions (%) of men registered at the GP practices providing PSA data, and number of partners per practice presented by area

	Coventry		Croydon		Ealing		Harrow		Total		
	no.	%	no.	%	no.	%	no.	%	no.	%	
Age group											
	45-64	24995	65.5	27583	70.4	17585	72.4	21523	67.9	91686	68.8
	65-74	8005	21.0	7554	19.3	4507	18.5	6582	20.8	26648	20.0
	75-84	5132	13.5	4032	10.3	2206	9.1	3591	11.3	14961	11.2
	total	38132	100	39169	100	24298	100	31696	100	133295	100
No. partners											
	1	13	29.5	14	33.3	15	46.9	4	14.3	46	31.5
	2-4	20	45.5	19	45.2	12	37.5	13	46.4	64	43.8
	4 or more	11	25.0	9	21.5	5	15.6	11	39.3	36	24.7
	Practice total	44	100	42	100	32	100	28	100	146	100

Table 6: QOF points social deprivation score and percentage of population by ethnic group associated with practice post codes

	Coventry	Croydon	Ealing	Harrow
QOF points				
minimum	784.83	907.45	851.26	988.97
maximum	1050	1050	1050	1050
median	1025.67	1019.01	1022.99	1045.50
Total no. practices	44	42	32	28
IMD values				
minimum	4.14	5.05	7.86	5.72
maximum	78.76	39.85	49.82	39.60
median	35.93	22.11	24.7	13.18
Ethnicity, values associated with				
% African or Caribbean, range	0.64 – 4.18	2.2 – 32.1	3.58 – 12.84	1.85 – 11.48
median	1.79	11.75	8.97	6.64
% Asian, range	1.43 – 48.27	2.04 – 25.63	5.18 – 69.68	11.49 – 51.92
median	9.04	7.29	10.9	29.58
% white, range	43.4 – 96.06	38.64 – 91.4	16.25 – 83.86	36.56 – 77.35
median	86.51	70.67	71.39	57.23

Table 7: Rate of PSA testing per 100 men aged 45 to 84 years before and after the launch of the pilot presented by area

Period	Coventry		Croydon		Ealing		Harrow	
	no.	rate	no.	rate	no.	rate	no.	rate
1 st Oct 2005 to 31 st Mar 2006 (first non-pilot period)	1276	3.3	1685	4.3	743	3.1	1656	5.2
1 st Apr 2006 to 30 th Sep 2006(second non-pilot period)	1414	3.7	1652	4.2	735	3.0	1642	5.2
1 st Oct 2006 to 31 st Mar 2007 (pilot period)	1563	4.1	1850	4.7	707	2.9	1803	5.7
No. of men registered in general practice	38132		39169		24298		31696	
Rate ratio of rate in the second non-pilot and pilot periods compared with the first non-pilot period adjusted for age at consultation								
Result for Second non-pilot period	Rate ratio	1.11	0.98	0.99	0.99			
	95%CI	1.03, 1.20	0.92, 1.05	0.89, 1.10	0.93, 1.06			
	p	0.008	0.568	0.835	0.807			
Result for pilot period	Rate ratio	1.22	1.10	0.95	1.09			
	95%CI	1.14,1.32	1.03,1.17	0.86,1.05	1.02,1.16			
	p	<0.001	0.006	0.345	0.012			

Table 8: Poisson regression analysis of the relation between the rate of PSA testing per 100 men age, and time using linear splines to test for changes in the slope between the three periods

Table 8a Coventry

		Significance	95% Conf. Interval	
Age (yrs)	Rate ratio			
45-64	1.0			
65-74	2.48	<0.001	2.31	2.65
75-84	2.53	<0.001	2.34	2.73
Time period:	Regression coefficient			
coefficient measures the slope of the relation of rate of PSA testing to time(month)				
01/10/05 – 31/03/06 (first non-pilot)e of rate by month*	1.02	0.08	0.998	1.04
coefficient measures change in slope for period relative to slope in the first non-pilot period				
01/04/06 – 30/09/06 (second non-pilot period) ⁺	1.00	0.912	0.966	1.04
01/10/06 - 31/03/07 (pilot)	0.98	0.348	0.94	1.02

Table 8b Control PCTs

		Significance	95% Conf. Interval	
Age (yrs)	Rate ratio			
45-64	1.0			
65-74	2.74	<0.001	2.63	2.85
75-84	3.36	<0.001	3.21	3.52
Time period:	Regression coefficient			
coefficient measures the slope of the relation of rate of PSA testing to time(month)				
01/10/05 – 31/03/06 (first non-pilot)	1.00	0.710	0.99	1.02
coefficient measures change in slope for period relative to slope in the first non-pilot period				
01/04/06 – 30/09/06 (second non-pilot period)	0.99	0.569	0.97	1.02
01/10/06 - 31/03/07 (pilot)	1.03	0.010	1.01	1.05

Table 9: Results of Poisson regression analysis of the relation between the rate of PSA testing per 100 men to age, area and practice characteristics using data from the pilot period

