ABS45: Emphysema is equally often present in smokers with preCOPD as in smokers without COPDGeorgios Stratelis^a, SvenGöran Fransson^b, Birgitta Schmekel^b^a Department of Health and Society, VårdcentralenBrinken, Sveavägen32, Motala, 59136, Sweden ^b Department of Medicine and Care, VårdcentralenBrinken, Sveavägen32, Motala, 59136, Sweden

Background: COPD is one of the major leading causes of morbidity and mortality worldwide and cigarette smoking is the major risk factor for the development of COPD. The earlier we can detect signs of incipient COPD, the earlier and with greater impact we can advise smokers to cease smoking. In a previous study, smokers 45–55 years old, were invited to perform spirometry. 57 smokers with normal lung function and pre-COPD were identified. Pre-COPD was defined as smokers having FEV₁ predicted 89–93 for males and 90–93 for females or FEF₅₀ ≤60% predicted. **Aim:** To compare the occurrence of emphysematous lesions in smokers who had normal lung function and pre-COPD with smokers without pre-COPD by spirometry. **Setting:** Primary health care centre Brinken, Motala and University hospital in Linköping, Sweden. **Method:** The study group consisted of 59 smokers with a mean age of 55 years, of which 30 were smokers with normal lung function and pre-COPD and 29 were matched controls, who had normal lung function and no pre-COPD. The subjects performed new spirometry and High Resolution Computed Tomography (HRCT) 3–4 years after selection. **Results:** The cumulative incidence of COPD in all 59 subjects was 8.5% (5/59) and all were recruited smokers defined as having pre-COPD, 16.7%, (5/30). The presence of emphysema on HRCT was 43% (*n*=13) in the group of smokers defined as having pre-COPD and 44% (*n*=13) in the control group. Smokers with emphysema, identified on HRCT, had significantly lower BMI (*p*<0.001). **Conclusion:** Emphysema at HRCT, is present before the lung function has deteriorated according to spirometric definitions of COPD. Smokers with emphysema had significantly lower BMI. Low body weight might be a consequence of incipient COPD not detectable by spirometry, primarily as a result of the systemic inflammation present in COPD or simply be a risk factor for developing COPD.

Conflict of interest and funding

None declared.

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ABS46: Lung function testing in the elderly - can we still use FEV1/FVC <70% as a criterion of COPD?

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Introduction: Chronic obstructive pulmonary disease (COPD) can be diagnosed when the FEV₁/FVC ratio is below 70%, according to Global initiative for chronic obstructive lung disease. However, there is a risk of over-diagnosis when this diagnostic threshold is applied among the elderly. **Aims:** To contribute to the discussion about the criteria for diagnosing COPD, by describing the lung function in a population aged 60 years or more, and in particular the changes in the mean and 5% percentile of the FEV₁/FVC ratio with increasing age. **Subjects and methods:** A cross sectional population based study was performed in the city of Tromsø, Norway, in 2001–2002. Spirometry was done in 4102 people 60 years and older (54.6% women). **Results:** A drop in FEV₁% predicted and FEV₁/FVC ratio associated with smoking and increasing age was found. The frequency of FEV₁/FVC ratio <70% increased steeply by increasing age and was about 20% in never smoking women and men aged 75 years and more. The 5% percentile of the FEV₁/FVC ratio dropped more rapidly by increasing age in healthy never smokers than could be expected from currently used reference values. **Conclusions:** Adjustments of the GOLD

criteria for diagnosing COPD are needed, and FEV₁/FVC ratios down to 65 and 60 % should be regarded as normal when aged 70 and 80 years or more, respectively.

Conflict of interest and funding

There are no conflicts of interest.

