

COPD: Management of a long term condition in UK

Presentation for Chronic Obstructive Pulmonary Disease

health professionals in the NHS

Module: Community Care and Management of Longer Term
Conditions

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Definition

Chronic obstructive pulmonary disease - commonly abbreviated to COPD - is a chronic inflammatory disease of the lungs which causes an obstruction of the airflow. COPD is usually the result of long-term exposure to irritating particles or gases, including from cigarette smoke. People with COPD have an increased risk of developing lung cancer, heart diseases, and a range of other conditions. (Respiratory London)

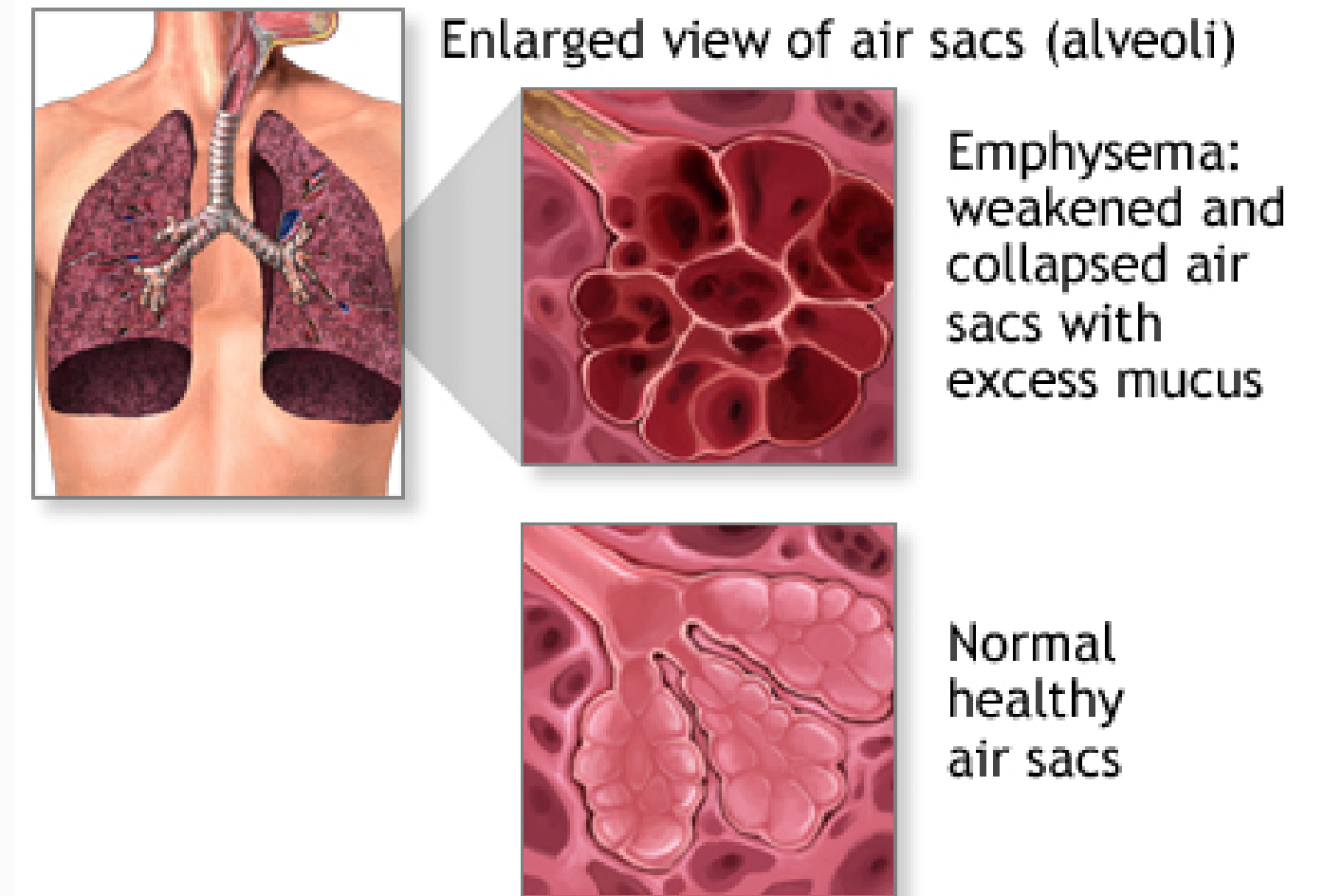


Fig-1: Chronic Obstructive Pulmonary Disease
Source: (MedlinePlus, 2025)

Symptoms of COPD

Symptoms -

- Chronic cough
- Progressive dyspnea (shortness of breath)
- Wheezing
- Chest tightness
- Fatigue
- Frequent respiratory infections
- Cyanosis (in advanced stages)

(Vestbo et al., 2013)

