Men and lung cancer: a review of the barriers and facilitators to male engagement in symptom reporting and screening

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Keywords

Cancer early detection
Cancer screening
Early diagnosis of cancer
Men
Gender
Gender roles
Lung cancer
Men's health

Abstract

Background: Lung cancer is the second most common cancer in UK men and is the leading cause of cancer death in the UK. Cancer prognosis is generally improved with earlier detection, thus men should be aware of symptoms and be willing to seek help for these.

Methods: A literature search was conducted using online databases, and information on lung cancer awareness-raising programmes was pursued via the internet.

Results: Evidence suggests that men are less likely to utilise population-level cancer screening programmes. Lack of awareness of lung cancer symptoms is more prominent amongst UK men than women, and non-specific symptoms may cause further misinterpretation or non-recognition. Men's fear of appearing un-masculine may result in them ignoring symptoms, yet some literature reports no gender difference in patient delay. Stigma attached to lung cancer may also hinder help-seeking behaviour. Factors that facilitate men's cancer awareness and help-seeking include family members' and female partners' influence, a close family member suffering with cancer, and health promotion campaigns.

Conclusions: An innovative approach is required to improve men's lung cancer awareness and likelihood to engage in screening. ''Push'' and ''pull'' strategies, involving elements such as social marketing, co-production and X-ray efficiency reviews may be of benefit. Focussing campaigns on important changes such as marriage, becoming a father, bereavement or physical impairment may influence men, and it is particularly important not to position men as ignorant or exclude certain groups of men. Lung cancer programmes must utilise in-depth independent evaluation methods to report their failures and successes, rendering results valuable in ongoing developments.

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Online 6 May 2011

Introduction

Men are at a higher risk for all cancers that affect both sexes[1], including lung cancer which is the second most common cancer in UK men, and the most common cause of cancer death in the UK [1,2]. Of the 39,470 people diagnosed with lung cancer in 2007, approximately 57% were men [2]. For UK men, lung cancer is largely attributable to lifestyle and behavioural factors, particularly smoking, and, although rates are dropping, they still have a higher lifetime risk of developing lung cancer when compared to UK women: 1 in 14 compared to 1 in 21, respectively [2,3].

There are two main types of lung cancer that originate in the lung: small cell lung cancer (SCLC) and non-small cell cancer (NSCLC). SCLC accounts for approximately one fifth of lung cancers, and is almost exclusively caused by

[1] Excluding breast cancer.

smoking [4]. NSCLC includes three main types of cancer: squamous cell carcinoma, adenocarcinoma and large cell carcinoma. These account for 35%, 27% and 10% of all lung cancers, respectively, with adenocarcinoma accounting for the majority of lung cancers in non-smokers [5].

The best prognosis for cancers is predominantly related to earlier diagnosis, enabling those with operable disease to have resection and those with inoperable disease to have less aggressive and extensive treatments [6]. Consequently it is extremely important that men are aware of symptoms and are willing and enabled to seek help for these.

Retrieval of studies

Relevant literature was identified through a search of various computerised databases including ScienceDirect, EBSCOhost and Elsevier, using search terms such as *lung cancer awareness*, *lung cancer screening*, *lung cancer early diagnosis*, *lung cancer gender*, *help-seeking gender*, and *help-seeking masculin**. A search was also carried out for lung cancer awareness-raising programmes using the aforementioned databases and the major internet search engines. The literature was restricted to publications dated between 2000 and 2010, although searching the reference lists of literature retrieved in the review yielded one further article published prior to this date that was deemed significant enough to be included.