		Significance	95% Conf. Interval	
Age (yrs)	Rate ratio			
45-64	1.0			
65-74	2.76	<0.001	2.61	2.93
75-84	3.49	<0.001	3.26	3.73
Area				
Coventry	1.0			
Croydon	1.28	<0.001	1.15	1.41
Ealing	1.01	0.812	0.91	1.13
Harrow	1.30	<0.001	1.15	1.46
Area and practice characteristics	Regression coefficient			
IMD	0.996	0.003	0.993	0.999
QOF points	0.998	<0.001	0.998	0.999
Square root of % African, African Caribbean	0.947	0.003	0.914	0.981
Square root of % Asian	1.028	0.024	1.004	1.053

Table 10: Six monthly rate of PSA testing per 100 men aged 45 to 84 years in the first non-pilot (1st October 2005 to 31st March 2006) and pilot (1st October 2006 to 31st March 2007) periods by PSA level and area (PSA readings with level not know are excluded from this table)

PSA level(ng/mL)		Coventry rate no.	Croydon rate no.	Ealing rate no.	Harrow rate no.
<2	First non-pilot period	1.9 723	2.3 920	2.0 481	2.9 927
	Pilot period	2.3 869	2.7 1044	1.7 402	3.1 978
	Rate ratio of rate in pilot period compared with first non-pilot period adjusted for age *	Rate ratio 95%CIs p	1.20 1.09,1.33 <0.001	1.13 1.04,1.24 0.005	0.84 0.73,0.95 0.008
2 to<4	First non-pilot period	0.6 226	0.9 351	0.4 103	1.0 313
	Pilot period	0.8 323	0.9 359	0.5 130	1.1 336
	Rate ratio of rate in pilot period compared with first non-pilot period adjusted for age *	Rate ratio 95%CIs p	1.43 1.21,1.69 <0.001	1.02 0.88,1.18 0.76	1.25 0.97,1.63 0.078
≥4	First non-pilot period	0.8 318	1.1 414	0.6 144	1.3 409
	Pilot period	1.0 364	1.1 441	0.7 174	1.5 480
	Rate ratio of rate in pilot period compared with first non-pilot period adjusted for age *	Rate ratio 95%CIs p	1.14 0.98,1.33 0.078	1.07 0.93,1.22 0.356	1.21 0.69,1.51 0.093
	Total male population	38132	39169	24298	31696

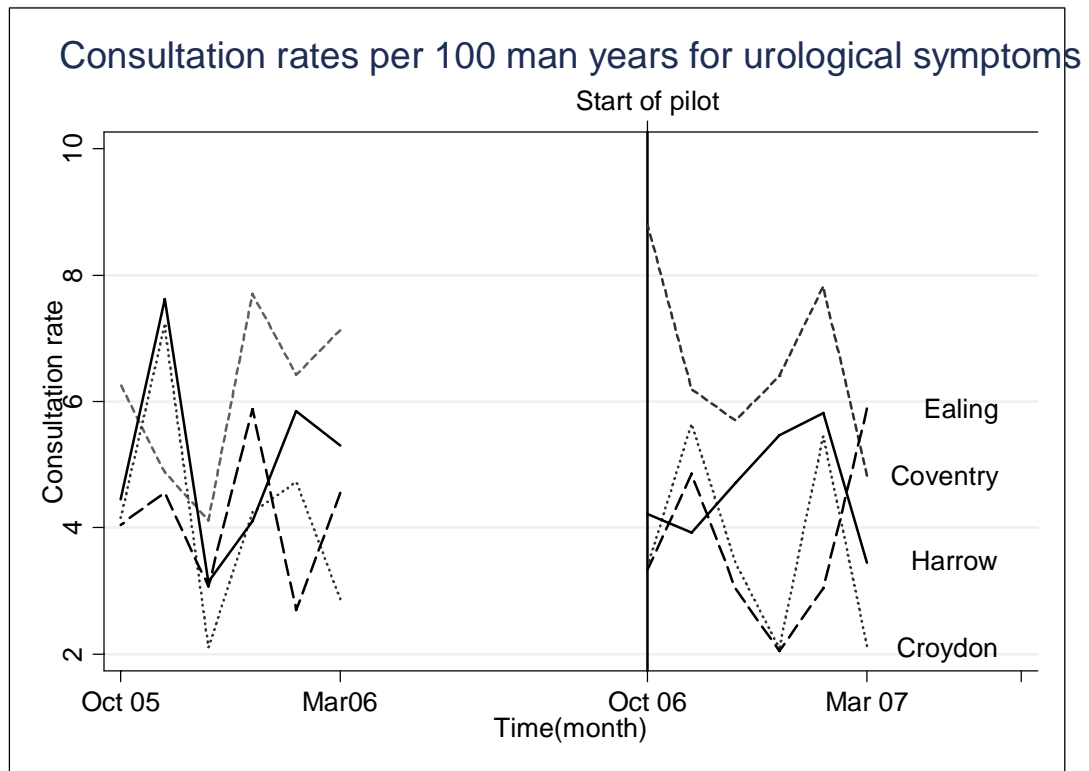
Table 11: Six monthly counts of new urological appointments for men aged 50 or more, in Coventry (restricted to 1st April 2006 to 31st March 2007) and in the control areas in the first non-pilot (1st October 2005 to 31st March 2006) and pilot (1st October 2006 to 31st March 2007) periods*

