ACE Programme: Proactive Approaches to People at High Risk of Lung Cancer

November 2016 Cluster Update

Introduction

The ACE Programme identified and then ‘clustered’ six local projects that were aiming to take proactive approaches to identify and then test people who were assessed as being at high risk of lung cancer. Five of the six projects were aiming to use low dose CT (for appropriate patients) and the sixth project was designed to increase access to chest x-rays (CXR) by opening a self-referral service.

The self-referral CXR service was established in Crewe in July 2015 and has had over 200 attendances to date. ACE is intending to evaluate the benefits of this project alongside several other self-referral CXR services (some historical) in order to provide more depth and context to the evaluation. It is therefore not included in this report which focuses on the CT projects.

With regard to the CT projects, four of the five are now active (Guy’s and St Thomas’ is likely to be operational from winter 2016) and even though it is much too early to compare and share results, this short paper aims to raise awareness of these projects within an ACE context and provide some information on project methodologies and throughput to date pending final evaluation, which is due in March 2017.

National Context

Readers will be aware that there is currently no national screening programme for lung cancer in the UK. Evidence indicates that offering screening for lung cancer to all people of a defined age group, as is the case for other cancer screening programmes, would not be an effective approach using current methodology (CT scanning). The effectiveness of a proactive approach will rely on selecting and screening only those individuals who are at high enough risk for the benefits to outweigh harms. But there is still debate about the selection criteria and other issues such as participation rates.

ACE aims to help inform these debates by evaluating the four projects – particularly in terms of which methods prove most effective at identifying and then engaging people who tend to be less willing to engage in healthcare interventions.

The outcome of this evaluation and the final report should be available by March 2017 even though some of the projects may continue beyond this date. ACE understands that the National Screening Committee will be reviewing evidence for lung cancer screening towards the end of 2016 or early 2017.
Similarities and differences of ACE ‘Pro-active lung’ Projects

Each of the four ACE projects included in this update was designed and structured by local stakeholders to meet local needs. All of the localities were concerned about their poor lung cancer survival rates and this galvanised them to take action.

The Case for Action: Evidence indicates that the best way of improving survival is to identify lung cancers early when treatments are most effective. The best way of doing this is to find the cancers before they become symptomatic. Since the risk factors associated with lung cancer are so well defined, and the symptoms of early stage lung cancer so poorly defined, the approaches focus on finding and ‘checking’ people at high risk before symptoms have developed. Elements of prevention can also be included in these approaches e.g. referral to smoking cessation, which strengthens the case further.

Capacity and pathways: Some projects started by reviewing their existing lung cancer pathways for symptomatic patients to ensure that they were robust enough to deal with the increased throughput that would be generated by a proactive approach.

Funding arrangements: Service costs e.g. risk assessments and CT scans associated with the projects are mostly being met by local CCGs but some of the project management costs have been provided by ACE or through various other specific funding streams.

Orientation: The structure and orientation of the projects vary, with some established within a formal research framework and hospital based and others more driven by local primary care agendas and community based.

Messaging and media: Most of the projects ran focus groups to develop their messaging and then used social marketing techniques to define and target their high risk populations. Community events and media campaigns were sometimes part of the early phases to raise awareness and ‘soften’ community attitudes.

Finding those at high risk: All four projects used information searches within primary care systems to achieve an initial list of potentially high risk individuals, but then different methods and different criteria were used to refine the lists prior to issuing invitations.

Health Checks/Risk Assessments: The risk assessments are generally carried out by nurse specialists but the processes vary in terms of the risk algorithms used and the range of activities that take place during the health check e.g. cardiovascular disease risk assessment and smoking cessation counselling. The sessions range from 20–60 minutes in length.

CT arrangements: Mobile scanners are available in community locations for two of the projects, and access to hospital based scanners is being offered in the other two projects. Booking arrangements and time intervals set between risk assessment and CT also vary.

A high level description of each of the four CT projects is provided below:

Queries/Comments to Barbara.Gill@nhs.net in the first instance.
Liverpool Healthy Lung Project (A51)

Went Live: Community events from February 2016, Health Checks began 18 April 2016

Key Features:
- Historical link with UKLS Trial, involvement of Prof Field, University of Liverpool
- Strong cross organisational working, including three Trusts, public health & primary care
- Commissioned independent evaluation of project, in addition to ACE evaluation
- Phased approach starting with four neighbourhoods with high incidence

Messaging, Media and Social Marketing:
- Upbeat positive messaging – Healthy Lungs
- Running 80 community ‘warm up’ events in target neighbourhoods
- Used Community Health Ambassadors to deliver messages

Progress to date/Project Scope: Breakdown for first region (Picton: March – July 2016):
- 2471 invitations issued and 41% booked appointments
- 865 health checks undertaken, and had 87 DNAs
- 351 referrals to CT, 14 declined CT
- 306 CT scans reported to date. 31 lung nodules identified, as well as 59 with non-cancer significant findings
- 6 have been referred to local lung cancer services, 2 in imaging follow up and 4 have had surgical resections (23rd September 2016)

Criteria for a Health Check/risk assessment:
Anyone registered with Liverpool GP practice in target neighbourhoods, aged 58 – 70 with smoking history or COPD.

Health Check elements:
- 45 minutes long, carried out by respiratory nurse in a community health hub setting. Spirometry, discussion of potential symptoms and smoking advice included.
- Referrals to Smoking cessation clinics included if appropriate.

Definition of High Risk:
My Lung Risk Calculator (using LLP algorithm) being used with 5% increased risk over 5 years as qualification for CT.