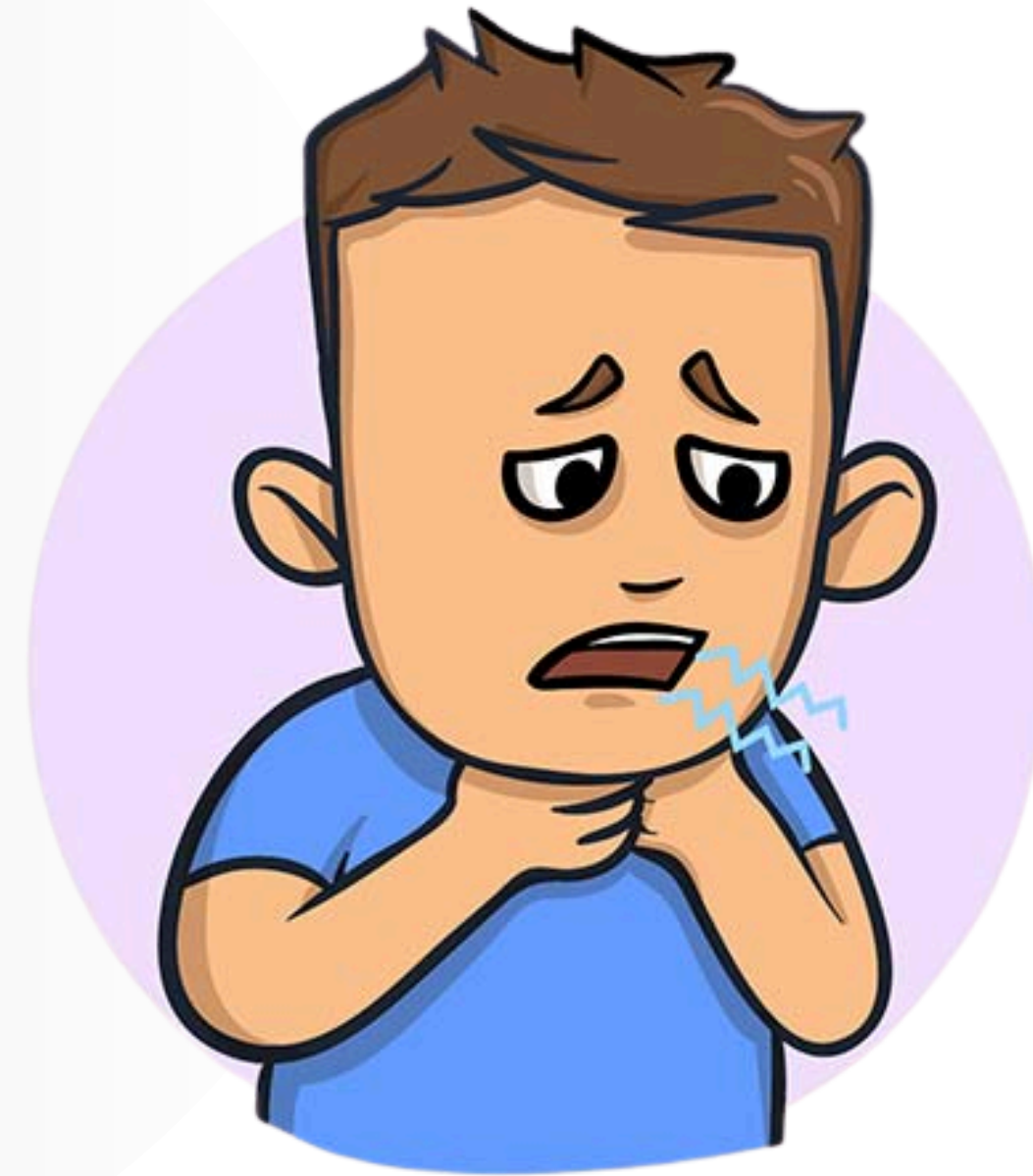


Fig-2: Symptoms of COPD
Source: (Detroit Medical Center)

Aetiology of COPD

Aetiology -

- Cigarette smoking (most common cause)
- Environmental pollution (outdoor and indoor biomass fuel)
- Occupational exposure
- Genetic factors (e.g., alpha-1 antitrypsin deficiency)
- Early-life factors (poor lung development, childhood infections)
- Recurrent respiratory infections
- Gene–environment interaction

(Huang et al., 2018)