Area	Coventry	Croydon	Ealing	Harrow
First non-pilot period	----	782	514	1132
Second non-pilot period	681	----	----	----
Pilot period	697	988	469	1074

* these results cannot be expressed as rates as the size of population served by the hospitals is not known

FIGURES

Figure 1: the rate of consultations for urological symptoms (per 100 person years) in men aged 50 to 84 years with no prior diagnosis of prostate cancer or benign prostatic disease in the study areas by month



Figures 2a, b, c and d: the rate of consultations for urological symptoms (per 100 person years) in men with no prior diagnosis of prostate cancer or benign prostatic disease by age group and month for each area

Figure 2a

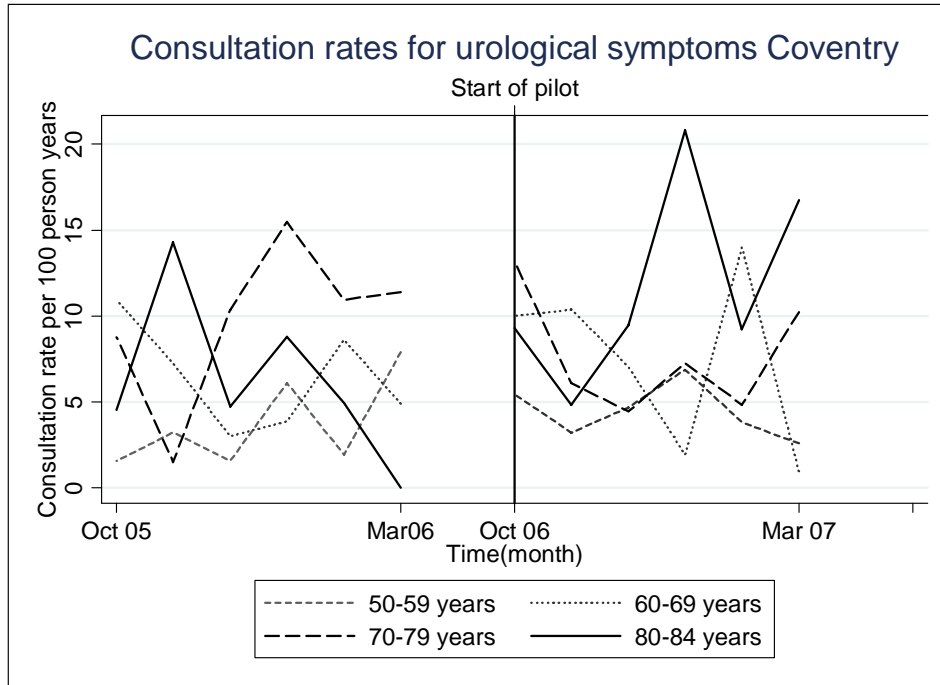


Figure 2b

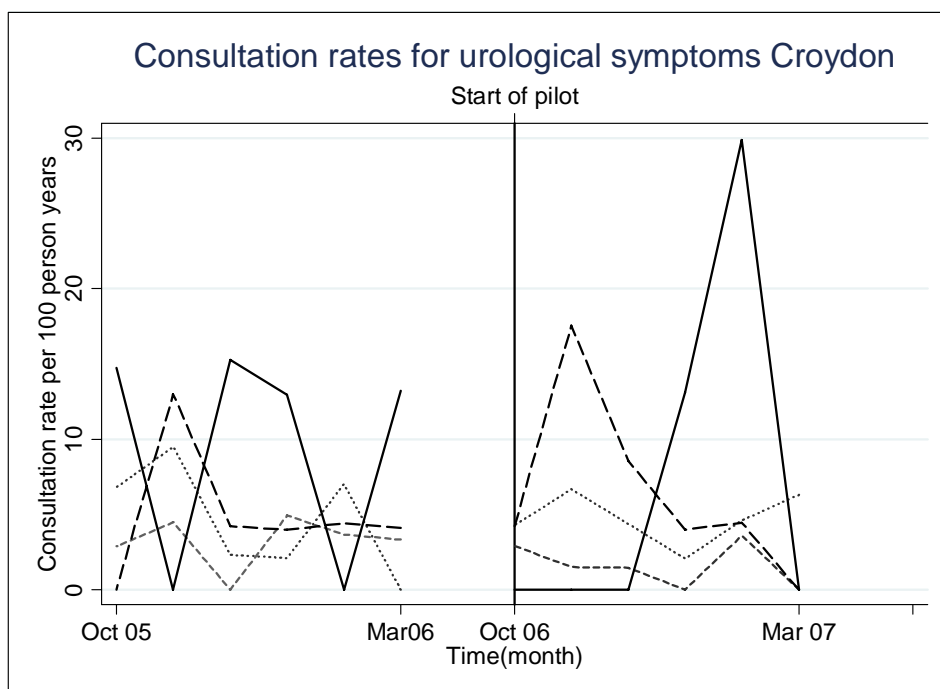


Figure 2c

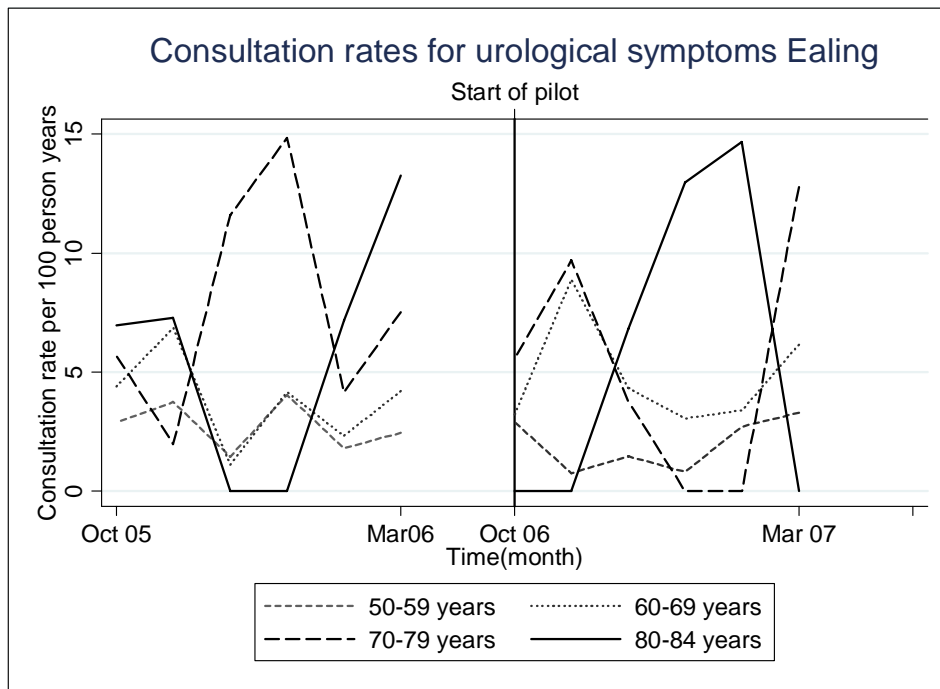


Figure 2d

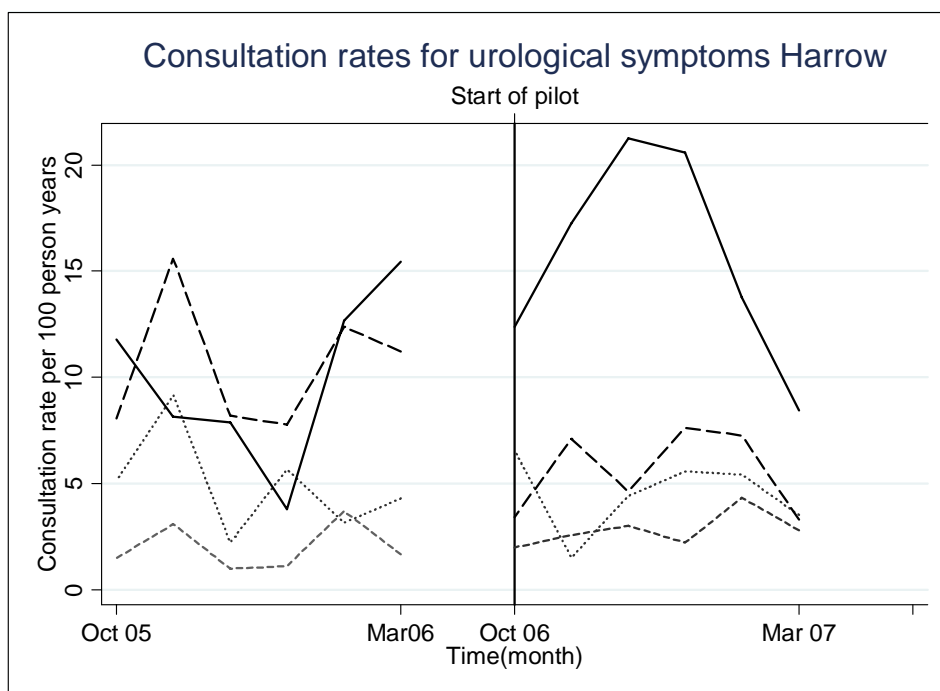


Figure 3 consultation rate of first ever presentation of urological symptoms per 100 person years in Coventry by age and time