CT Scanning:
This is booked by the nurses in the community health hub. Participants given choice of three local hospitals. The CT scan takes place within three weeks of the health check.

Next Steps:
- Capacity for 1618 CT scans to take place over the year has been commissioned
- Arrangements being refined with experience. Nurses providing valuable insight on patient views, and whole team approach working well.
Nottingham Health MOT Pilot (A91)

Went Live: As pilot, January – March 2016. Phase 2, January – May 2017

Key Features:
- Part of overarching public health initiative with political support
- Started with pilot at one GP practice, who then shaped health check
- Broader health check done as well as Lung MOT, CT in GP car park
- Lead provider commissioned to manage process
- Using some of UCLH’s methods/materials

Progress to date/Overall aim:
- 188 people identified as eligible to attend, achieved 35% response rate
- 64% of those assessed were offered a CT scan as a result of their risk score
- Of 41 eligible for CT, five declined offer
- 14% had undiagnosed COPD, 20% were started on statins, three lung nodules

Next Phase:
- Awaiting approval of business case for next phase
- Rollout to other GP practices, adding publicity and community events
- Aiming to achieve 50% uptake rate

Criteria for a Health Check/Risk Assessment:
65–75 year olds with history of smoking

Health Check elements:
One hour health assessment includes, spirometry, smoking cessation advice and referral, and a general NHS health check.
One of their aims is to increase smoking quitters along with improving early diagnosis and raising awareness of its benefits.

Definition of high risk:
The top 5% lung cancer risk patients as calculated by QCancer. This equates to > 0.68% lung cancer risk over 2 years. Due to available CT scanner capacity, the criteria was opened up to top 10% risk patients, equating to 0.37% lung cancer risk threshold over 2 years.

CT scans:
Mobile scanner in GP surgery car park, bookings arranged by GP surgery. Average time from health check to CT slot – one week.

Next Steps: The CCG has approved the roll out of the service to an additional 5 practices in an area of high smoking and deprivation rates. Clinics will start in January 2017 and continue for about 4 months. The Roy Castle Lung Cancer Foundation are supporting the project financially and through their marketing team’s input into public engagement including “roadshows” and publicity displays in health centres. With this additional resource the aim is to increase uptake rates to 50%. It is expected that 280 health checks will be conducted generating 160 scans.
Macmillan Cancer Improvement Partnership (MCIP) in Manchester Lung Cancer Early Diagnosis Service (A33)

Went Live: 13 June 2016

Key Features:
- Community-based One Stop shop with health check and CT offered same day
- Mobile CT scanners and health checks based in local car parks eg. supermarkets (appointments booked ahead of time, not ‘drop in’)
- Focussing sequentially on three separate CCG areas (four or five GP practices each, 14 in total)

Messaging and social marketing:
- ‘Sooner rather than later’ is key message. Lung Health Check is an MOT for lungs.
- Focus groups used to hone participant information – current smoker/ex-smoker differences noted
- Strong GP and grass roots community engagement, rather than widespread publicity

Criteria for a Health Check/Risk Assessment:
- People aged 55–74, smokers or ex-smokers (without recent chest CT)
- Letters to all in age range in 14 practices with current/former smokers asked to self-select
- Invitation is for a ‘Free’ Lung Health Check, if they are or were a smoker

Health Check elements:
- Health checks take place in community settings and last 20 minutes
- Undertaken by respiratory nurses
- Questions about symptoms, lung function and spirometry included

Definition of High Risk:
- Those with an increased risk greater than 1.51% over six years are offered a CT scan
- Risk algorithm being used is based on Tammemagi et al (2013)

CT Scans:
Mobile scanners located in supermarket car parks, one month per location and same day CT on offer to reduce drop out. One stop shop concept.

Progress to date:
- High level of demand, no chasing required to fill service capacity
- Original allocation of 2400 health assessment slots fully booked and additional capacity commissioned to clear waiting list
- Over 2000 lung health checks completed and eligible participants had same day low dose CT scan
- 3 month follow up scans for suspicious nodules underway
- Clinical outcomes are being recorded but not yet available to disseminate
University College London (A90)

Went Live: November 2015

Key Features:
- Pilot established as a formal research project; ‘Lung Screen Uptake Trial’ funded by a NAEDI/Cancer Research UK project grant
- Hospital based, UCLH and the Homerton
- Testing a ‘targeted, stepped and low burden’ invitation strategy using RCT design
- Has now spawned larger vanguard project

Messaging and Media and Social Marketing:
- Emphasis is on support and minimising fear, fatalism and stigma. Smoking cessation not mentioned in the invitations
- ‘MOT for your lungs’ and information about resections to combat fatalism
- Protocol and invitation materials and methods are published (Quaife, Ruparel, Janes, Wardle et al., 2016; BMC Cancer: 16: 281)

Criteria for a Health Check/Risk Assessment:
- 60-75 year old current smokers or recent former smokers are target group

Health Checks:
- Health checks take one hour and are done by research nurses
- Wide range of tests performed, blood and breath samples collected
- Information about pros and cons of screening given
- Randomised smoking cessation referral intervention is being tested (opt in vs opt out)

Definition of High Risk:
Aged 60–75 and 30 pack year smoking history and given up less than 15 years ago, or PLCO score of ≥ 1.51 over six years, or LLP score of ≥ 2.5%

CT Scans:
- These are carried out at UCLH or the Homerton.
- The risk assessment and CT scan are usually performed on the same day but in some cases may be performed within a few days or few weeks

Progress to date:
- 2000 invitations (1.5% of GP population) are being issued to potentially high risk people

Next Steps:
Continue recruiting until target sample size achieved. Follow up and data analysis.