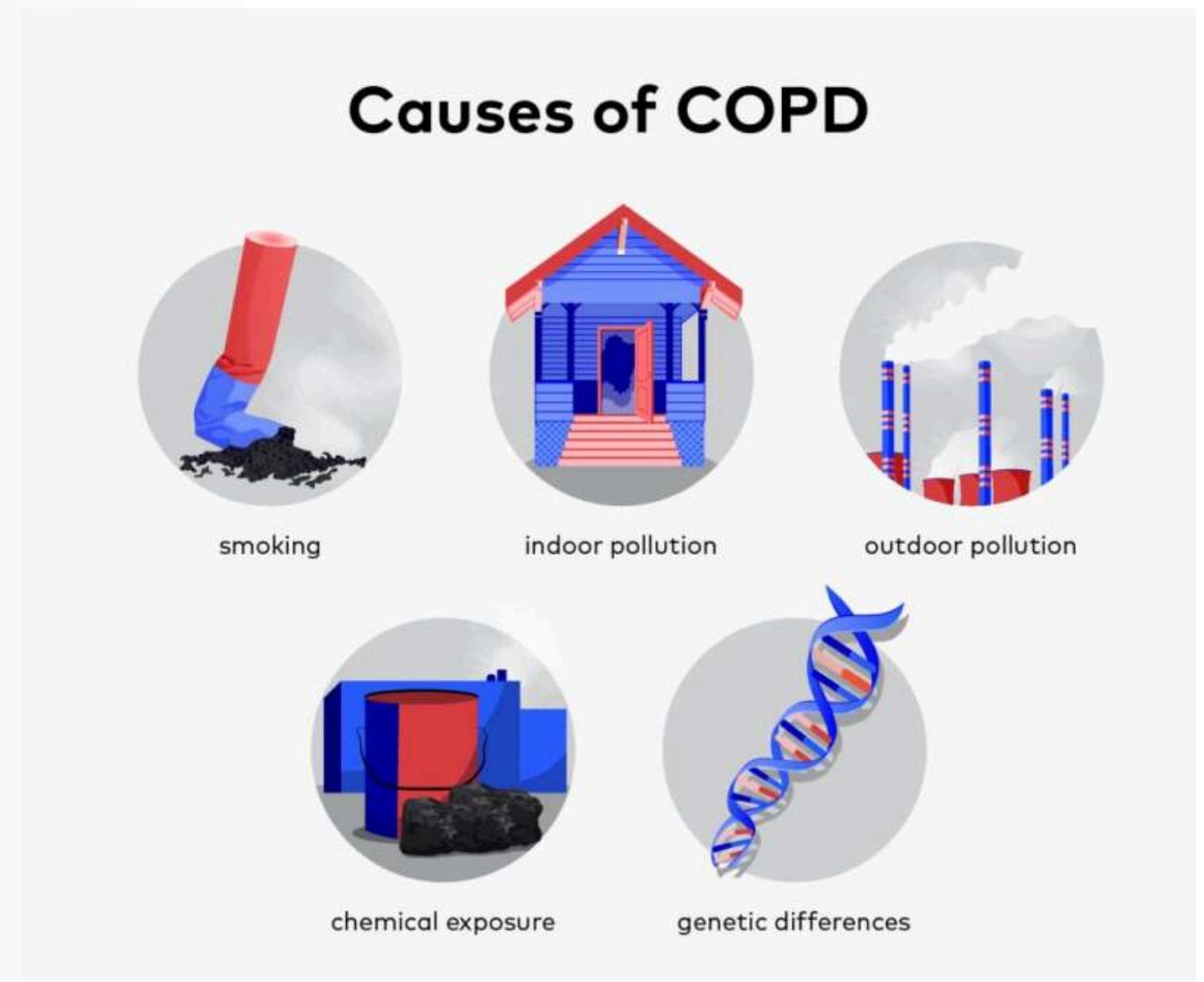


Fig-3: Aetiology of COPD
Source: (Healthgrades, n.d.)

Prevalence of COPD in UK and Worldwide

United Kingdom: About 1.2 million people in the UK have been diagnosed with COPD, although a sizable portion of cases go undetected. In the UK, the frequency of COPD rises with age and is closely linked to smoking history; socioeconomically disadvantaged groups have greater rates (British Lung Foundation, 2020).

Worldwide: With an estimated 390 million cases globally COPD affects 10% of persons over 40 and is a serious global health concern. Particularly in low- and middle-income nations where exposure to risk factors like smoking and biomass fuel is considerable, the disease is a major source of morbidity and mortality. (Adeloye et al., 2015).

Economic and Social Burden of long term condition of COPD

Economic Burden -

- Productivity loss as a result of absenteeism.
- Decreased productivity at work (presenteeism).
- Direct Medical Costs
- The severity of the condition increases indirect costs. (Tachkov et al., 2017)
(Ford et al., 2015)

Social Burden -

- Disability (DALYs) increased.
- Decreased quality of life over time.
- lived with a disability for 0.6–9 years, depending on severity.
- diminished capacity to work and carry out everyday tasks.
- More significant effects in moderate and severe COPD. (Tachkov et al., 2017)

Diagnosis of the long term condition of COPD

- Diagnosis is based on spirometry (key test).
- Presence of persistent airflow limitation.
- Consider in patients with chronic respiratory symptoms.
- Important to assess risk factors (e.g., smoking, pollution).
- COPD is often underdiagnosed, especially in early stages.
- Early diagnosis is essential for better outcomes. (Lopez-Campos et al., 2016)

