selected to pose more of a challenge to MDTs. Nevertheless, each of these cases had a pre-defined preferred treatment option.

Results The three cases rated straight-forward produced good agreement between MDTs, (Abstract P153 table 1) for radical vs palliative treatment. More complex cases resulted in less agreement between MDTs. One case (number 5) was excluded from analysis as it was clearly too ambiguous for MDTs to properly assess.

Conclusions We conclude this method to compare decision making by MDTs is a feasible tool. A roll-out is now planned to a further 50 MDTs to document more clearly the variation in decision making UK-wide. Even with this small sample of MDTs for just two Networks, complex cases clearly produce greater variation in the proportion of patients offered radical treatment.

REFERENCE

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P154 THE IMPROVING LUNG CANCER OUTCOMES PROJECT: A STUDY OF THE FEASIBILITY OF A NATIONAL RECIPROCAL PEER REVIEW AND FACILITATED QUALITY IMPROVEMENT PROGRAMME

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Background Variation exists in lung cancer outcomes in the UK, which does not appear to be wholly explained by differences in case mix. The Improving Lung Cancer Outcomes Project aims to address this via a 2 year programme of national reciprocal peer review and facilitated quality improvement. We describe the feasibility and acceptability of delivering this programme over the first year.

Methods All NHS trusts in England were invited to take part. Those who agreed were paired on the basis of contrasting results in four headline indicators from the national lung cancer audit. 15 pairs were randomised to the intervention arm and the remaining pairs acted as controls. The intervention group were invited to participate in workshops, reciprocal site visits, patient experience surveys and facilitated quality improvement (QI) work. Evaluation of this activity was performed using anonymous feedback, interviews with participants and observations of programme activities by external researchers.

Results 92 of 156 (59%) trusts agreed to participate. The site visits for the 15 pairs in the intervention arm took 6 months to complete and were attended by a total of 210 MDT members. The visits were seen as supportive yet opened up the possibility of legitimate challenge to existing ways of working. All 30 trusts in the intervention group were represented in the first patient survey, which had an overall response rate of 49%. However returns for individual trusts were low which reduced perceived credibility in some cases. 71 QI plans were submitted by 29 of the 30 trusts. These focused on a range of areas including data collection, diagnostics, and access to clinical nurse specialists. Considerable revision of the QI plans was required to ensure alignment with the overall project aims.

Conclusions We have demonstrated that reciprocal peer review and facilitated quality improvement planning is both feasible and acceptable as part of a national lung cancer improvement project. Organising timely site visits, providing credible patient feedback and maintaining the focus of quality improvement plans is challenging and requires considerable resource. The overall effect of the programme on patient experience and outcomes is awaited with interest.

P155 GP EDUCATION OF THE EARLY SYMPTOMS OF LUNG CANCER: DOES IT IMPROVE OUR EARLIER DIAGNOSIS OR STAGING OF LUNG CANCER?

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Introduction Detection of lung cancer at an earlier stage generally leads to a better prognosis. In the UK, there is a 62-day target from GP referral to cancer treatment; therefore the opportunity to improve earlier detection of lung cancer, in terms of stage, is dependent on earlier "red flag" symptom recognition and referral. We hypothesised that GP education of the early symptoms of lung cancer should lessen time from symptom onset to time seen in the Respiratory outpatients (OPA).

Methods We introduced a health campaign across Essex consisting of GP education and public awareness. Phase 1 involved GP education and phase 2 patient and public education. We compared patients referred with a diagnosis of lung cancer, in one centre in 2010 and 2011 prior to and after GP education, to ascertain if time of onset of symptoms to first attendance at lung cancer OPA improved. Patients who had a diagnosis of lung cancer were entered into a prospective database. Data collected included symptom duration, referral times and staging. GP education comprised of seminars and group visits to the multidisciplinary members in GP practices, as well as provision of information packs. Data were collected by members of the lung cancer team.

Results Data demonstrated no significant difference in mean symptom duration, nor the number of patients being referred at an earlier stage (Abstract P155 table 1). However, there was a 50% increase in the number of GP referrals during the period following intervention.

Conclusions These results demonstrate that GP education has not significantly increased early detection of lung cancer, although it has dramatically increased the number of 2-week referrals, this is noteworthy, since awareness of lung cancer symptoms may have improved in the GP population following education. It may be that targeting the public/patients themselves, will reduce the time of symptom onset to presentation to the medical profession. We will address this in the next phase of our study when we aim the education at the general public. This will help determine the impact

Abstract P155 Table 1 Comparison of data from pre and post GP education

	PRE GP education January–July 2010	POST GP education January–July 2011
Number of 2 week referrals from GPs	140	210
Lung cancer patients referred by GP	77 (55%)	72 (34%)
Mean age and SD	69.8 years±10.66	73.1 years±9.74
Mean onset of symptoms: (no of patients)		
≤3 weeks: mean (n)	1 week (9)	2 weeks (3)
1–6 months: mean (n)	3.2 months (51)	3.2 months (53)
≥6 months: mean (n)	13.8 months (4)	11.3 months (3)
Unknown/incidental (n)	(13)	(13)
Stage of NSCLC		
IA	3 (4%)	6 (8%)
IB	3 (4%)	2 (3%)
IIA	4 (5%)	6 (8%)
IIB	3 (4%)	2 (3%)
IIIA	11 (14%)	10 (14%)
IIIB	6 (8%)	3 (4%)
IV	31 (40%)	29 (40%)
Mesothelioma	9 (12%)	4 (6%)
Small cell	7 (9%)	8 (11%)

of increasing public awareness and education on earlier presentation of suspicious symptoms.

