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Stigma in Lung Cancer



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Despite substantial reductions in smoking prevalence, lung cancer is the leading cause of cancer-related mortality for both genders in the United States. In 2016, lung cancer is expected to be responsible for 158,080 deaths. Tobacco smoking is still the number one risk factor for lung cancer and has been linked to 90% of all lung cancer cases. Currently, only 15% of all lung cancer cases are diagnosed at an early stage. Historically, these poor rates were due to the lack of effective routine screening. This changed dramatically in November 2011 when the National Lung Cancer Screening Trial (NLST), released their results that showed low-dose computed tomography (LDCT) could reduce lung cancer mortality by 20%. LDCT is now widely recommended for current and former smokers. Identification of all barriers and facilitators is essential for the successful promotion of lung cancer screening. Denormalization of smoking has been one of the most successful tobacco control measures and is associated with a sharp decrease in the prevalence of smoking. However, smoking is now concentrated in the most vulnerable populations (e.g. lower income groups and the mentally ill) who have the least ability and/or willingness to quit. In addition, denormalization has the effect of sanctioning smoking related stigma. A majority (95 %) of lung cancer patients experience stigma, with 48 % of lung cancer patients specifically reporting feeling stigmatized by their medical providers. Perceived lung cancer stigma is defined as a personal experience characterized by exclusion, rejection, blame or devaluation. Lung cancer conjures up attributions of blame because it is associated with smoking cigarettes and is perceived to be a controllable behavior. Perceived lung cancer stigma is a risk factor for poor psychosocial and medical outcomes in the context of lung cancer diagnosis and treatment. People often associate lung cancer with previous smoking behavior, regardless of whether the person with lung cancer was a smoker or not. There is growing body of evidence that patients, caregivers, healthcare providers, and members of the general public have negative implicit attitudes toward lung cancer. Perceived lung cancer stigma is one barrier that can

delay the detection of lung cancer because of fear of health professionals' censure associated with smoking. In our previous work we found that there were four beliefs associated with whether older (>55) current and former smokers would agree to lung cancer screening (LDCT): Perceives accuracy of the LDCT as an important factor in the decision to have a LDCT scan; Believes that early detection of LC will result in a good prognosis; Believes that they are at high risk for lung cancer; and is not afraid of CT scans. This study showed that older smokers are aware of the risks of smoking, are interested in smoking cessation, and most are interested in and positive about LDCT. There are no studies that have examined the impact of perceived lung cancer stigma on the decision to have an LDCT. To address this gap, we conducted a secondary analysis in which lung cancer stigma was measured by five true or false items: doctors treat smokers badly; doctors have a bias against smokers; cigarette smokers keep their smoking a secret from important people in their lives; cigarette smokers avoid talking about smoking with their doctor; cigarette smokers feel guilty about their smoking; and friends and family are upset that I smoke. Four variables demonstrated a significant association with LDCT agreement: People treat smokers badly; Doctors have a bias against smokers; Smokers feel guilt about smoking; and Friends and family do not approve of my smoking. Only two of the independent variables made a unique statistically significant contribution to the model. A test of the model against a constant only model was statistically significant, indicating that the predictors as a set, reliably distinguished between those who would agree to an LDCT and those who would not agree (chi square = 8.5 p. = <.1 with df = 4). The model as a whole explained between 43% of the variance in agreement to have a CT scan, and correctly classified 83.2% of cases. The strongest predictor for agreeing to a LDCT was "People treat smokers badly", (OR 3.7, 95% CI .143-.971). Participants with this belief were almost 4 times less likely to agree to a CT scan than those who did not have the belief. The odds ratios for the remaining predictor, Doctors have bias against smokers, was OR 1.7, 95% CI 1.47- 4.90; Believes that they are at high risk for LC (OR 2.1, 95% CI 1.8 – 3.12). **DISCUSSION** The decision to agree to a LDCT is negatively associated with two indicators of perceived stigma, "people treat smokers badly" and "doctors have a bias against smokers." These findings suggest that stigma is a barrier to preventative care utilization much like it is for patients with HIV, STDs, TB and mental health problems. Smokers from

deprived communities are an important group to engage with lung cancer screening but thus far participation in trials has been skewed towards former smokers and better educated smokers. With the current demographic profile of smokers, the effectiveness of a lung cancer screening program depends in part on whether there are inequalities in participation which has the potential to exacerbate disparities in lung cancer survival. Given the impact of lung cancer stigma on satisfaction with care and patient outcomes it is imperative that further research explore the association of perceived lung cancer stigma and the decision to have LDCT.

