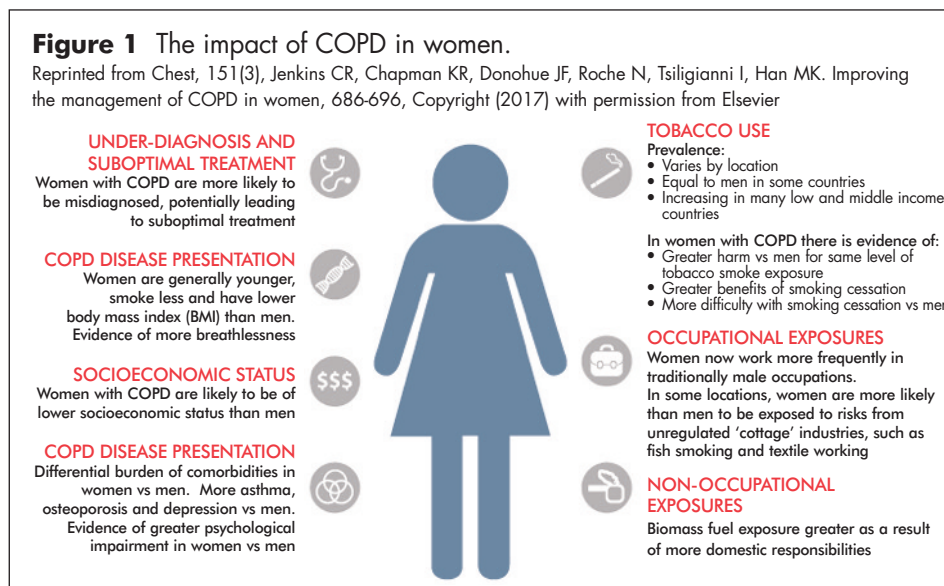


## Improving care for women with COPD: guidance for primary care

The scope of global primary care includes not only disease management, but also prevention and early risk identification, finding those people in the community who need special attention, diagnosis, treatment and management. One such challenge is to identify early, diagnose, and treat women with chronic obstructive pulmonary disease (COPD). The main challenges of COPD in women and the reasons that they need special attention, are depicted in Figure 1.<sup>1</sup>

**Figure 1** The impact of COPD in women.

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### THE NEED FOR INCREASED AWARENESS OF COPD IN WOMEN

Prevention and early diagnosis strategies for women usually focus on early cancer detection, despite the fact that women are more likely to die from COPD than from breast and lung cancer combined.<sup>1,2</sup> Until recently, COPD diagnosis in women has been neglected because it has been considered predominantly a disease of men.<sup>1,3</sup> However, because of an increase in smoking and/or on-going exposure to biomass smoke in many countries, COPD prevalence now seems to be similar between women and men. Indeed, data suggest that women could be at greater risk of smoking-induced lung function impairment, and could suffer from more severe symptoms for the same level of tobacco exposure than men.<sup>1,4</sup> Non-smokers with COPD are also more likely to be female. Women bear a disproportionate burden of exposure to risk factors such as biomass smoke, due to a

greater role in cooking and domestic responsibilities, occupational exposure in specific industries that generate smoke and dust, and from second-hand smoke.<sup>1</sup>

### WOMEN HAVE DIFFERENT PHENOTYPES AND SOCIOECONOMIC STATUS<sup>1,3</sup>

Globally, women with COPD are usually younger, have a lower BMI, less first-hand tobacco smoke exposure, greater risk of significant lung impairment, more severe symptoms with the same level of exposure and a lower socioeconomic status (SES) which affects their access to care. They often disregard their symptoms and tend to be more reluctant to seek care, therefore diagnosis is delayed and they often have more severe disease by the time they are identified. Therefore, we need to support initiatives and campaigns to increase awareness amongst individuals and communities. Women with low socioeconomic status are particularly vulnerable

and may need special social support.

Women experience more symptoms (especially breathlessness), have a more impaired quality of life and suffer from more exacerbations than men.<sup>1,3,5</sup> This means that women may benefit from closer monitoring of their exacerbation risk, symptoms and quality of life. Primary care professionals need to be aware of these differences and use validated tools to assess breathlessness and impaired quality of life. Practical tools such as Medical Research Council (MRC) and modified Medical Research Council (mMRC) Breathlessness Scale, Clinical COPD Questionnaire (CCQ) and COPD Assessment Test score (CAT)<sup>TM</sup> have been suggested for use in primary care. See the IPCRG COPD wellness assessment tools desktop helper for more information.<sup>6</sup>

Asthma is more common in women,<sup>7</sup> so Asthma-COPD overlap (ACO) is also more prevalent in women than in men and both diagnoses need to be considered in order to institute correct treatment.