Lung cancer screening: current status

Although screening is an option for some cancers, lung cancer screening is not currently recommended at population level, as studies have failed to demonstrate consequent reductions in mortality [7]. However, with developments in computerised tomography, the results of two large randomised controlled trials – (i) the National Lung Screening Trial, based in the USA and (ii) the Dutch-Belgian NELSON (Nederlands-Leuvens Longkanker Screenings ONderzoek) trial – are currently awaited to provide further evidence around the efficacy of lung cancer screening [7,8]. Whilst the full effectiveness of population screening programmes remains uncertain, lung cancer screening may also cause potential issues in terms of uptake of screening opportunities, particularly for men. Lung cancer presents biomedical difficulties with many of the pre-diagnostic symptoms being of a vague nature, and sometimes related to other, often less severe, morbidities [6,9,10]. This is important, as research around men and health help-seeking behaviour suggests that men are more likely to ignore vague symptoms and present at a more advanced stage in the disease process [11,12]. The UK's National Bowel Cancer Screening Programme, which is the first to target both men and women, appears to support this, showing a lower uptake in men than in women in both the pilot stage and the national programme rollout [13]. It is, therefore, vital that if any screening programme for lung cancer is developed it be tailored to target both men and women in gender sensitive ways.

Awareness

There are numerous reasons why patients may present later with symptoms of lung cancer. One key reason is lack of awareness of lung cancer warning signs. The symptoms of lung cancer, for which an urgent referral for chest X-ray would be offered, as listed in the National Institute for Health and Clinical Excellence (NICE) Clinical Guideline for the diagnosis and treatment of lung cancer are as follows: (i) haemoptysis, or (ii) any of the following unexplained or persistent (that is, lasting more than 3 weeks) symptoms or signs: cough, chest/shoulder pain, dyspnoea, weight loss, hoarseness, finger clubbing, cervical/supraclavicular lymphadenopathy, features suggestive of metastasis from a lung cancer (for example, in brain, bone, liver or skin), and irregular radiological imagery from chest X-ray (i.e. chest signs such as the Golden S sign and the luftsichel sign) [14]. Whilst most of these symptoms may be noticeable by patients, experienced symptoms, such as changes in breathing patterns, chest pains, extreme fatigue or an irritating cough, were reportedly not associated with lung cancer by patients in Corner et al.'s study [15]. Another recent study found that many expected their experience of lung cancer to be much more acute [16] and, as

mentioned above, vague symptoms can lead to later presentation amongst men in particular. In contrast, Smith et al. reported that haemoptysis, and new onset of shortness of breath, cough or loss of appetite were associated with earlier consulting [9]. Although these studies have not compared male and female responses it should be noted that men have been reported to have less knowledge of cancer warning signs (including cough/croaky voice/difficulty swallowing that lasts longer than 4 weeks, unexplained weight loss, and unexplained pain or ache lasting longer than 4 weeks) than women [17,18].

Linked to lacking awareness is non-recognition of the seriousness of symptoms [10,19]. Men's more pronounced lack of awareness means they are less likely to pick up on the seriousness of lung cancer symptoms [20]. Corner et al. found that, of the 22 participants involved in their qualitative retrospective study, many ''felt what they were experiencing was probably a minor problem'' [15]. Another study reported that patients felt that the symptoms of lung cancer were negligible, and hard to define [16]. Related to this, are two themes: (i) health changes may be thought normal, part of ''everyday'' fluctuations in bodily functioning, or due to pre-existing conditions and, (ii) changes may be interpreted separately from one another, thus often attributed to non-illness-related causes [9,15,16]. Men have attributed symptoms such as fatigue to advancing age, and often thought coughs were the result of changing environments, such as a newly installed air conditioning system in the workplace, or a new job which put the individual in constant contact with lorry exhaust fumes [15,16]. One recent editorial drew upon primary care experience, stating that the non-specific symptoms of lung cancer are common in primary care populations, and even haemoptysis, possibly the most alarming symptom for a patient to experience, may be attributable to several other common causes, including chest infection [21]. This ''normalisation'' of lung cancer symptoms due to the non-severe nature of, what are interpreted as, unrelated issues, has been seen in a number of studies and has been noted to persist until symptoms worsen to a point where they become incapacitating and thus impact on everyday activities, particularly amongst men [12,22].