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ABS47: Flow and volume responses after bronchodilation in mild to severe COPDTjard Schermer^a, Joliet Hartman^a, Lisette van den Bemt^a, Ton van Boxem^b, Leandra Boonman-de Winter^c, Richard Dekhuijzen^a, Ivo Smeele^c^a Department of General Practice, Radboud University Nijmegen Medical Centre, P.O. Box 9101 (117-HAG), Nijmegen, 6500 HB, The Netherlands ^b Franciscus Hospital Roosendaal, The Netherlands ^c SHL Breda, The Netherlands

Aims and objective: To investigate the relationship between the severity of COPD and responses in terms of changes in exhaled flow and volume during routine bronchodilator reversibility testing. **Study subjects and methods:** We used data from the "Stichting Huisartsen Laboratorium" (SHL) Breda, a regional diagnostic centre that provides a range of diagnostic and health care services for GPs in the South-Western part of the Netherlands. Patients aged ≥40 years diagnosed as COPD by a respiratory consultant of the SHL were categorized according to disease severity using GOLD criteria. Spirometric tests were performed by trained lung function technicians using SpiroPerfect® PC based spirometers. Cross-sectional univariate analysis of the association between the GOLD stages and the forced expiratory volume in one second (FEV₁) and vital capacity (VC) response after bronchodilator testing. **Results:** 887 patients (63.5% males) with a diagnosis of COPD were analysed, 227 GOLD I, 547 GOLD II, 113 GOLD III/V. Mean age was higher for each successive GOLD stage (62.0, 63.5 resp. 65.6 years, *p*<0.05). Mean FEV₁% predicted was 68.8 (SD 16.2). FEV₁ response decreased with increasing GOLD stage (*p*=0.015): GOLD I 0.193 litres (SD 0.199), GOLD II 0.187 (SD 0.173), GOLD III/IV 0.140 (SD 0.168). In contrast, VC responses increased as the disease was more severe (*p*=0.010): GOLD I 0.149 (SD 0.199), GOLD II 0.199 (SD 0.266), GOLD III/IV 0.232 (SD 0.343) litres. **Conclusions:** Response on bronchodilator in terms of flow (FEV₁) decreased as GOLD stage was more severe, whereas the volume (VC) response increased along with the severity of COPD.

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ABS48: On-line reporting of primary care spirometryPatrick White^a, Wun Wong^a, Tracey Fleming^b, Barry Gray^b, David Armstrong^a^a Kings College London School of Medicine, Department of General Practice and Primary Care, 5 Lambeth Walk, London, SW11 6SP, United Kingdom ^b King's College Hospital NHS Trust, United Kingdom

Introduction: Spirometry can be performed in GPs' surgeries but test quality and accuracy of interpretation are uncertain. **Aims and objectives:** To test the feasibility and usefulness of specialist on-line reporting of spirometry in general practices. **Subjects and methods:** Six randomly selected practices (6000+ patients) were provided with a spirometer, training, and workload reimbursement. Each practice did tests on at least 50 patients in whom abnormal results were expected. Test results were given to a practice clinician and to the local respiratory unit for interpretation. Written reports from both were compared to assess primary care interpretation of test quality, and

diagnosis. Disagreements between primary and secondary care assessments were reviewed by a multidisciplinary team. Those of clinical importance were included in the analysis. **Results:** 29 of 44 practices wanted to take part. In the six selected practices 312 tests were completed. Mean age was 64 years (19-94 yrs), 52% female, mean predicted FEV1 69% (16-127%). 77 of 185 tests reported as acceptable in primary care were judged unacceptable by the specialist. 136 tests were judged obstructive by the specialist of which 85 were identified as obstructive by the primary care teams. In 129 of 218 (59%) tests there was complete agreement about level of severity. Practices differed in the frequency of disagreement with the specialists but in all there were disagreements in more than 15% of tests. **Conclusion:** On-line reporting of primary care spirometry is feasible and primary care teams are interested in it. The level of disagreement between primary care and specialist interpretation of the tests suggests that specialist reporting of tests is essential in these practices if primary care spirometry is to be carried out to an acceptable standard.

