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Title: COPD severity and health impact across the current CanCOLD population

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Body: Introduction: Based on the observation that COPD prevalence from COLD is 4-fold higher than previous estimates, CanCOLD (Canadian Cohort Obstructive Lung disease) has been built to better characterize COPD subject phenotypes. Objective: To determine in a random population sampling of non institutionalized adults aged ≥40 years the severity of COPD detected with spirometry and the impact on health. Methods: CanCOLD is a prospective longitudinal cohort study (9 sites), tracking 1800 subjects with assessment at baseline, 18 and 36 months. CanCOLD sampling is based on the selection and contact of COPD subjects from the prevalence study COLD. Then matched non-COPD peers are selected/contacted. Measurements are in 5 categories: questionnaires (SF-36, SGRQ and CAT); pulmonary function and exercise tests; Chest CT scan; blood tests; and administrative databases. Results: More than 25% (>400 subjects) recruitment is accomplished. There was no difference of the SF-36 scores for GOLD2+, GOLD1, at risk and healthy subjects. GOLD1 reported similar health status than at risk (SGRQ, CAT) and healthy subjects (CAT). GOLD2+ reported worsening health status compared to GOLD1, at risk (SGRQ, CAT) and healthy subjects (CAT). In subjects started by their physicians on any respiratory medication, the CAT
scores [mean (SD)] were 12.9 (8.2), 9.9 (5.5), 7.5 (5.4) and 7.1 (5.3) for GOLD2+, GOLD1, at risk and healthy, and for those not on respiratory medication 7.9 (5.5), 5.3 (5.0), 5.7 (5.4) and 5.8 (3.9). Similar results were found with SGRQ. Conclusions: Clusters based on CAT and SGRQ can be of interest to phenotype COPD subjects in the population. Funding by CIHR Rx&D Collaborative program-93326; ClinicalTrials.gov: NCT00920348.