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COPD Screening Program: What Is the Appropriate Target Group Population?

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We have recently published the results of a study about the comparison of 3 screening questionnaires among smokers aged >40 years in the primary care [1]. As this screening program is still ongoing and taking into account the recommendations of the National Board of Health in Denmark that early detection of COPD should focus on patients >35 years, current or former smokers with at least 1 respiratory symptom [2, 3], we decided to explore the efficacy of such a screening program if we had focused only on this specific subgroup. The aim of the present analysis was to find the percentage of underdiagnosed patients with COPD that could be detected if the target population of the screening program would be limited to symptomatic smokers.

We excluded all subjects with a previous diagnosis of asthma or chronic pulmonary disease other than COPD. We focused to symptomatic subjects after excluding those with a previous medical diagnosis of COPD and treated with inhaled drugs (correct diagnosis + overdiagnosis).

A total of 3,775 subjects were initially included. We found that 429 subjects (11.4%) had airway obstruction (post FEV₁/FVC <0.7), while 208 of them had a previous diagnosis of COPD (221 underdiagnosed subjects). Additionally, 352 subjects (9.3%) who were treated with inhaled drugs but without obstructive disorder (overdiagnosis) were also excluded from the analysis. Finally, we excluded all asymptomatic subjects (2,374). We focused on 620 symptomatic subjects (16.4% of the initial population). Their mean age was 61 ± 11.9 years, with a mean BMI of 28.7 ± 5.4, while 436 (70.3%) of them were males. We found that 204 out of 620 (32.9%) symptomatic subjects had airway obstruction (COPD spirometric stages according to GOLD): stage 1, *n* = 77 (37.7%); stage 2, *n* = 108 (52.9%); stage 3, *n* = 17 (8.3%); and stage 4, *n* = 2 (1%). Using this approach, we detected 92.3% (204/221) of the underdiagnosed patients with COPD.

Early detection of underdiagnosed patients with COPD in the primary care appears to be extremely effective if screening spirometry is confined to a target population of smokers (current and former) with at least 1 respiratory symptom.

References

- 1 Spyrtatos D, Haidich A-B, Chloros D, Michalopoulou D, Sichletidis L: Comparison of three screening questionnaires for chronic obstructive pulmonary disease in the primary care. *Respiration* 2017;93:83–89.
- 2 KOL: COPD: recommendations for early detection, monitoring, treatment and rehabilitation (in Danish). Danish National Board of Health, 2007.
- 3 Ulrik CS, Løkke A, Dahl R, Dollerup J, Hansen G, Cording PH, et al: Early detection of COPD in general practice. *Int J Chron Obstruct Pulmon Dis* 2011;6:123–127.