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ABS49: Splitting COPD and asthma: Validation of the differential diagnosis questionnaire (DDQ) in Australian primary care

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Introduction: Diagnostic confusion between COPD and asthma abounds in clinical practice and epidemiological surveys, as symptoms are non-specific. Spirometry is essential for the diagnosis of COPD, but is neither widely used nor reliably performed in general practice. The DDQ was developed to help GPs differentiate patients with respiratory symptoms into the category 'likely COPD'. **Aims and objectives:** To validate the DDQ prospectively in Australian primary care. **Subjects and Methods:** Forty-two GPs in Adelaide, Brisbane and Sydney recruited patients aged >40 years with a previous diagnosis of asthma or COPD, or with recent respiratory medication prescription. Diagnostic validity - DDQ scores were compared to spirometry in 131 patients, using two pre-determined cutpoint scores: 24.5 = 'high likelihood' (HL) and 18.5 = 'low likelihood' (LL). Test-retest reliability was tested in 73 of these patients. **Results:** Subject characteristics - 79% smoked >10 pack-years; M:F = 56:44; 57% were aged >60; previous diagnoses were asthma (64%), COPD (44%) or both (13%). Utility of DDQ - HL Cutpoint: Sensitivity = 63%, Specificity = 76%, Positive Predictive Value = 67%. LL Cutpoint: Sensitivity = 82%, Specificity = 44%, Positive Predictive Value = 77%. Area under the Receiver Operating Curve = 0.72 (moderate diagnostic agreement between DDQ and spirometry). Reliability was good (kappa = 0.78). These characteristics are similar to those previously obtained from UK/US, though some symptoms in Australia appear less helpful in contributing to the differential diagnosis model. **Conclusions:** The DDQ is a valid and reliable tool for helping GPs in Australia differentiate patients with a high likelihood of COPD from those unlikely to have COPD. Further work may help to develop greater discriminative value for the DDQ in Australia, enabling the GP to prioritise patients more effectively for spirometry confirmation.

Conflict of interest and funding

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ABS50: Study of resources in asthma and COPD in the community of Madrid (Spain)

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Introduction: Respiratory medicine is developing in primary care. We describe the resources available. In a second phase, we will study health results. **Aims and objectives:** To learn about resources (infrastructure and process) related with Asthma and COPD in the public centers of the Community of Madrid (Spain). **Subjects and methodology:** A descriptive, cross-sectional study. A postal survey addressed (2 mailings) to the leaders of all the health centers (227), between November (2000) and April (2001). Response: 156 (68.7%). A previous study over 44 coordinators (nominal group), added 10 items and changed 4. Variables of infrastructure: existence and/or revision of cardiopulmonary resuscitation equipment (CPRE), spirometry, pulse oximeter, peak flow, inhalation devices and educational tools. Variables of process: existence of protocol, quality control, health education, provision of systems, continued education, waiting list. **Results:** Spirometry was available in 102 centers (65.4%), calibrated habitually in 60 (38.5%), there was CPRE in 142 (91%), pulse oximeter in 19 (12.2%). peak flow in 53.8%, 27.6% and 43.6% of the medical consultations, infirmary and emergency departments. There was an asthma protocol in 53 centers (34%) and COPD in 131 (84%). There was quality control in asthma in 10 centers (6.4%) and COPD in 52 (38.3%). There was grouped education in asthma in 22.4% and 19.2% in COPD. 60.3% of asthmatics and 93.7% of COPD patients were referred to pneumology. 7.1% of the asthmatic patients waited less than 31 days to be attended in allergy, as opposed to 49.9% in pneumology. **Conclusions:** Some deficiencies in infrastructure and process were detected with evidence of less development in the attention to the asthmatic patient. Also, there was little activity in respect of health education.

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ABS51: Can you be a generalist and a specialist? Stakeholders' views on a respiratory General Practitioner with a Special Interest service

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Introduction: General Practitioners with Special Interests (GPwSIs) have a potentially important role in delivery care for people with long-term respiratory diseases. The development of a GPwSI service within a Primary Care Trust (PCT) involves a process of 'transitional change' which impacts on all stakeholders, who may embrace or resist change. **Aims and objectives:** The objective of the current study is to explore the attitudes and views of stakeholders to the provision of a respiratory GPwSI service within the six PCTs in Leicester, UK. **Subjects and methods:** Using a qualitative design, GPs, nurses, secondary care doctors, nurse specialists, physiotherapists, a healthcare manager and patients with respiratory disease took part in focus groups and interviews. **Results:** The 25 participants expressed diverse opinions about the challenge of integrating specialist services with generalist care and the specific contribution that GPs might make to the care of people