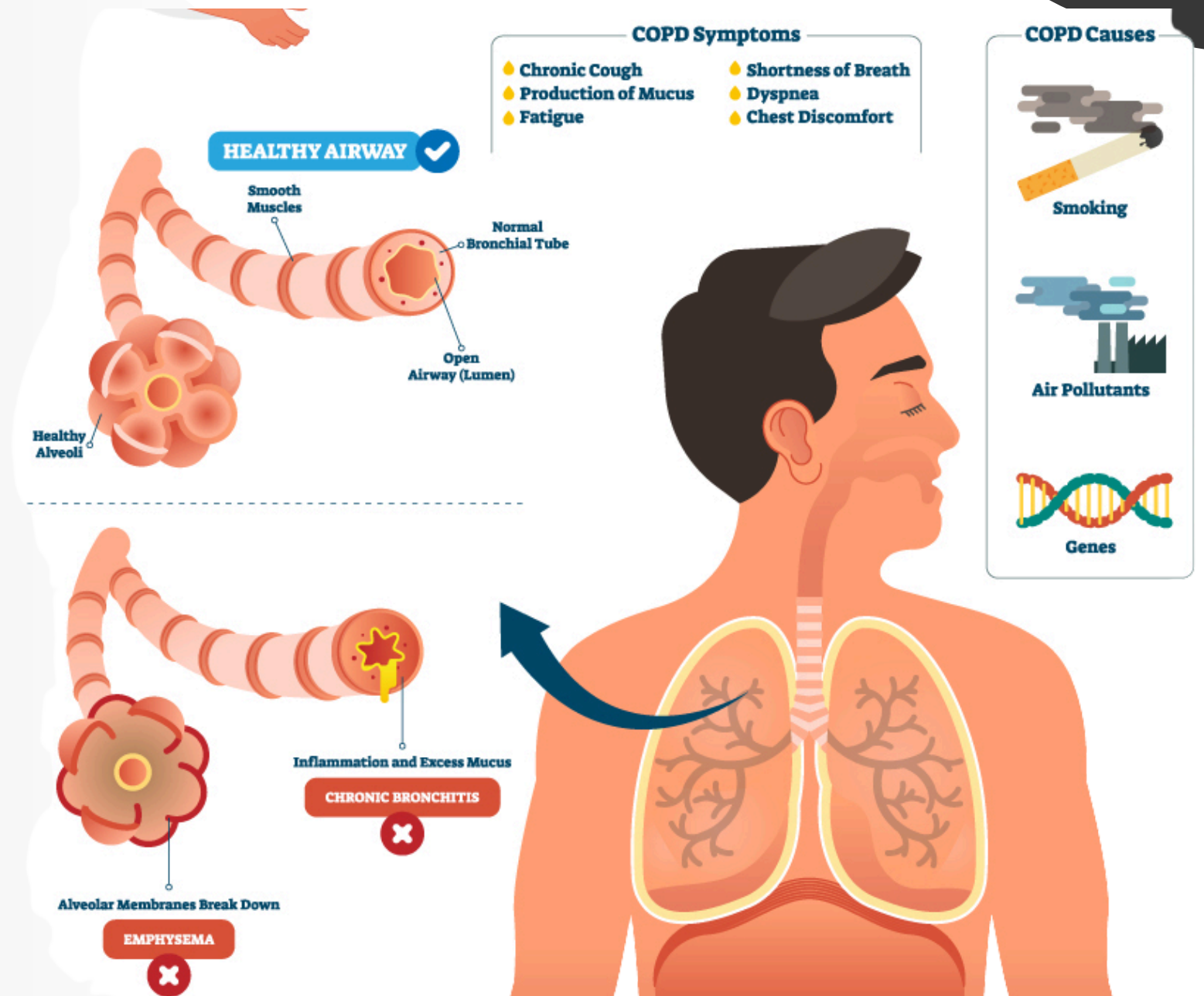


Fig-4: Diagnosis of the long term condition of COPD. Source: (Healthline, 2025)

Initial Assessment of long term condition of COPD

1. Assessment should go beyond FEV₁ alone
2. Use a combined approach:
 - Symptoms (e.g., dyspnea scales like mMRC, CAT)
 - Airflow limitation (spirometry)
 - History of exacerbations
3. Identify disease phenotypes (e.g., frequent exacerbators)
4. Evaluate multiple domains:
 - Severity
 - Disease activity
 - Impact on patient's life
5. Helps guide personalized treatment approach. (Lopez-Campos et al., 2016)

Management of long term condition UK guidance of COPD

- Smoking cessation (most important).
 - Bronchodilators.
 - Pulmonary rehabilitation.
 - Vaccination.
 - Regular follow-up.
- (NICE, 2019; GOLD, 2023)

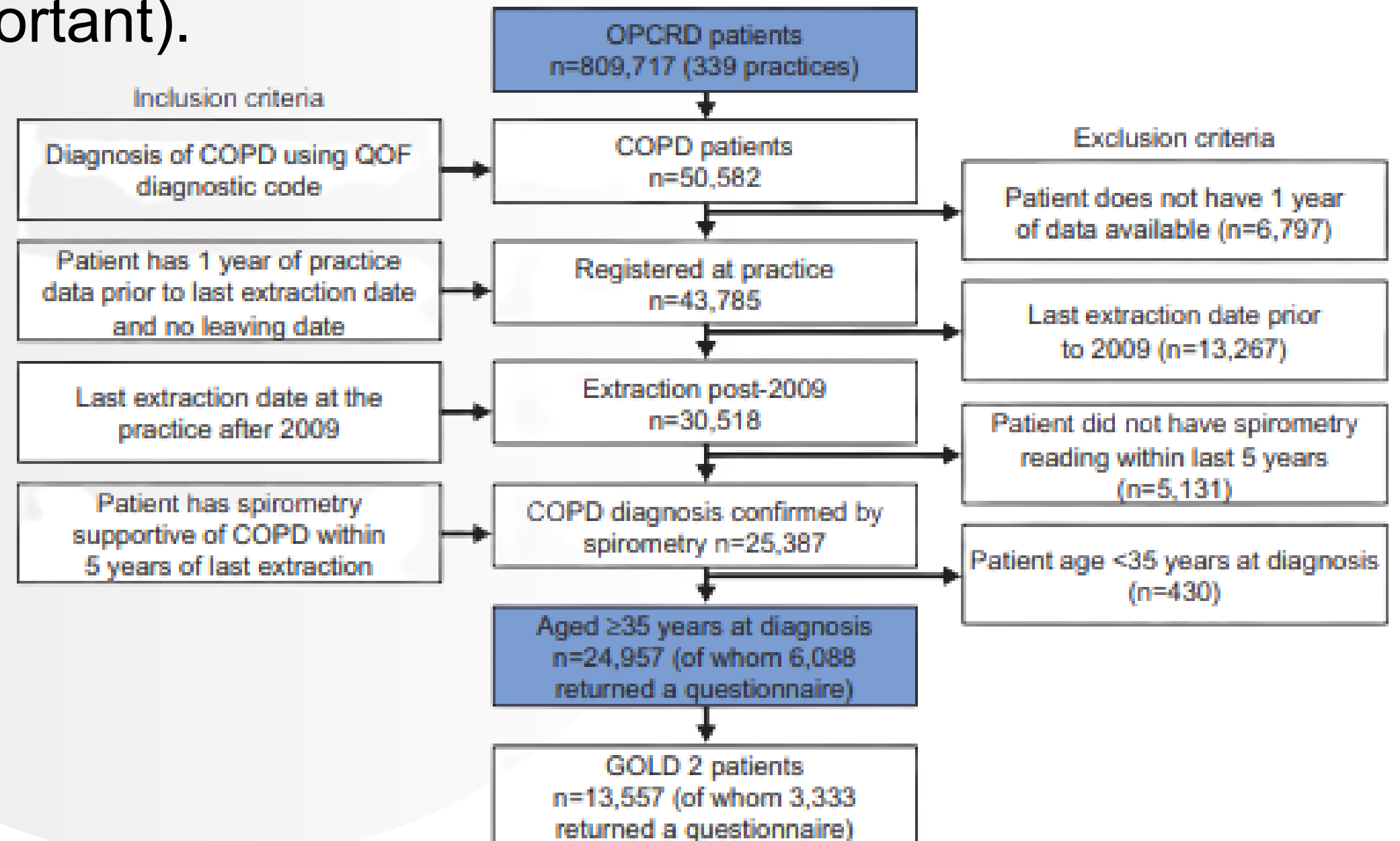


Fig-5: Management of long term condition UK guidance of COPD
Source: (Price et al., 2014)

Models and Frameworks of long term condition of COPD

- Patient-centered care.
- Self-management support.
- Evidence-Based Clinical Indicators
- Multidisciplinary team (MDT).
- Personalized treatment.
- Focus on long-term outcomes. (NICE, 2019; GOLD, 2023)
(Forbes et al., 2017)

Treatment Option of long term condition of COPD (UK Based)

Available COPD Treatment Components:

- LAMA: Long-acting muscarinic antagonist.
- LABA: Long-acting beta agonist.
- ICS: Inhaled corticosteroid.
- PDE-4 Inhibitor: Roflumilast (oral, once-daily anti-inflammatory).