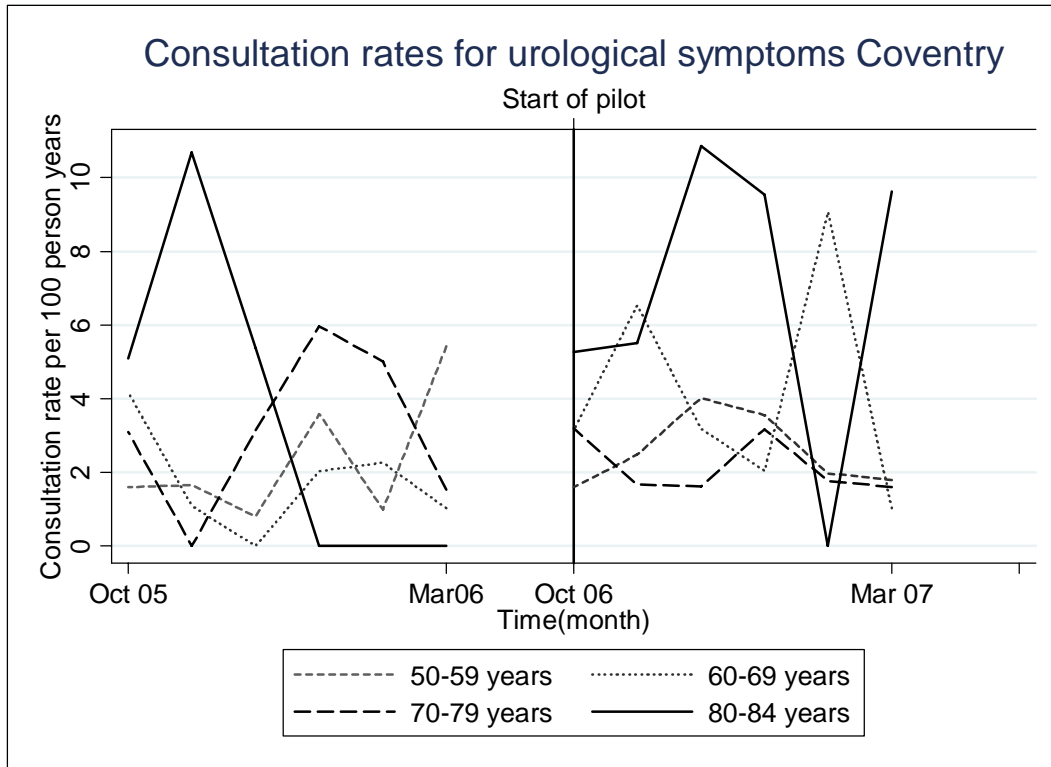


Figure 4: the rate of PSA testing per 100 men aged 45 to 84 years by area and month

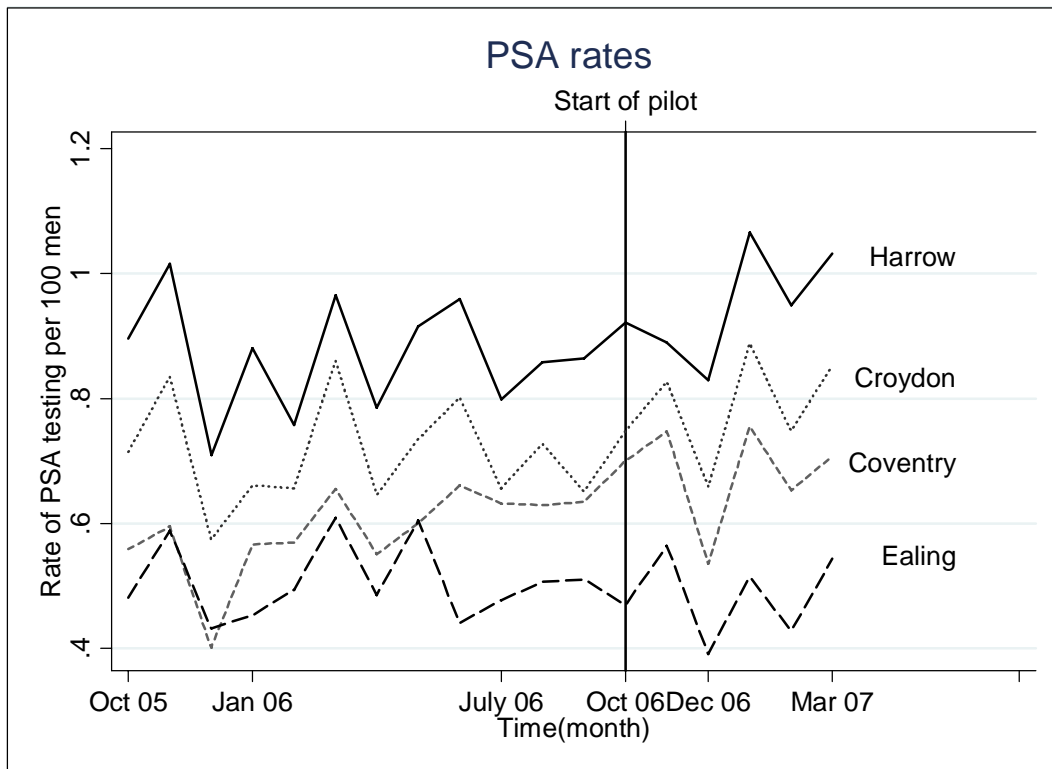


Figure 5a,b,c and d: the rate of PSA testing per 100 men aged 45 to 84 years by age and month for each area