### DIFFERENT COMORBIDITIES: MORE DEPRESSION, ANXIETY AND OSTEOPOROSIS<sup>1,3</sup>

Women are more likely to suffer from depression and anxiety than men.<sup>8</sup> This is important as anxiety influences breathlessness, and depression and/or anxiety are strong determinants of quality of life. A prompt diagnosis enables the depression and/or anxiety to be appropriately managed and will improve quality of life. Simple questionnaires like PHQ4 and PHQ9 have been tested and validated in primary care. Osteoporosis, which may be a side effect of high dose inhaled and/or frequent oral corticosteroid use, is also more prevalent in women than

## Some of the validated questionnaires commonly used in primary care

mMRC	<a href="http://goldcopd.org">http://goldcopd.org</a>
MRC	<a href="https://www.mrc.ac.uk/research/facilities-and-resources-for-researchers/mrc-scales/mrc-dyspnoea-scale-mrc-breathlessness-scale/">https://www.mrc.ac.uk/research/facilities-and-resources-for-researchers/mrc-scales/mrc-dyspnoea-scale-mrc-breathlessness-scale/</a>
CCQ	<a href="http://ccq.nl/">http://ccq.nl/</a>
CAT	<a href="http://www.catestonline.org/">http://www.catestonline.org/</a>
PHQ4	<a href="http://gihep.com/phq4/">http://gihep.com/phq4/</a>
PHQ9	<a href="https://patient.info/doctor/patient-health-questionnaire-phq-9">https://patient.info/doctor/patient-health-questionnaire-phq-9</a>
GAD7	<a href="https://patient.info/doctor/generalised-anxiety-disorder-assessment-gad-7">https://patient.info/doctor/generalised-anxiety-disorder-assessment-gad-7</a>

men.<sup>1,3,9</sup> The IPCRG has published a guide to tools that measure comorbidity.<sup>10</sup>

## TREATMENT

### Smoking cessation for tobacco dependence<sup>4</sup>

Women have greater sensitivity to the effects of nicotine; they have a greater behavioural dependence and are less successful in long-term smoking cessation.<sup>4</sup> Primary care professionals should emphasise the benefits of smoking cessation and offer individualised counselling depending on the woman's concerns about quitting, and their potential benefits. Pregnant women who smoke should be a target for special support to protect the short- and long-term health of the woman, foetus and infant.

Bupropion and varenicline are equally effective for men and women. Nicotine and cotinine metabolism is faster in women than in men and is increased by oral contraceptives and during pregnancy. The implication of this is that nicotine replacement therapy (NRT) may need to be prescribed in higher dosages. See IPCRG position paper.<sup>4</sup>

### Inhaled medications

Women are more likely to use inhaled corticosteroids (ICS) than men because of the overlap with asthma – or maybe because of misdiagnosis as asthma.<sup>1,3</sup> However, ICS is known to further increase the risk of fractures in a dose-dependent association in a population that already has a higher prevalence of osteoporosis.<sup>11</sup> Reserve the use of ICS in COPD for when there is a real need, and if used, monitor closely. GOLD guidelines advise that ICS in COPD are indicated only for people who exacerbate frequently, when dual bronchodilator therapy

is optimised or in people with co-morbid asthma (ACO), otherwise withdrawal of ICS is suggested.<sup>12</sup> See IPCRG guidance on ICS withdrawal in COPD.<sup>13</sup>

### Education, pulmonary rehabilitation

Although evidence is scarce, it seems logical to educate women about the early identification of symptoms and of signs of exacerbations. Pulmonary rehabilitation is an effective programme tailored to individual needs, and it should take account of different psychological, exercise and cultural needs. See IPCRG desktop helper on pulmonary rehabilitation [www.ipcrgrg.org/PR](http://www.ipcrgrg.org/PR).<sup>14</sup>