For patients with severe airflow obstruction who continue to exacerbate. (Hertel et al., 2012)

Comorbidities of long term condition of COPD

- Cardiovascular & Vascular Diseases (Coronary heart disease and heart failure)
- Metabolic & Nutritional Disorders (Type 2 diabetes and metabolic syndrome)
- Psychiatric & Cognitive Issues (Anxiety and clinical depression). (Cavallès et al., 2013)

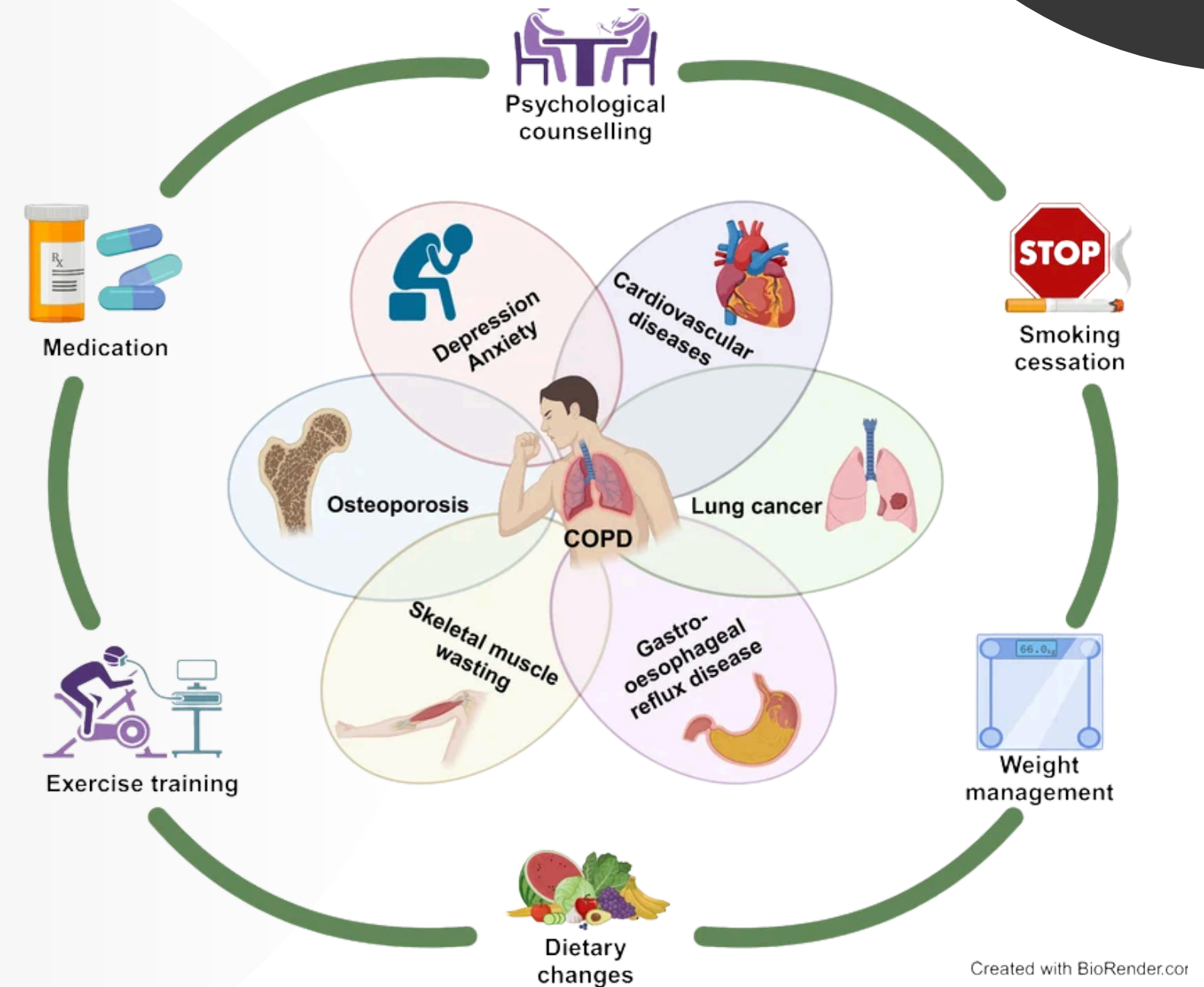


Fig-6: Comorbidities of long term condition of COPD
Source: (Lu et al., 2024)

Co-productive Care in long term condition of COPD: Skills, Values, and Behaviors

- Empathy and Active Listening - Authentically validate breathlessness
- Shared Decision-Making (SDM) - Act as peer.
- Cultural Competence and Candor - Treat mental health.
- Holistic Assessment - Empower patient skills.
- Supportive Coaching - Explain exacerbation risks.
- Resource Advocacy - Solve logistical barriers. (Cavallès et al., 2013; Hertel et al., 2012)

Prevention of long term condition of COPD

The prevention of long-term chronic obstructive pulmonary disease (COPD) focuses on mitigating risk factors and implementing early interventions to slow disease progression. Key strategies include:

- **Primary Management Goal:** Aims to increase awareness and decrease morbidity and mortality.
- **Long-acting Bronchodilators:** Regular use of long-acting bronchodilators (e.g., Tiotropium) is recommended.
- **Exacerbation Prevention:** Inhaled glucocorticosteroids are specifically recommended for Stage III (Severe) patients. (Fabbri and Hurd, 2003) (Mirza et al., 2018)