Figure 5a

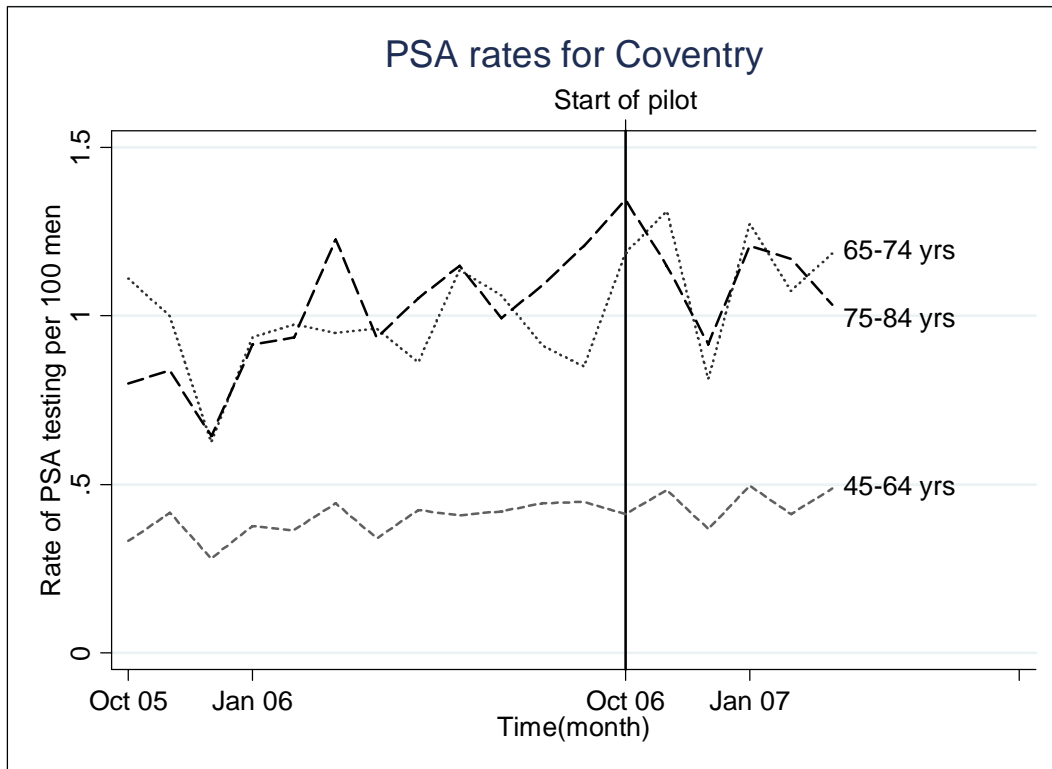


Figure 5b

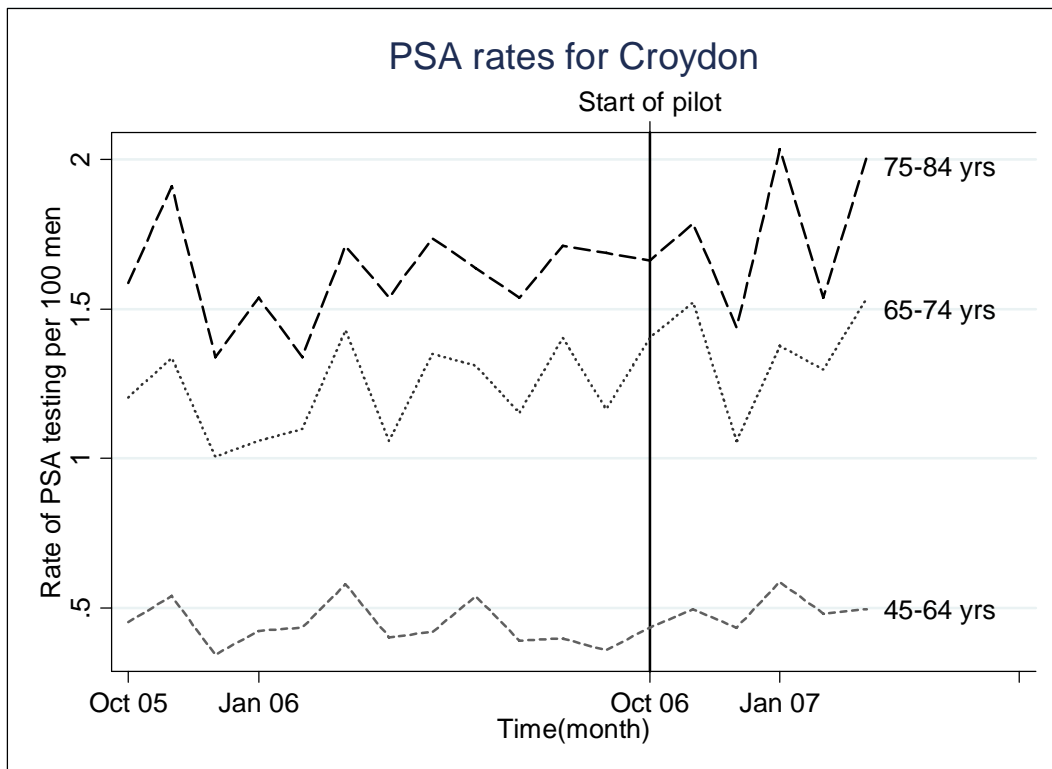


Figure 5c

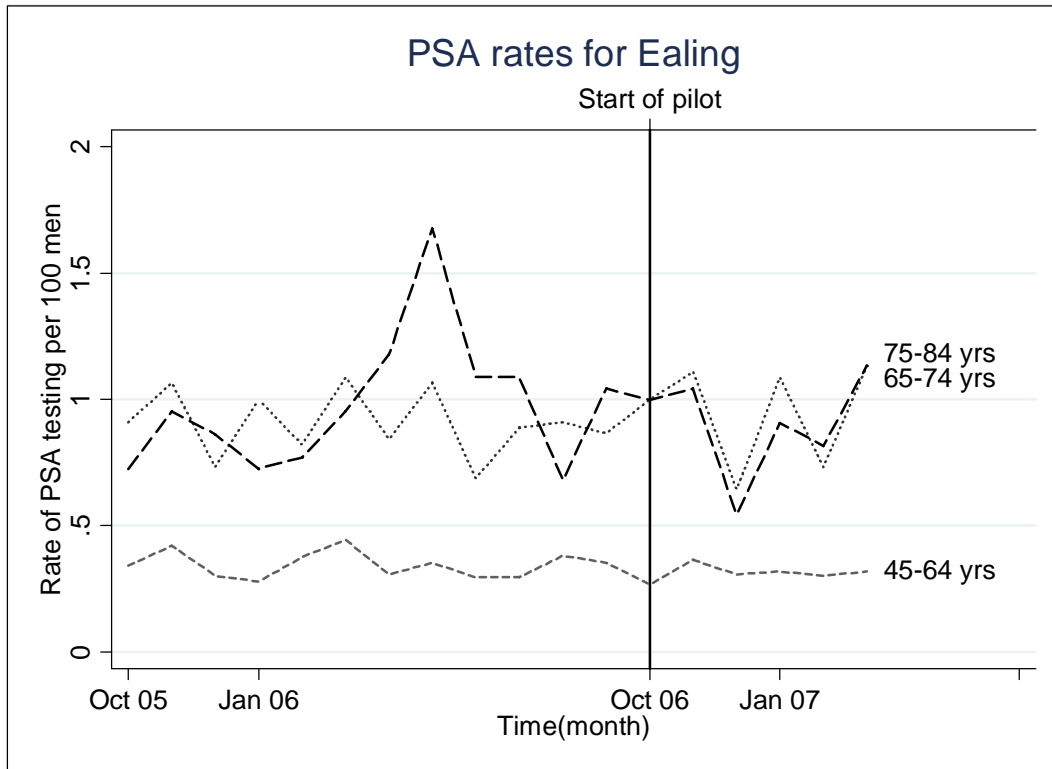
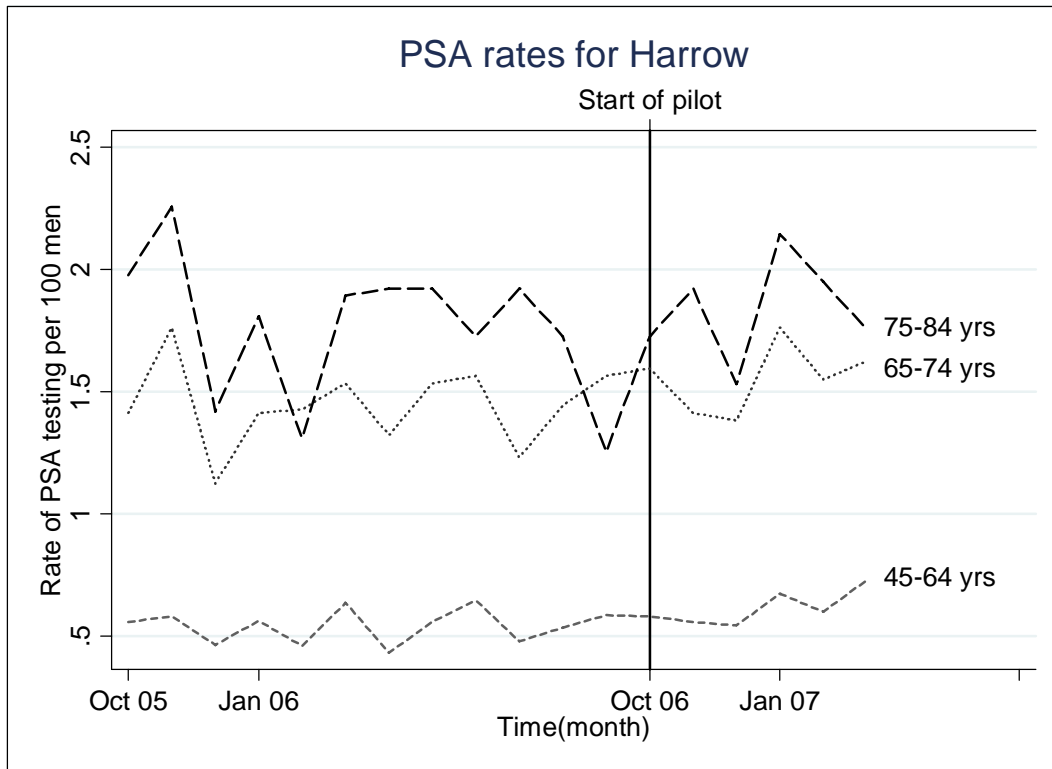


Figure 5d



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Key messages agreed by the Prostate Cancer Advisory Group**What is the prostate?**

- The prostate is only found in men. It is very important for a man's sex life, producing some of the fluid in semen. It is found below the bladder and is about the size of a walnut. It surrounds the tube that carries urine from the bladder
- When something goes wrong with the prostate, it can affect a man's sex life, his long term health and with prostate cancer can lead to death

What can go wrong with the prostate?

