Respiratory High Impact Interventions

NHS England

Intervention	Summary	Cost of intervention / Return on investment	Impact on demand	Expected outcomes	Resources
Spirometry in diagnosis of asthma & COPD Targeted testing in primary care to identify and further explore reduced lung function, providing the opportunity for preventative and/or treatment	Evidence suggests that earlier detection and diagnosis of COPD, asthma and other lung conditions allows the targeted use of early primary prevention interventions (like support to stop smoking) and secondary prevention interventions (like pulmonary rehabilitation). NICE estimates there are 115,000 new diagnoses of COPD and 80,000 (average) asthma diagnoses per year. Strong clinical consensus that an earlier diagnosis provides greater opportunity for proven clinical interventions.	£500 cost for training for quality assured spirometry, see below for illustrative cost of respiratory diagnosis bundle (one model): LES respiratory diagnostic provision in the South West of England: **Cost per case based on county-wide activity** • FeNO: £25.13 • Spirometry: £17.37 • Respiratory Champion: £9345.16 per PCN/annum Available evidence suggests that spirometry is likely to be a cost-effective measure. Lambe et al (2019) The annual economic burden of asthma and COPD on the NHS in the UK is estimated as £3 billion and £1.9 billion respectively. In total, all lung conditions (including lung	Both under and over diagnosis of respiratory conditions leads to delayed treatment and increased chance of acute admissions. • Under-diagnosis of moderate and severe asthma was recognised as a key factor in the National Review of Asthma Deaths, 30% of all those that died had a diagnosis of mild asthma. • CYP without a diagnosis of asthma, but on an inhaler have poorer outcomes / cost more than those with an asthma diagnosis. The ARCTIC observational cohort study: Late COPD diagnosis is associated with higher exacerbation rate and increased comorbidities and costs compared with early diagnosis. The study shows late diagnosis incurred a	With targeted use of the interventions mentioned above, this burden can be offset by: • Reduction in emergency and acute admissions. • Reduction in pharmaceutical costs. • Increased referral into education & self-management programmes reduces downstream intensive interventions. • By reducing misdiagnosis, the NHS could save an estimated £1.5-7.5 million per annum.	The RCGP has produced guidance setting out suggested actions to support long-term condition management. For COPD and asthma, it describes the process for identifying those patients at highest risk without a diagnosis. NHS RightCare Pathways: COPD (england.nhs.uk) Overview | Asthma: diagnosis, monitoring and chronic asthma management | Guidance | NICE

		cancer) directly cost the NHS in the UK £11billion annually.	15.7% increase in direct costs per patient during 2 years after COPD diagnosis. The study also highlights the need for accurate diagnosis of COPD in primary care in order to reduce exacerbations and the economic burden of COPD.		
Inhaler and medicines optimisation Action to ensure appropriate medicines use, particularly inhalers, to reduce exacerbations and mortality	Appropriate medicines use, particularly inhaler, is evidenced to reduce exacerbations and mortality. With optimal therapy, 90% of people with asthma could be well controlled. Evidence that widespread implementation of inhaled corticosteroids decreases unscheduled healthcare utilisation. 5.4 million people with asthma could potentially benefit from optimal use of inhalers and reduce the environmental impact of inhalers.	Inhaler prescribing is part of routine care as recommended by NICE. This applies to annual reviews where there is an opportunity to improve quality. The optimisation of inhaler use is being incentivised through the PCN Impact and Investment Fund. It is also incentivised for community pharmacists via the Pharmacy Quality Scheme.	Regular use of inhaled corticosteroids, as part of a broader national focus on asthma, was effective in reducing costs associated with asthma in Finland, including hospital utilisation falling by 54% over a ten-year period.	Optimisation of inhalers is associated with better disease control, shown to improve clinical outcomes and reduces unscheduled healthcare usage.	NICE guidance Diagnosis, monitoring and chronic asthma management and particularly recommendations 1.5 to 1.7 on pharmacological treatment. Primary Care Network Investment and Impact Fund guidance and particularly indicators Resp-01 and Resp-02
Pulmonary Rehabilitation (PR) for COPD support and exercises to improve lung function following	Cochrane Review of PR following exacerbations of COPD, showed PR prevented further deterioration and exacerbations, and reduced	PR is a cost-effective intervention for COPD, shown at £2,000-£8,000 quality adjusted life years. £14 million (of NHS Long Term Plan funding) has been	Approx. 2 million people have COPD in England and most will require PR. If the LTP objectives for PR are fully implemented this could prevent 500,000 exacerbations and 80,000 admissions (modelling provided	Completion reduces hospital admissions and primary care appointments, and leads to clinically significant improvements in breathlessness, activity, exercise	NICE (2018) Overview | Chronic obstructive pulmonary disease in over 16s: diagnosis and management | Guidance | NICE British Thoracic Society – Quality Standards for PR

exacerbations of COPD	admissions for 90% of patients who complete the programme.	allocated to systems in 2022/23 to expand PR service provision and achieve the LTP objectives for PR.	for the NHS Long Term Plan, p66).	levels and quality of life for 90% of participants who complete.	Pulmonary Rehabilitation | British Thoracic Society | Better lung health for all (brit-thoracic.org.uk)
Personalised Asthma Action Plan (PAAP) for all Children and Young People (CYP) with asthma Ensuring CYP and their families have support and education to manage their conditions	The UK has one of the highest prevalence, emergency admission and death rates for childhood asthma in Europe. Reviews of asthma deaths identified that educating staff on the use of PAAP and reviewing inhaler techniques could reduce exacerbations and prevent deaths from asthma.	Free PAAP templates and e-learning for health training modules available for all staff (tiers 1-3 are free to access and tier 4 costs £450 per learner). Hospital admissions due to asthma range from £1516 to £2473 per night. Reducing admission by half would save the NHS c£9.8 million.	Preventing CYP asthma exacerbations could save a further 50% of bed days to 6,000, £9.6m of saving.	Asthma deaths are largely attributable to avoidable factors. Implementation of interventions will lead to increased quality of life, reductions in hospitalisations.	NICE guidance NG80: Asthma: diagnosis, monitoring and chronic asthma management Beat Asthma Healthy London Partnership: Asthma Asthma & Lung UK