Personalised Care & Self-Management Support in long term condition of COPD

- Shared Decision Making.
- Personalized Care and Support Planning.
- Enabling Choice.
- Social Prescribing and Community-Based Support.
- Personal Health Budgets.
- Supported Self-Management. (Hertel et al., 2012; Fabbri and Hurd, 2003)

Educational programs may include:



Fig-7: Personalized care of COPD
Source: (Cravo et al., 2022)

Six Evidence Based Components of long term condition of COPD

Components 1 & 2:

- **Shared Decision Making:** Allows COPD patients to collaborate with clinicians on personalized care plans that prioritize their specific needs, which significantly improves perceived health status even if it doesn't reduce hospital readmission rates. (Collinsworth et al., 2018)
- **Personalised Care and Support Planning:** Tailoring management plans based on the patient's specific GOLD stage (Mild to Very Severe) and individual symptom burden. (Cravo et al., 2022; Hertel et al., 2012; Fabbri and Hurd, 2003)

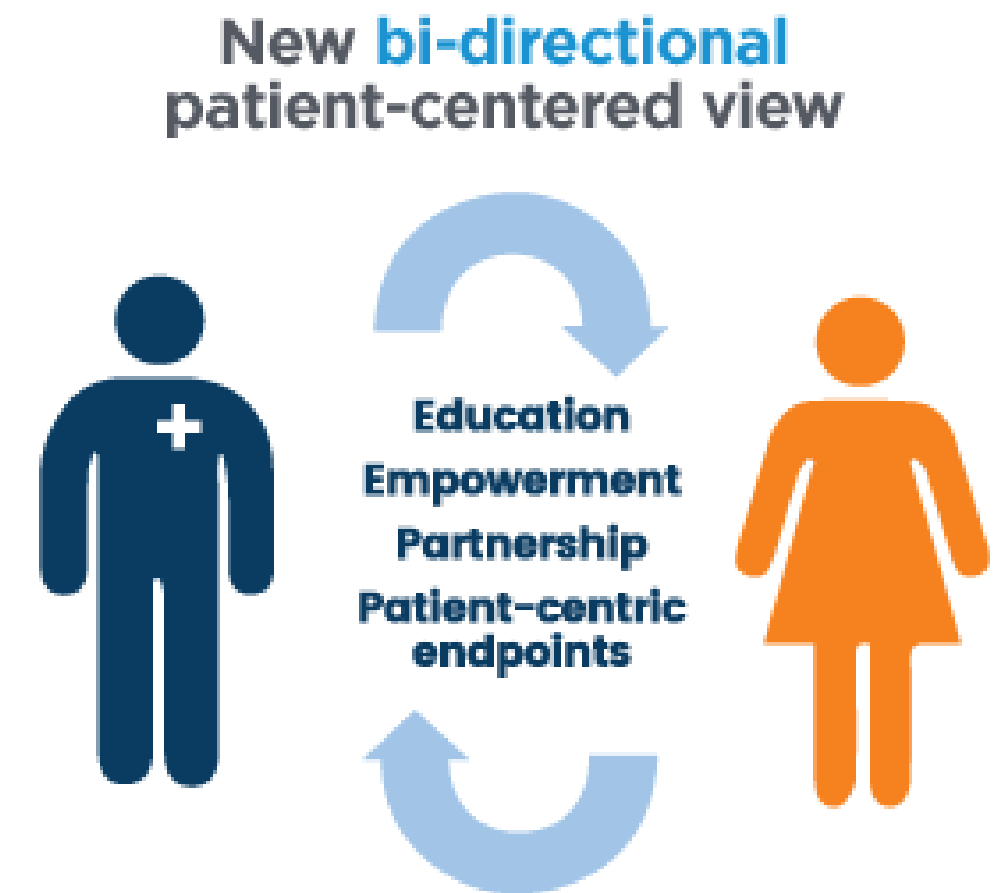


Fig-8: Components 1 & 2
Source: (LUNGeivity Foundation, 2024)

Six Evidence Based Components of long term condition of COPD

Components 3 & 4:

- **Enabling Choice:** Connecting patients to lead their own care by identifying specific support needs through tools like SNAP, ensuring consultations are based on personal priorities rather than medical protocols. (Gardener et al., 2019)
- **Social Prescribing and Community Support:** links patients to non-clinical community resources like exercise groups and peer support to tackle social isolation and improve self-management. (Bhandari et al., 2025)