Presentation

Bearing in mind the non-specific symptoms of lung cancer, studies have reported that lung cancer patients often believed that their pre-diagnosis symptoms were too trivial to warrant an appointment with a practitioner [15,16,23]. One man clearly highlighted this view:

> *You don't want to waste the doctor's time because the message is you don't need a doctor for 95% of things that are wrong with you. You know, you phone NHS Direct* [a telephone health advice service], *you talk to a pharmacist and you say, "I've got this niggling cough," and he gives you cough medicine"* [16]

Such beliefs may be stronger amongst men than women, with women repeatedly shown to consult general practitioners (GPs) [24,25] and report subtle symptoms [12,26] more often. It has been suggested that the medicalisation of women's lives contributes to their readiness to consider symptoms and seek practitioner's opinions [12,27]. This is supported by others who report that men experience symptoms in an equivalent way to women, yet their help-seeking behaviours differ [28]. This could be due to the propensity of some men to worry less [29], whilst it could also be the resultant of men's reported tendency to ignore symptoms [11,30].

Much literature has argued that men's unwillingness to seek help is due to gender role socialisation [11,27,31]. A recent qualitative study involving 55 Scottish men specifically highlighted their unwillingness to report ''minor'' symptoms. For some men wasting a doctor's time was a deterrent; many thought it weak and un-masculine; and the idea of suffering to a certain degree to ensure consulting with something concrete was important in maintaining a (hegemonic) masculine identity [32]. Interestingly, a recent qualitative study on male GPs' views of men's use of the health services suggested that, considering the high demands on their time, GPs may be thankful for the group of people (i.e. the stoic men) who are ''quite well trained'' and only consult for ''real health problems'' [28], and this is supported by the research of Seymour-Smith *et al* [33]. GPs placed self-referral as a feminine behaviour, and reported that men often actively avoid attending for trivial issues at the risk of being labelled an ''inappropriate attender'' [28]. Men who strive to conform to traditional constructs of

masculinity may, therefore, render themselves at increased risk of lung cancer mortality due to later presentation.

In contrast others have found that gender differences in response to symptoms are not evident, especially when they may be suggestive of serious disease [11]. A recent literature review found that gender had no effect on patient delay (time between first noticing a symptom and presentation to GP) for those with lung cancer [10]. Indeed, one study reported that GPs believed the older stoic generation of men were being replaced by a younger generation of ''*18–25 year olds who are totally irresponsible in the demands they sometimes place on* [the GP] *service*'' [28]. The National Cancer Intelligence Network states that men do not knowingly delay seeking help, although they do have less knowledge of cancer symptoms than women [34]. In addition, practitioner delay (time between initial consultation and referral to secondary care), largely due to misdiagnosis, was more likely to be experienced by men with lung cancer than by women [10]. One possible reason for this may be due to the way in which symptoms are presented: a man, unaware of the symptoms of lung cancer, who has an irritating cough and extreme fatigue may be more nonchalant and present his symptoms to a GP ''in passing'', whereas a woman who, with her reportedly better knowledge of lung cancer symptoms has attributed a variety of symptoms to lung cancer, and booked an appointment specifically to discuss these, may be more urgent in her consultation and may, therefore, receive a quicker referral.

Stigma

Bearing in mind men's concerns about making unwarranted appointments and ''needlessly'' taking up a busy GP's time, it is important to consider the stigma associated with lung cancer. Studies have found a widespread view that those with lung cancer often experience blame and stigma for their illness due to its strong causal association with smoking: an avoidable risk factor [15,16]. A recent qualitative study interviewed 45 patients about their lung cancer: some were smokers, some had never smoked and some had given up smoking for 20–30 years. Findings showed that patients believed they were stigmatised because people frequently associate lung cancer with smoking and other ''dirty'' manmade substances such as diesel fumes, asbestos and pollution [35]. This was found to have serious consequences for some participants, who delayed seeking support as a result of felt stigma and thought they would be given inferior medical support if they smoked [35]. This concurs with other studies that have reported that smokers may feel unworthy of treatment [15].

