

Research Ideas on Respiratory Conditions and Tobacco Dependency

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Identifying undiagnosed COPD amongst the general population in China: a screening test accuracy study (protocol)

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Research question

What are the most cost-effective screening strategies for identifying undiagnosed COPD in the general population in China?

Background

In China, the latest estimates suggest COPD is the 4th leading cause of death in urban areas and 3rd in rural areas, with 1.28 million deaths annually. COPD also has high rates of under-diagnosis in China; there are 38m people with diagnosed COPD and estimated more than 60m with undiagnosed disease. The prevalence rate from population screening studies in people ≥ 40 years old was 8.2% in 2007, and 9.9% in 2015. However, only 35.1% of those with airflow obstruction on spirometry had previously been diagnosed with COPD.

Possible methodology: (eg research methods, design, population, recruitment, funding)

Design: Cross-sectional study (screening test accuracy).

Population: Aged ≥ 40 years, living in Beijing (North), Chengdu (South West), Guangzhou (South) or, Shenyang (North East).

Recruitment: Participants will be recruited from two sources; hospital health checks and locality offices. A maximum of 2,600 participants will be recruited to the study.

Outcome measures: Participants will conduct index and references tests on the same day. Index tests will include COPD screening questionnaires, peak flow and microspirometry. The reference test (diagnosed COPD) is defined as clinical diagnosis by a pulmonologist and airflow obstruction based on the lower limit of normal (GLI), according to quality diagnostic spirometry. Test performance (e.g. sensitivity, specificity) of all screening tests and strategies will be compared against quality diagnostic spirometry, with cost effectiveness analysis.

Questions to discuss

Should we screen the general population, or target 'at risk' populations?

What are the likely challenges of conducting a study in four different cities in China?

Declaration of Interest

Declaration of Interest (including funding source and trial registration as appropriate)

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