Royal College of Physicians | NACAP

Primary Care Audit 2020/21

Audit Queries: 2021 audit Git Hub

Version: Git Hub 2021

The audit period was 16 months and covered 1 April 2020 to 31 July 2021. The data was obtained from practices during a four-week period in autumn/winter 2021 via the Secure Anonymised Information Linkage (SAIL) databank. Queries cover asthma and COPD (dark pink), COPD only (light pink) and asthma only (green).

Please note that where a query states **'in the last 2 years'** this 2 year period equals the 2 years prior to the extraction period. So for the 2020/2021 data extraction this will be two years prior to the end of September 2021. Where the query states '**6 months prior to diagnosis or within 6 months of diagnosis'** the data of diagnosis is used to determine the time period looked at.

No	Question	Rationale
Section 1: Demographics and mental health conditions		
COPD and asthma	Number of people with asthma and/or COPD NOTE: Date of diagnosis to be included.	**Git Hub notes** **Data and methodology report:** Denominators can be found in each table of the data and methodology report **Other notes:** None
COPD and asthma	The following demographics will be extracted and reported on: • Ethnicity • Sex • Age • Deprivation score: WIMD/IMD	For analysis of equity of access. **Git Hub notes** **Data and methodology report:** Page 8 **Other notes:** Age (table 1.2 of the data report) - Standard deviation for men and women separately was not available for the 2021 audit due to disclosure issues. NACAP intend to explore inclusion again for the next audit. Analysis scripts for this are available via the Git Hub page for the 2020 audit - GitHub - NationalAsthmaCOPDAudit/primary_care2020: 2020 Welsh Primary Care Audit.
COPD and asthma	The presence of the following co-morbidities will be assessed: • Diabetes • Hypertension • Coronary Heart Disease • COPD • Stroke	To allow assessment of the percentage of asthma and COPD patients with co-morbidities (to better categorise the audited cohort). **COPD** **NICE CG101 COPD** *Co-morbidities are considered in the management of patients with COPD. [2010]*

• Heart Failure • Painful conditions (determined by repeat prescribed analgesics) • Lung cancer • Asthma • Bronchiectasis • Depression (screened for/diagnosed in last 2 years) • Anxiety (screened for/ diagnosed in last 2 years) • Schizophrenia, Bipolar and other psychotic illness • Learning disability • Mild/moderate mental health issues (paeds only) • Osteoporosis • Eczema • Atopy • Nasal polyps • Reflux • Hay fever • Family history of asthma • Allergic rhinitis • Obesity (BMI)	**Asthma** **BTS/SIGN guideline** *Healthcare professionals must be aware that patients with severe asthma and one or more adverse psychosocial factors are at risk of death. BTS/SIGN 8.1.3* **NRAD** *Health professionals must be aware of the factors that increase the risk of asthma attacks and death, including the significance of concurrent psychological and mental health issues.* **NICE quality statements (QS25)** **Quality Statement 5: Review** *Assessment of comorbidities is included in the recommended content for annual reviews for both adults and children.* **Git Hub notes** **Data and methodology report:** Pages 9 - 10 **Other notes:** Screening for anxiety or diagnosed in the last 2 years was not included in 2021 analysis methodology due to the necessary information not being available via the SAIL databank. NACAP intend to explore inclusion again for the next audit. The scripts for conducted this analysis can still be found within the 2021 audit Git Hub page.