Cancer Research UK has reported that smoking is responsible for 90% of lung cancer deaths, accounting for approximately 31,734 deaths from lung cancer in the UK in 2008 [2]. This equates to approximately 3,500 deaths from lung cancer in 2008 that were not related to smoking. Sun et al. reported that lung cancer is widely viewed as a smoker's disease and those who have never smoked will often suffer the same stigmatisation: a feeling that their disease was self-inflicted [36]. This is supported by Chapple et al.'s finding that those who didn't smoke felt blame for their lung cancer regardless of current smoking status or history [35]. It is, therefore, also important to consider never- and ex-smokers when developing lung cancer awareness programmes.

Whilst consideration has been given above to factors that may discourage men from seeking help for the symptoms of lung cancer, it is also important to consider factors that facilitate and legitimise health help-seeking behaviour.

Family members

Family members are reportedly vital in influencing help-seeking behaviour. For some, this may constitute early symptom recognition and encouragement to seek help [37]. For men in particular, female partners are often vital in persuading them to seek help for cancer symptoms [16,38], and studies have reported partners forcing consultation by acting on their behalf [27]. Similarly, living with a female partner increases men's knowledge of prostate cancer [39], whilst living alone is a risk factor for delayed consultation with a GP [9]. A family member's sanction is seen to legitimise a man's help-seeking behaviour, thus removing the fear of ''time-wasting'' or appearing weak: both extremely important factors for men conforming to traditional (hegemonic) views of masculinity [27]. One study highlighted how

it may not be that men do not wish to consult for symptoms but rather that by waiting until consultation is suggested by a female partner or family member, men can convey that they have been pressured and thus male hegemony can be maintained [38].

Sensitisation

Another form of legitimisation for men is sensitisation through a friend or family member suffering with cancer. Chapple et al. reported that if a man's friend or family member had testicular cancer they were more likely to be aware of the warning signs and self-examine [40], whilst male GPs have reported that men often used their knowledge of a friend's or family member's illness to justify a consultation for similar symptoms [28]. This form of legitimisation enables men to present as informed, health conscious individuals, rather than appearing weak or neurotic [38].

Health promotion campaigns

A recent qualitative study found that GPs thought health promotion campaigns allowed men to ''present themselves as being 'sensible' in seeking help or advice'' [28]. In relation to this, it has been recommended that raising public awareness of cancer amongst men is key to reducing men's anticipated delay in consulting for symptoms [17]. Notably, past campaigns have been reported to exacerbate the stigma of lung cancer, featuring patients who wish they had never smoked, yet failed to practice self-care and give up smoking, and are therefore now facing, or have since faced, death [23,35]. Street's analysis of a 2004 smoking cessation poster advertisement printed in a mass-produced magazine highlights how smokers are painted as irresponsible and nonchalant in relation to their own self-care [41]. Such media messages may reinforce the stigma attached to lung cancer and smoking, placing blame on the individual, and creating a particularly defeatist attitude for those who suspect they may have lung cancer. In turn, this may delay earlier diagnosis and treatment. One recent study also found that men did not respond well to smoking cessation campaigns that used scare tactics to elicit emotions, perceiving this approach as manipulating [42]. One idea to consider employing to help overcome stigma and fatalistic outlooks, whilst raising awareness, is to focus on a patient's prospects, rather than using scare-tactics and drawing upon their past. An example of this is the American ''Faces of Lung Cancer'' project, which tells the stories of the treatments those with lung cancer have had, or are currently undergoing [43]. These ''stories'' begin at the symptom recognition stage. Whilst giving hope for possible treatments, they also act to raise awareness of symptoms which, together, may encourage earlier consulting.

What can be done?