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Indigenous Population with Lung Cancer



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Background: As the most common cancer and the leading cause of cancer deaths worldwide, lung cancer has garnered increasing attention and efforts to reduce its toll. In contrast to the wealth of information on lung cancer burden for the general population, a rapid review of the academic literature (published in the past 10 years) to identify articles about lung cancer in Indigenous populations of four comparable OECD countries, found a paucity of information. The reasons for the paucity of articles are multi-faceted and most likely related to the lack of indigenous identification in health and cancer administrative datasets, among other issues. The search identified 62 articles which documented disparities in lung cancer outcomes for Indigenous peoples, identified likely reasons and made recommendations for better targeted prevention and management strategies. Indigenous people in all four countries, namely Aboriginal and/or Torres Strait Islanders in Australia; Māori in New Zealand; First Nations, Métis or Inuit in Canada; American Indians and/or Alaskan Natives (AIs/ANs) in the United States (US), have significantly lower life expectancy than their non-Indigenous counterparts, to which their lung cancer burden must surely contribute.

The burden of lung cancer for Indigenous populations: Lung cancer is one of the most commonly occurring cancers for indigenous people across all four countries. It has recently been reported that lung cancer incidence is higher in Indigenous men in Australia, Canada's Métis and in Alaskan Natives than in their non-indigenous counterparts, and in Māori women, Alaskan Native women and Indigenous women in some

Australian States.¹ Lung cancer is the leading cause of cancer deaths in Indigenous Australians (1 in 4 cancer deaths) and Māori where mortality rates were three times those of non-Māori (nearly 1 in 3 cancer deaths).^{1,2} Lung cancer mortality among the Alaskan Native population is higher than the US white population, and among the highest of any racial/ethnic group in the US.³ Survival following a diagnosis of lung cancer was lower for indigenous people in all four countries compared to their non-indigenous counterparts.⁴⁻⁶ For example for Indigenous Australians five year survival following a diagnosis of lung cancer was 7% compared with 11%. Indigenous Australians are 1.7 times more likely to die from lung cancer than non-Indigenous Australians. In Australia, lung cancer accounted for 25% of all Indigenous deaths from cancer.² In the USA and Canada lung cancer survival rates improved over time for non-indigenous populations but remained unchanged or declined for the AI/AN and First Nations cohorts,^{6,8} increasing disparities.

Explaining the disparities: The greater burden of lung cancer in indigenous populations is largely attributable to the higher prevalence of tobacco smoking. In both Australia and New Zealand, 39% of the Indigenous populations aged 15 and over were daily smokers – almost 3 times the rate of the non-Indigenous populations.^{4,9} AI/AN populations had the highest tobacco use (29%) of any population group in the USA.¹⁰ Smoking rates among Canada's Aboriginal populations are on average twice as high as those of non-Aboriginal Canadians, with nearly half of Inuit adults smoking daily or regularly.¹¹ While smoking rates in all four countries have decreased, the decline in indigenous smoking prevalence has occurred at the same or slower rate than for non-indigenous people, meaning the gap in smoking rates has remained. Although higher lung cancer incidence and mortality rates for indigenous peoples is related to patterns of tobacco use, they also reflect the significant disparities in terms of socio-economic disadvantage, social dislocation, geographic/remoteness and related stressors indigenous people face.¹ Poorer survival of indigenous people with lung cancer is attributed to a greater likelihood of advanced disease at diagnosis,¹² lower rates of treatment, not receiving optimal lung cancer care concordant with clinical guidelines care,^{1,7,13,14} and higher prevalence of comorbidities.² But these factors do not explain all the survival disparities. Recent research has shifted focus from patient and community-level factors to examining system-level and societal factors that affect lung cancer care and outcomes for indigenous patients including difficulty accessing health services and the cultural appropriateness of healthcare services⁶; lack of coordination and follow-up processes^{15,16}; health