Section 2: Getting the diagnosis right		
Post-bronchodilator spirometry		
1a.	**COPD and asthma** The percentage of people diagnosed with asthma and/or COPD in the **last 2 years** who have a post-bronchodilator test with an appropriate numeric value. NOTE: should include 339m + all 339 codes Presented as two separate results: 1. Those with 339m (post-bronchodilator FEV^1/FVC) 2. Those with any 339 code Appropriate numeric value: COPD = 0.2-0.7 Asthma = 0.2-0.7* *will not occur in all asthma patients due to variability.	**COPD** **NICE CG101 COPD** *People aged over 35 years who present with a risk factor and one or more symptoms of chronic obstructive pulmonary disease (COPD) have post -bronchodilator spirometry.* **Asthma** **BTS/SIGN guideline** *Carry out quality-assured spirometry using the lower limit of normal to demonstrate airway obstruction, provide a baseline for assessing response to initiation of treatment and exclude alternative diagnoses.* • *Obstructive spirometry with positive bronchodilator reversibility increases the probability of asthma.* *Normal spirometry in an asymptomatic patient does not rule out the diagnosis of asthma.* **Git Hub notes** **Data and methodology report:** Page 12 **Other notes:** None
Spirometry		
1b.	**Asthma only** The percentage of people diagnosed with asthma in the **last 2 years** who have had a spirometry (+ reversibility) test. NOTE: Last recorded measurement and result to be used. Definitions of reversibility testing include: • Spirometric evidence of a significant FEV1 response to a SABA or after a trial of treatment with ICS or OCS, OR • Prescription for ICS using medication codes in conjunction with a "positive" reversibility testing code suggesting subjective improvement OR • evidence of significantly variable PEFR	**BTS/SIGN guideline** *Undertake a structured clinical assessment to assess the initial probability of asthma. This should be based on:* • *a history of recurrent episodes (attacks) of symptoms, ideally corroborated by variable peak flow when symptomatic and asymptomatic* • *symptoms of wheeze, cough, breathlessness and chest tightness that vary over time* • *recorded observation of wheeze heard by a healthcare professional* • *personal/family history of other atopic conditions (in particular, atopic eczema/dermatitis, allergic rhinitis)* • *no symptoms/signs to suggest alternative diagnoses.* *Compare the results of diagnostic tests undertaken whilst a patient is asymptomatic with those undertaken when a patient is symptomatic to detect variation over time.*

	Recommended spirometry ratio codes are 339m (Post Br FEV1/FVC) and 339M (Pre Br FEV1/FVC) but the search will include all relevant spirometry codes ratio and non ratio codes, including FEV^1, FVC and PEFR.	*Carry out quality-assured spirometry using the lower limit of normal to demonstrate airway obstruction, provide a baseline for assessing response to initiation of treatment and exclude alternative diagnoses.* • *Obstructive spirometry with positive bronchodilator reversibility increases the probability of asthma.* *Normal spirometry in an asymptomatic patient does not rule out the diagnosis of asthma.* **NICE guideline (NG80)** *Asthma: diagnosis, monitoring and chronic asthma management* ***1.3 Objective tests for diagnosing asthma in adults, young people and children aged 5 and over*** ***Lung function tests*** *Spirometry* *1.3.5 Offer spirometry to adults, young people and children aged 5 and over if a diagnosis of asthma is being considered. Regard a forced expiratory volume in 1 second/forced vital capacity (FEV1/FVC) ratio of less than 70% (or below the lower limit of normal if this value is available) as a positive test for obstructive airway disease (obstructive spirometry).* **Git Hub notes** **Data and methodology report:** Page 15 **Other notes:** Any spirometry ratio codes ≥0.2-0.7 for adults with asthma and Pre-bronchodilator ratio ≥0.2-0.7 and Any spirometry ratio codes for children with asthma was not available for the 2021 audit due to disclosure issues. NACAP intend to explore inclusion again for the next audit. The scripts for conducted this analysis can still be found within the 2021 audit Git Hub page.
Peak Flow		
2a.	**Asthma only** The percentage of people diagnosed with asthma in the **last 2 years** who have a record of a peak flow test (reading and/or diary records). NOTE: Result of test to be included in this query if available (coding of test does not always have result). Last recorded measurement with result to be used. See above for recommended codes.	**As above** **Git Hub notes** **Data and methodology report:** Pages 13 and 14 **Other notes:** None