With men displaying lower levels of lung cancer awareness, it seems innovative approaches are required. Several of the latest awareness campaigns reveal approaches that show promise, however a paucity of evaluative research conducted on these campaigns restricts the forming of firm statements on effectiveness. Earlier diagnosis could be encouraged through social marketing: a method which could be used to increase awareness amongst healthcare professionals as well as the general public [16]. One possible strategy involves combining ''push'' and ''pull'' approaches: pushing people towards services by using social marketing, campaigns, community events and co-production, and then pulling them through the ''system'' as quickly as possible, via awareness raising and training for those working in primary care, and reviews of the sufficiency and efficiency of X-ray services in secondary care [44]. Such methods have recently been employed by the ELCID (Early Lung Cancer Intervention in Doncaster, UK) project and provisional results suggest that the campaign has led to more people presenting if they have had a cough for 3 weeks or longer, and also more requesting an X-ray [44,45]. Whilst the campaign appeared to encourage presentation, 2009 results showed that GP support was key in increasing X-ray numbers, indicating that an integrated ''push–pull'' approach is vital for increasing lung cancer awareness and screening [46].

A further consideration is that shifts in men's health-related practices may be more likely if they are focussed around other poignant events such as marriage, becoming a father, bereave-

ment or physical impairment [47]. A recent study investigated the effect of smoking cessation images on 20 new fathers living in Canada and reported that ''the dominant discourses of responsible fathering and parenting and the incompatibility of smoking and fatherhood provide influential scaffolding for the building of powerful health promotion messages'', although the authors were cautious about this controversial finding [42]. Some scholars disagree that hegemonic masculinity, in this case the father as a provider and protector, should be used to encourage healthful behaviour as such exploitation may only serve to hinder men's health at a later date [28,48]. For example, endorsing the father as a provider and protector who must be there for his family may discourage him from seeking help in the future, due to fear that he may be diagnosed with something that would interfere with his fathering ''role'', or simply because he wishes to appear strong for his family.

Marriage or a decision to cohabit, may be considered another significant event in a man's life. Although the legitimisation offered by female partners is evidently important for men's help-seeking behaviour, studies report that it is also important not to place too great an onus on this. Health promotion programmes should not act to reinforce traditional stereotypes of stubborn, ill-informed men averse to seeking help with women as the ''fussing'', ''nagging'' ''custodians of family health''. Although placing the responsibility for forcing help-seeking onto women enables men to uphold their masculinity, it can also disempower men by positioning them as naïve dependants, and also by rendering health services unavailable to men without such women to ''help'' [28,48].

It may also be argued that no change of circumstance should be required to encourage help-seeking behaviour amongst men, rather health promotion should address the constructions of masculinity. One recent study found that men's health behaviour could be predicted by men's views of masculinity and how they believed other men behaved, therefore, deconstructing these beliefs and showing men how health-behaviour changes could boost their masculinity may be a viable option [31].

In conclusion, there is currently a wide variety of literature available on men's help-seeking and the negative effect of this on men's health [27,31,48]. The problem is a complex one, particularly in relation to men and lung cancer where symptoms are vague and often considered trivial. Men have reportedly lower levels of lung cancer awareness than women and, since some reports have stated that men do not delay seeking help, particularly when serious illness is suspected, there is good reason to focus effort on raising men's awareness of lung cancer symptoms. A recent commentary on cancer prevention highlighted the gaps in research on effective cancer awareness and prevention programmes [49], whilst a systematic review has reported that preventative health programmes for men often focus on the early setting-up and functioning stages rather than on outcome evaluation [50]. Such issues have been reported in the literature for a number of years [47], thus the closing recommendation is that lung cancer programmes should utilise in-depth independent evaluation methods to report their failures and successes. Such evaluations could then be utilised to inform ongoing developments in programmes aimed at improving men's lung cancer symptom awareness and reporting and, in turn, their prospects for engagement in screening.

Acknowledgements

The authors would like to thank Gary Raine for his valuable comments and suggestions during the development of this paper.

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