P156 NAEDI LUNG CANCER AWARENESS CAMPAIGN IN LONDON

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Background Lung cancer is the leading cause of cancer mortality in the UK. Survival rates over the last 30 years have not significantly improved. The NAEDI initiative is working to promote early diagnosis to improve stage at presentation and increase survival rates.
Objectives The project in Hammersmith & Fulham focused on the three most deprived wards, population 32 000). The aims were to increase public awareness and intention to act on symptoms by 10%, GP chest x-ray referrals by 15%, and Two Week Rule (TWR) referrals and, ultimately, earlier stage at diagnosis by 10%.
Methods Nine general practices in the target area received educational seminars on NICE guidelines, project details and aims. 40 pharmacies, 25 smoking cessation advisors and 30 district nurses received education on symptoms, communication and management skills, and were provided with campaign materials. The public campaign involved training 42 health champions in key messages regarding alarm symptoms. Face-to-face contact was made with 1300 people. Local advertising had an estimated reach of three million people. The campaign ran from February to July 2011.
Results Data on public perceptions were collected with a validated form of the Cancer Awareness Measure. On average there was a 12% increase in unprompted recall of the commonest lung cancer symptoms, and a 26% increase in intention to make urgent GP contact for such symptoms. Data from the 9 practices during the campaign period in 2011 compared to the same period in 2010 showed a rise in chest x-ray referrals from 350 to 463 (32% increase). In 2010 there were no TWR referrals and seven lung cancer diagnoses. For 2011, there was 1 TWR referral (lung cancer) and 10 new lung cancers diagnosed.
Conclusions Community engagement has been a success locally with active involvement of trained champions into future public health work streams. Data collection again next year is required to evaluate whether the increase in chest x-ray referral rates is maintained and translated into earlier stage at diagnoses. The success of primary care engagement needs roll out across the borough and embedding into future service provision to ensure sustainability.

P157 FOLLOW-UP OF PULMONARY NODULES: FOLLOWING THE FLEISCHNER RADIOLOGY GUIDELINES

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Background 0.1% of chest films and 1% of chest CT show incidental pulmonary nodule(s). While some of these are acted on immediately, others are followed up where the nodules are small and there are no risk factors (never smokers, age <35 years, other malignancies). Fleischner Society recommends interval CT follow-up of pulmonary nodules [MacMahon H *et al*, Radiology 2005], but whether we adhere to these is uncertain and presently we report our practices based on this.
Methods Over a 4-year period to July 2009, 145 of all cases discussed at our lung multidisciplinary (MDT) meeting had a pulmonary nodule(s). They are either considered for immediate action or subsequent follow-up. Mean (SD, range) year age for this cohort was 65 (11.04, 37 to 86) of which 82 were male and 63 female. Nodules were classified as single or multiple, and by initial size of the largest nodule where multiple.
Results Of the 145 cases, 97 had single nodule and 48multiple. Of these, respectively (n=absolute number) these were =4 mm (13), >4–6 mm (20), >6–8 mm (22), >8 mm (87) with do data in three. There were no follow-up data for 14, of whom 7 had refused subsequent follow-up, 4had been discussed at MDT but no more proposed, and three died. Where there were data for follow up, 69 (53%) followed Fleischner's guidelines on case selection and recommended interval scanning and 62 (47%) did not usually but not exclusively due to delayed imaging intervals. Classification by initial nodule size and whether appropriate follow-up or not and sub-divided by whether malignant or not is shown in the enclosed Abstract P157 table 1 (n=119, six still on active follow-up). Figures include those managed with PET scans whether under taken immediately (11) or later during follow-up (34). Of the entire cohort 28 had malignant disease of which 16 underwent surgery and 12 had an input through oncology. Of these, five had been identified as malignant because of increased size (2) or number (2) or because the nodule was persistent (1) but none had change in attenuation. Other cases where concerns were raised were benign (n=10) but were similarly being considered due to multiplicity of nodules (3), uncertainty (1) and a persistent opacity (1) but exact reasoning was not available in the five others.

Abstract P157 Table 1

Appropriate timing	Outcome	≤4 mm	>4–6 mm	>6–8 mm	>8 mm	Totals
Yes	Benign	4	4	4	30	42
	Malignant	1	3	1	16	21
No	Benign	6	10	14	19	49
	Malignant	–	–	–	7	7

Conclusion Data show that we conform to the Fleischner guidelines in approximately half the cases and these identified 15 who required further specific investigation and of which five had malignant disease. Although this is a small number of those followed up it supports the practice of follow-up but which still needs to better protocol driven.

P158 END OF LIFE CARE FOR LUNG CANCER; CAN WE IDENTIFY THOSE IN NEED OF SUPPORT

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Introduction and Objectives The End of Life Care Strategy advocates the identification and support of patients approaching the end of their lives, and to aid this, social care benefits can be awarded to those with a life expectancy <6 months by completion of a DS1500 form. Many lung cancer patients fall into this category: we wished to look at the use of this enhanced support mechanism in our busy lung cancer unit.
Method We looked at the use of DS1500 in the initial period for 100 consecutive outpatients with lung cancer diagnosed through our rapid access clinic in 2007 (mean age 73 years [SD 8], mean PS=2 [IQR 2], 47 females), comparing its use with survival and histological tumour type. Mortality data were obtained from the national registry.
Results Twenty two had a DS1500 completed (median 26 days [20] from presentation): there was no difference in age, sex or PS between these and the remainder. Of the 75 with a tissue diagnosis,