Fractional Exhaled Nitric Oxide (FeNO)		
3.	**Asthma only** The percentage of people diagnosed with asthma in the **last 2 years** who have a record of a fractional exhaled nitric oxide (FeNO) test. NOTE: Result of test to be included in this query.	**BTS/SIGN Guideline** *Fractional exhaled nitric oxide (FeNO)* *Use measurement of FeNO (if available) to find evidence of eosinophilic inflammation. A positive test increases the probability of asthma but a negative test does not exclude asthma.* **NICE guideline (NG80)** *Asthma: diagnosis, monitoring and chronic asthma management* ***1.3 Objective tests for diagnosing asthma in adults, young people and children aged 5 and over*** ***Airway inflammation measures*** *Fractional exhaled nitric oxide* *Please refer to 1.3.2 and 1.3.4* **Git Hub notes** **Data and methodology report:** Page 14 **Other notes:** None
Any objective measurement		
4.	**Asthma only** The percentage of people diagnosed with asthma in the **last 2 years** who have a (ever recorded) record of any objective measurement. • Spirometry (+reversibility) • Peak Flow • Fractional exhaled nitric oxide (FeNO)	**As above for spirometry, peak flow and FeNO test.** **Git Hub notes** **Data and methodology report:** Page 13 **Other notes:** None
Chest x-ray		
5.	**COPD only** The percentage of people diagnosed with COPD in the **last 2 years** who had a chest x-ray or CT scan **6 months prior to diagnosis or within 6 months of diagnosis** (i.e. when COPD code was first added to disease register).	**NICE CG101 COPD** *recommends that at the time of their initial diagnostic evaluation in addition to spirometry all patients should have a chest radiograph to exclude other pathologies.* **Git Hub notes** **Data and methodology report:** Page 13 **Other notes:** CT scan no longer appropriate for COPD patients. NACAP will potentially remove from next audit.

Section 3: Assessing severity and future risk		
MRC scores and FEV1		
6.	**COPD only** The percentage of people with COPD with MRC scores 1,2,3,4,5 and 'not recorded' **in the last year** [15 months].	**NICE CG101 COPD** *One of the primary symptoms of COPD is breathlessness. The Medical Research Council (MRC) breathlessness scale should be used to grade the breathlessness according to the level of exertion required to elicit it.* *Breathlessness of MRC3 severity or more represents significant functional impairment and patients with MRC3 or more should be receiving the key components of a review. They should be receiving pulmonary rehabilitation as soon as possible. They may also require additional pharmacological interventions and oxygen therapy so a more targeted and intensive review may be required.* **Git Hub notes** **Data and methodology report:** Page 18 **Other notes:** None
7.	**COPD only** The percentage of people with COPD who have a measure of FEV1 percent-predicted value recorded **in the last year** [15 months].	**NICE CG101 COPD** *There is no specific recommendation to measure annually but treatment thresholds for pulmonary rehabilitation, inhaled therapies and assessment for oxygen are determined by percent-predicted FEV1 and the subsequent classification of severity.* **Git Hub notes** **Data and methodology report:** Page 18 **Other notes:** None
Smoking		
8.	**COPD and asthma** The percentage of people with asthma and/or COPD who were asked about tobacco smoking **in the last year** [15 months] and their smoking status.	**COPD** **NICE QS10** is linked to **QS43 - Smoking: supporting people to stop** [2013] ***NICE QS43 - Quality statement 1*** *People are asked if they smoke by their healthcare practitioner, and those who smoke are offered advice on how to stop.* *Tobacco smoking is the cause of COPD in the vast majority of people. Stopping smoking reduces the rate of decline of lung function and reduces exacerbations. Other treatments for COPD work better if tobacco use has ceased.* **Asthma** **BTS/SIGN guideline**

		Parents with asthma should be advised about the dangers, to themselves and to their children with asthma, of smoking, and be offered appropriate support to stop smoking. *Clinicians should be aware that higher doses of inhaled corticosteroids may be needed in patients who are smokers or ex-smokers.* **NRAD** *A history of smoking and/or exposure to second-hand smoke should be documented in the medical records of all people with asthma. Current smokers should be offered referral to a smoking-cessation service.* **Git Hub notes** **Data and methodology report:** Page 20 **Other notes:** None
9.	**Asthma only** The percentage of people with asthma who were recorded as being exposed to secondhand smoke **in the last year** [15 months].	**As above for asthma** **Git Hub notes** **Data and methodology report:** Page 21 **Other notes:** None
COPD exacerbations and asthma attacks		
10a.	**COPD and asthma** The percentage of people with asthma and/or COPD with 0,1,2 or more asthma attacks/COPD exacerbations **in the last year** [15 months] evidenced by cumulative exacerbation code or use of the total number of individual exacerbation codes (whichever is greater). NOTE: There must be at least 14 days between each event for them to be considered separate events. Obtain date of exacerbation.	Enables exploration of asthma attacks/exacerbations per demographic, if frequent exacerbations are more likely in certain patient groups. To investigate if issues around adherence and control are being addressed. Where patients are continuing to have repeated asthma attacks/COPD exacerbations may show that assessments and reviews may not be taking place appropriately. **COPD** **NICE CG101 COPD** *A more comprehensive assessment of severity includes … the frequency of exacerbations …* The guideline also advises on treatment thresholds for pulmonary rehabilitation, self-management planning and inhaled therapies according to exacerbation frequency. *Exacerbations of COPD accelerate the decline of COPD, impair quality of life during the episode and, if left untreated, can result in hospitalisation and high risk of death. Recovery can be prolonged during which time the patient and carer will need additional physical and psychosocial support. Recognising and recording*