- Benign disease (Benign Prostatic Hyperplasia – BPH) – the prostate slowly gets bigger as men get older, and in some can cause difficulty when passing urine as the growing prostate puts pressure on the tube that carries urine from the bladder. BPH is treatable and is rare in men under 50
- Prostatitis – this is normally an inflammation of the prostate gland and can cause difficulty and pain when passing urine. Prostatitis is treatable and can occur in men of any age
- Prostate cancer – a single cell in the prostate begins to multiply out of control and forms a tumour. Some cells may break away and travel to other parts of the body, starting new tumours. Prostate cancer is treatable and can be cured in many cases. It is rare in men under 50 but gets more common as men get older

The symptoms of prostate diseases are similar:

- Needing to urinate often, especially at night
- Difficulty in starting to urinate
- Straining to urinate or taking a long time to finish
- Pain when urinating or ejaculating

Other, less common symptoms that may be prostate cancer are:

- Pain in lower back, hips or pelvis
- Blood in the urine (this is unusual)

However, these symptoms are often something else and not cancer.

Prostate cancer is different from most cancers – some prostate cancers grow slowly and may not cause problems, but some grow quickly and need early treatment.

If you are worried about any of these symptoms, you should go and see your doctor.

Where can I get further information?

NHS Direct On-line: <http://www.nhsdirect.nhs.uk/>

APPENDIX 1 contd.

DRAFT PILOT SCOPE (being developed during May to July 2006)
prepared by S Summer, May 06 for ContinYou

SOURCE

Who is the message coming from?

- Celebrity with a prostate problem
- Health professional:
 Consultant urologist, general practitioner, nurse, health educator
- Community leader
- Family member
- Friend/colleague

MESSAGE

What are the key messages?

Are the key messages appropriate, acceptable, understood?

CHANNEL

How will the message get to the intended people?

Print mass media:

 Cov Evening Telegraph, Cov Observer, PCT free newspaper, Limelight, other newsletters,
leaflets, posters

Phoneline- NHS Direct

Internet website

Local radio:

Face-to-face: talk by respected expert

Local event

INTENDED TARGET AUDIENCE & SETTING

Who and where?

3 intended target audiences:

All men over 50+

African Caribbean men over 50+

Relatives over 50+

Trial information interventions in following settings:

1X leisure/sports centre setting

1X community organisation

1X workplace

1X GP or hospital setting

OUTPUTS & OUTCOMES

What measurable changes after the communication?

More men knowing where their prostate is and what can go wrong with it

Recall of information items and where they saw the information

Understanding of the pros and cons of PSA testing

Numbers of men who are interested in their health as a result of the pilot

Number of men who say they will go to their GP if they have a prostate problem

Demographic profiles of the study areas based on results reported from the 2001 Census
(<http://www.statistics.gov.uk/census/>)

The higher the rank (1 being the highest and 376 the lowest), the higher the proportion of people or households in that category for a given area

Area	Sepd/divorc E & W <u>rank/376</u>	Households without car/van E & W <u>rank/376</u>	Unemployed E & W <u>rank/376</u>	No. Black Caribbean Males and females all ages	Overcrowding E & W <u>rank/376</u>	Total no. Males All ages	GPRD no. practices	Mean Socio- economic status score	
								GPRD practices	All PCT practices
Coventry	169	56	72	3,314	48	300,848	4	32.1	28.4
Ealing	347	69	80	13,507	14	147,563	3	25.7	19.8
Croydon	125	90	86	26,065	30	159,111	5	17.9	23.4
Harrow `	376	173	164	6116	27	99,953	5	15.2	13.6

Criteria for exclusions and inclusion for analyses of GP consultations using the General Practice Research Database (GPRD)

	Categories specifically related to the prostate gland	No. codes identified
Groups of diagnoses(*see table below for full details)	cancer of the prostate benign disease of the prostate	13
Groups of symptoms	rectal exam enlarged haematuria intermittency obstruction PSA retention storage urinary flow rate	73
Groups of prescriptions	uncontrolled flow eg. Oxybutynin, Tolterodine Tartrate, Solifenacin Succinate retention eg Finasteride, Tamsulosin, Dutasteride	104

* Table giving full details of codes using to identify certain diagnoses

READ_OXMIS_CODE	READ_OXMIS_NAME
B915.00	Neoplasm of uncertain behaviour of prostate
K20..15	BPH - benign prostatic hypertrophy
K20..00	Benign prostatic hypertrophy
B834.00	Carcinoma in situ of prostate
ZV10415	[V]Personal history of malignant neoplasm of prostate
B58y500	Secondary malignant neoplasm of prostate
B46..00	Malignant neoplasm of prostate
K20..14	Enlarged prostate - benign
185 C	PROSTATE CARCINOMA
185 CA	ADENOCARCINOMA PROSTATE
185 A	MALIGNANT NEOPLASM PROSTATE
600 BL	HYPERPLASIA BENIGN PROSTATIC
600 BN	BENIGN NEOPLASM PROSTATE