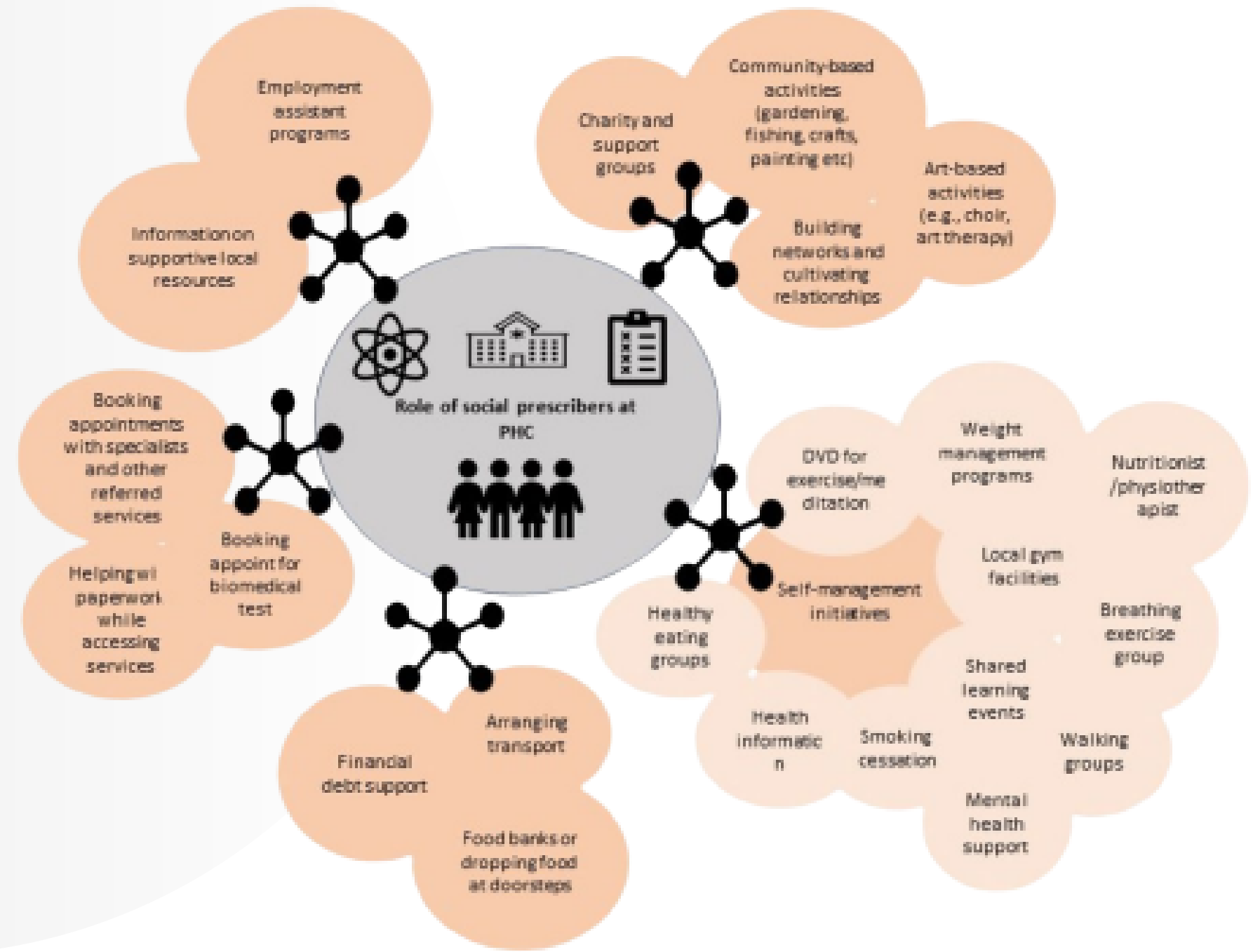


Fig-9: Components 3 & 4
Source: (Yadav et al., 2024)

Six Evidence Based Components of long term condition of COPD

Components 5 & 6:

- **Personal Health Budgets:** It give COPD patients direct control over NHS funding to choose personalized services or equipment that best meet their specific wellbeing goals. (Jones et al., 2013)
- **Supported Self-Management:** Empowers patients to recognize symptom changes and take action through education, clinical coaching, and personalized action plans. This approach effectively improves quality of life and reduces hospital readmissions. (Zwerink et al., 2014)



Fig-10: Components 5 & 6
Source:(Eikelenboom et al., 2016))

References

1. Haughney, J., Gruffydd-Jones, K., Roberts, J., Lee, A.J., Hardwell, A. and McGarvey, L. (2014) 'The distribution of COPD in UK general practice using the new GOLD classification', *European Respiratory Journal*, 43(4), pp. 993–1002. doi: 10.1183/09031936.00065013.
2. MedlinePlus, 2025. COPD (chronic obstructive pulmonary disease) illustration. Available at: <https://medlineplus.gov/ency/imagepages/19376.htm>
3. Vestbo, J., Hurd, S.S., Agustí, A.G., Jones, P.W., Vogelmeier, C., Anzueto, A., Barnes, P.J., Fabbri, L.M., Martinez, F.J., Nishimura, M. and Stockley, R.A., 2013. Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease. *European Respiratory Journal*, 41(4), pp.993–995. Available at: <https://doi.org/10.1183/09031936.00180812>
4. Detroit Medical Center (no date) 13 common COPD symptoms. Available at: <https://www.dmc.org/healthy-living/corporate-content/13-common-copd-symptoms>
5. Huang, X., Mu, X., Deng, L., Fu, A., Pu, E., Tang, T. and Kong, X., 2018. The etiologic origins for chronic obstructive pulmonary disease. *Respiratory Research*. Available at: <https://doi.org/10.1186/s12931-018-0842-8>
6. British Lung Foundation, 2020. Chronic obstructive pulmonary disease (COPD) statistics. Available at: <https://www.blf.org.uk>
7. Adeloye, D., Chua, S., Lee, C., Basquill, C., Papana, A., Theodoratou, E., Nair, H., Gasevic, D., Sridhar, D., Campbell, H. and Chan, K.Y., 2015. Global and regional estimates of COPD prevalence: systematic review and meta-analysis. *Journal of Global Health*, 5(2). Available at: <https://doi.org/10.7189/jogh.05.020415>
8. Tachkov, K. et al. (2017) 'Evaluation of the economic and social burden of chronic obstructive pulmonary disease (COPD)', *Biotechnology & Biotechnological Equipment*, 31(4), pp. 855–861. doi: 10.1080/13102818.2017.1335616.
9. Ford, E.S., Murphy, L.B., Khavjou, O., Giles, W.H., Holt, J.B. and Croft, J.B. (2015) 'Total and state-specific medical and absenteeism costs of COPD among adults aged $\geq$ 18 years in the United States for 2010 and projections through 2020', *Chest*, 147(1), pp. 31–45. doi: 10.1378/chest.14-0947.
10. Lopez-Campos, J.L., Tan, W. and Soriano, J.B., 2016. Diagnosis, assessment and phenotyping of COPD: beyond FEV₁. *International Journal of Chronic Obstructive Pulmonary Disease*. Available at: <https://doi.org/10.2147/COPD.S85976>