		exacerbations should be a key element of risk stratification in a general practice COPD population. **Asthma** **NICE Quality Statements (QS25)** ***NICE quality statement 6: Assessing asthma control*** *People with asthma who present with respiratory symptoms receive an assessment of their asthma control.* **Git Hub notes** **Data and methodology report:** Page 21 **Other notes:** None

10b.	**COPD and asthma** The percentage of people with asthma and/or COPD with 0,1,2 or more asthma attacks/COPD exacerbations **in the last year** [15 months] evidenced by use of a validated method for asthma attacks or COPD exacerbations. NOTE: There must be at least 14 days between each event for them to be considered separate events. *Obtain date of exacerbation.*	**As above** **Validated proxy method information for Asthma** *Coded exacerbations will be compared with the number of exacerbations calculated from use of validated combinations of the following codes:* • *≤300 mg oral corticosteroids (OCS) (not prescribed during an annual review)* *A cut-off of ≤150 mg will be used for children < 5 years old* • *Lower respiratory tract infections treated with same day prescription of appropriate antibiotics (Ax-LRTI)* *Please see Exacerbation risk and characterisation of the UKs asthma population from infants to old age.* *http://thorax.bmj.com/content/early/2017/10/26/thoraxjnl-2017-210650* **Validated proxy method information for COPD** • *an LRTI code* • *an exacerbation code* • *oral steroid and antibiotic prescriptions on the same day* *Please see* *Validation of chronic obstructive pulmonary disease recording in the Clinical Practice Research.* *https://doi.org/10.1136/bmjopen-2014-005540* *And* *Validation of the recording of acute exacerbations of COPD in UK primary care electronic healthcare records.* *https://doi.org/10.1371/journal.pone.0151357* **Git Hub notes** **Data and methodology report:** Page 21

		Other notes: Validated proxy method include the use of prescription data.
11.	**Asthma only** The percentage of people with asthma who have had ≥3 courses of prednisolone for asthma exacerbations AND have been referred for specialist care **in the last year** [15 months].	**NRAD** *Patients with asthma must be referred to a specialist asthma service if they have required more than two courses of systemic corticosteroids, oral or injected, in the previous 12 months or require management using British Thoracic Society (BTS) stepwise treatment 4 or 5 to achieve control.* **Git Hub notes** **Data and methodology report:** Pages 19 and 20 **Other notes:** Prescription data used
Oxygen saturation levels		
12.	**COPD only** People with stable COPD and a persistent (2 or more) resting stable oxygen saturation level of 92%.	**NICE QS10 - Quality statement 3** *People with stable COPD and a persistent resting stable oxygen saturation level of 92% or less have their arterial blood gases measured to assess whether they need long - term oxygen therapy.* **Git Hub notes** **Data and methodology report:** Page 19 **Other notes:** Persistent (2 or more) oxygen saturation level was not included in 2021 audit due to data not being available from the SAIL databank. Consider for next round depending on who does data extraction. NACAP intend to explore inclusion again for the next audit. The scripts for conducted this analysis can still be found within the 2021 audit Git Hub page (requires un-commenting out).