#### References

1. Jenkins CR, Chapman KR, Donohue JF, *et al.* Improving the Management of COPD in Women. *Chest* 2017;**151**(3):686-696.
2. Mathers CD, Loncar D. Projections of global mortality and burden of disease from 2002 to 2030. *PLoS Med* 2006;**3**(11):e442.
3. Tsiligianni I, Rodríguez MR, Lisspers K, *et al.* Call to action: improving primary care for women with COPD. *NPJ Prim Care Respir Med* 2017;**27**(1):11.
4. Van Schayck OCP, Williams S, Barchilon V, *et al.* Treating tobacco dependence: guidance for primary care on life-saving interventions. Position statement of the IPCRG. *NPJ Prim Care Respir Med* 2017;**27**(1):38.
5. Celli B, Vestbo J, Jenkins CR, *et al.* Sex differences in mortality and clinical expressions of patients with chronic obstructive pulmonary disease. The TORCH experience. *Am J Respir Crit Care Med* 2011;**183**(3):317-322.
6. IPCRG desktop helper: Guide to COPD Wellness Assessment Tools. Available from <http://www.theipcrgrg.org/display/TreatP/Guide+to+COPD+Wellness+Assessment+Tools>.
7. Zein JG, Erzurum SC. Asthma is Different in Women. *Curr Allergy Asthma Rep* 2015;**15**(6):28.
8. Gudmundsson G, Gislason T, Janson C, *et al.* Depression, anxiety and health status after hospitalisation for COPD: a multicentre study in the Nordic countries. *Respir Med* 2006;**100**(1):87-93.
9. Hubbard RB, Smith CJ, Smeeth L, *et al.* Inhaled corticosteroids and hip fracture: a population-based case-control study. *Am J Respir Crit Care Med* 2002;**166**(12 pt 1):1563-1566.
10. IPCRG desktop helper: Users' guide to measuring comorbidity in COPD. Available from <http://www.theipcrgrg.org/display/TreatP/Users%27+guide+to+measuring+comorbidity+in+COPD>.
11. Loke YK, Cavallazzi R, Singh S. Risk of fractures with inhaled corticosteroids in COPD: systematic review and meta-analysis of randomised controlled trials and observational studies. *Thorax* 2011;**66**(8):699-708.
12. Global Strategy for the Diagnosis, Management and

## SUMMARY OF GOOD PRACTICE STEPS FOR PRIMARY CARE PROFESSIONALS:

- 1 Women with COPD may not seek care so it's your role to collaborate with public health authorities and test ways to improve women's knowledge of their risks and access to care.
- 2 Women may have different risk factors. Give advice oriented to their particular needs. Help them find the right solutions e.g. clean cooking systems, ventilation, quitting smoking.
- 3 When you see an asthma diagnosis in a woman's record who has symptoms, re-assess and confirm with spirometry, particularly if there is history of smoking/biomass smoke exposure. Perhaps she has been misdiagnosed – or also has COPD?
- 4 Consider that a diagnosis of COPD is possible although the woman you have in front of you is younger and smokes less than the typical profile of a man with COPD. Don't only think about asthma.
- 5 If you confirm a COPD diagnosis, ask about symptoms and exacerbations to apply the GOLD classification that will guide treatment.
- 6 Treat tobacco dependence. Think of offering a more intense behavioural approach and adapt dosages of NRT. Motivate pregnant women to stop and if possible offer specialist services.
- 7 Optimise the treatment regimen according to GOLD classification.<sup>12</sup> Assess and treat co-morbidities specifically including anxiety and depression.
- 8 Think carefully about the indications for ICS before prescribing. Use in line with guideline recommendations and note the latest IPCRG advice on appropriate use of ICS and guidance on ICS withdrawal if the woman is already taking ICS and it is not needed.<sup>13</sup>

Prevention of COPD, Global Initiative for Chronic Obstructive Lung Disease (GOLD) 2018. Available from: <http://goldcopd.org>. Assessed October 2017.

13. IPCRG desktop helper 6: Evaluation of appropriateness of inhaled corticosteroid (ICS) therapy in COPD and guidance on ICS withdrawal. Available from <http://www.theipcrgrg.org/display/TreatP/Desktop+helper+6%3A+Evaluation+of+appropriateness+of+inhaled+corticosteroid+%28ICS%29+therapy+in+COPD+and+guidance+on+ICS+withdrawal>.
14. IPCRG desktop helper 7: Pulmonary Rehabilitation in the community. Available from <http://www.theipcrgrg.org/display/TreatP/Desktop+Helper+No+7++Pulmonary+Rehabilitation+in+the+community>.

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This desktop helper is advisory; it is intended for general use and should not be regarded as applicable to a specific case. More information: [www.ipcrgrg.org/desktophelpers](http://www.ipcrgrg.org/desktophelpers)



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