Referances

11. National Institute for Health and Care Excellence (NICE), 2019. Chronic obstructive pulmonary disease in over 16s: diagnosis and management. Available at: <https://www.nice.org.uk>
12. Global Initiative for Chronic Obstructive Lung Disease (GOLD), 2023. Global strategy for the diagnosis, management, and prevention of COPD. Available at: <https://goldcopd.org>
13. Forbes, L.J.L., Marchand, C., Doran, T. and Peckham, S. (2017) 'The role of the Quality and Outcomes Framework in the care of long-term conditions: a systematic review', British Journal of General Practice, 67(664), pp. e775–e782. doi: 10.3399/bjgp17X693077.
14. Lemmens, K.M., Nieboer, A.P., Rutten-van Mölken, M.P. et al., 2010. Application of a theoretical model to evaluate COPD disease management. BMC Health Services Research, 10, p.81. Available at: <https://doi.org/10.1186/1472-6963-10-81>
15. Price, D.B., West, D., Brusselle, G., Gruffydd-Jones, K., Jones, R., Miravittles, M., Rossi, A., Hutton, C., Ashton, V.L., Stewart, R. and Bichel, K. (2014). Management of COPD in the UK primary-care setting: an analysis of real-life prescribing patterns. International Journal of Chronic Obstructive Pulmonary Disease, 9(1), pp. 889–905. doi: 10.2147/COPD.S62750.
16. Hertel, N., Kotchie, R.W., Samyshkin, Y., Radford, M., Humphreys, S. and Jameson, K. (2012). Cost-effectiveness of available treatment options for patients suffering from severe COPD in the UK: a fully incremental analysis. International Journal of Chronic Obstructive Pulmonary Disease, 7, pp. 183–199.
17. Cavaillès, A., Brinchault-Rabin, G., Dixmier, A., Goupil, F., Gut-Gobert, C., Marchand-Adam, S., Meurice, J.C., Morel, H., Person-Tacnet, C., Leroyer, C. and Diot, P. (2013). Comorbidities of COPD. European Respiratory Review, 22(130), pp. 454–475.
18. Lu, W., Aarsand, R., Schotte, K., Han, J., Lebedeva, E., Tsoy, E., Maglakelidze, N., Soriano, J.B., Bill, W., Halpin, D., Rivera, M.G., Fong, K.M., Kathuria, H., Yorgancioğlu, A., Gappa, M., Lam, D.C.L., Rylance, S. and Sohal, S.S. (2024) 'Tobacco and COPD: presenting the World Health Organization (WHO) Tobacco Knowledge Summary', Respiratory Research, 25(1), p. 331. doi: 10.1186/s12931-024-02961-5.
19. Fabbri, L.M. and Hurd, S.S. (2003). Global Strategy for the Diagnosis, Management and Prevention of COPD: 2003 update. European Respiratory Journal, 22(1), pp. 1–2
20. Cravo, A., Attar, D., Freeman, D., Holmes, S., Ip, L. and Singh, S.J. (2022). The Importance of Self-Management in the Context of Personalized Care in COPD. International Journal of Chronic Obstructive Pulmonary Disease, 17, pp. 231–243. doi: 10.2147/COPD.S343108.

References

21. Mirza, S., Clay, R.D., Koslow, M.A. and Scanlon, P.D. (2018) 'COPD Guidelines: A Review of the 2018 GOLD Report', Mayo Clinic Proceedings, 93(10), pp. 1488–1502. doi: 10.1016/j.mayocp.2018.05.026.
22. Collinsworth, A.W., Brown, R.M., James, C.S., Stanford, R.H., Alemayehu, D. and Priest, E.L. (2018) 'The impact of patient education and shared decision making on hospital readmissions for COPD', International Journal of Chronic Obstructive Pulmonary Disease, 13, pp. 1325–1332. doi: 10.2147/COPD.S154414.
23. LUNgevity Foundation (2024). Shared Decision-Making. Available at: <https://www.lungevity.org/learn-about-lungevity/patient-focused-research-center/shared-decision-making>
24. Gardener, A.C., Ewing, G. and Farquhar, M. (2019) 'Enabling patients with advanced chronic obstructive pulmonary disease to identify and express their support needs to health care professionals: A qualitative study to develop a tool', Palliative Medicine, 33(6), pp. 663–675. doi: 10.1177/0269216319833559.
25. Bhandari, S., Harris, M., Heffernan, M. and Taggart, J. (2025) 'Social prescribing and community support for people with chronic obstructive pulmonary disease: a systematic review', BMC Primary Care, 26(1), p. 29. doi: 10.1186/s12875-025-02997-6.
26. Yadav, U.N., Paudel, G., Ghimire, S., Billot, L., Cass, A., Joshi, R. and Lloyd, J. (2024). A rapid review of opportunities and challenges in the implementation of social prescription interventions for addressing the unmet needs of individuals living with long-term chronic conditions. BMC Public Health, 24(306). doi: 10.1186/s12889-024-17736-2.
27. Jones, K., Forder, J., Caiels, J., Welch, E., Glendinning, C. and Windle, K. (2013) 'Personalization in the health care system: do personal health budgets impact on outcomes and cost?', Journal of Health Services Research & Policy, 18(2_suppl), pp. 59–67. doi: 10.1177/1355819613503152.
28. Zwerink, M., Kerstjens, H.A., van der Palen, J., van der Valk, P., Brusse-Keizer, M., Zielhuis, G. and Effing, T. (2014) 'Self-management for patients with chronic obstructive pulmonary disease', International Journal of Chronic Obstructive Pulmonary Disease, 9, pp. 1297–1309. doi: 10.2147/COPD.S74162.

References

29. Eikelenboom, N., van Lieshout, J., Jacobs, A., Verhulst, F., Lacroix, J., van Halteren, A., Klomp, M., Smeele, I. and Wensing, M. (2016). Context of Self-Management in the Context of Personalized Care in COPD. *British Journal of General Practice*, 66(646), pp. e354–e361. doi: 10.3399/bjgp16X684985.
30. Healthgrades (n.d.) Causes of COPD [online image]. Available at: <https://resources.healthgrades.com/> (Accessed: 16 April 2026).



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