Section 4: Providing high value care		
Personalised Asthma Actions Plans (PAAPs)		
13.	**Asthma only** The percentage of people with asthma who have had a Personalised Asthma Action Plan (PAAP) anytime **in the year** [15 months]**.**	**NICE Quality Statements (QS25)** ***NICE quality standard 3: Written personalised action plans*** *People with asthma receive a written personalised action plan.* **BTS/SIGN guideline** *All people with asthma (and/or their parents or carers) should be offered self-management education which should include a written personalised asthma action plan and be supported by regular professional review.* *In adults, written personalised asthma action plans may be based on symptoms and/or peak flows: symptom-based plans are generally preferable for children.* *Written PAAPs (for example, those for adults and children from Asthma UK, available at www.asthma.org.uk/resources/#actionplan) are crucial components of effective self-management education. One systematic review identified the features of PAAPs associated with beneficial outcomes. These include:* • *specific advice about recognising loss of asthma control, assessed by symptoms or peak flows or both. In children, symptom-based written plans are effective in reducing emergency consultations for asthma, although (in older children) peak flow-based plans may be as effective for other outcomes.* • *actions, summarised as two or three action points, to take if asthma deteriorates, including seeking emergency help, starting oral steroids (which may include provision of an emergency course of steroid tablets), restarting or temporarily increasing (as opposed to just doubling) ICS, as appropriate to clinical severity.* **NRAD** *All people with asthma should be provided with written guidance in the form of a personal asthma action plan (PAAP) which details their own triggers and current treatment, and specifies how to prevent relapse and when to seek help in an emergency.* **NICE guideline (NG80)** *Asthma: diagnosis, monitoring and chronic asthma management.* ***1.10 Self-management***

		1.10.1 Offer an asthma self-management programme, comprising a written personalised action plan and education, to adults, young people and children aged 5 and over with a diagnosis of asthma (and their families or carers if appropriate). *1.10.2 Consider an asthma self-management programme, comprising a written personalised action plan and education, for the families or carers of children under 5 with suspected or confirmed asthma.* **Git Hub notes** **Data and methodology report:** Page 24 **Other notes:** None
Assessing asthma control		
14.	**Asthma only** The percentage of people with asthma who have a record of the RCP 3 questions or ACT being asked **in the last year** [15 months]. NOTE: Annual review indicator	**NRAD** *An assessment of recent asthma control should be undertaken at every asthma review. Where loss of control is identified, immediate action is required, including escalation of responsibility, treatment change and arrangements for follow-up.* **BTS/SIGN guideline** *In adults the following factors should be monitored and recorded in primary care:* • *symptomatic asthma control* *(Symptomatic asthma control is best assessed using directive questions such as the Royal College of Physicians' '3 questions',129 or the Asthma Control Questionnaire or Asthma Control Test (see Table 7), since broad non-specific questions may underestimate symptoms)* ***Monitoring children in primary care*** *Asthma is best monitored in primary care by routine clinical review on at least an annual basis (see section 14.3).* *The factors that should be monitored and recorded include:* • ***symptom score**, eg Children's Asthma Control Test, Asthma Control Questionnaire* **Monitoring adults in primary care** *In adults the following factors should be monitored and recorded in primary care:* • ***symptomatic asthma control*** **QOF and NICE Quality Statements (QS25)** *Paediatrics* • ***Assessment of symptomatic asthma control using recognised tool** (RCP 3 questions, asthma control*

		questionnaire, children's asthma control test, paediatric asthma quality of life questionnaire) *Adults* ***Assessment of symptomatic asthma control using recognised tool*** *(RCP 3 questions, asthma control questionnaire, asthma control test, asthma quality of life questionnaire)* **Git Hub notes** **Data and methodology report:** Page 24 **Other notes:** The presence of ACT was not included in the 2021 audit due to the necessary Read/SNOMED CT codes not being available. NACAP intend to explore inclusion again for the next audit.
Inhaler technique		
15.	**COPD and asthma** Percentage of people with asthma and/or COPD who have been prescribed an inhaler **AND** had their inhaler technique checked in the last year [15 months].	**COPD** ***NICE QS10 - Quality statement 2*** *People with COPD who are prescribed an inhaler have their inhaler technique assessed when starting treatment and then regularly during treatment.* **Asthma** ***NICE Quality Statements (QS25)*** ***NICE quality statement 4: Inhaler technique*** *People with asthma are given specific training and assessment in inhaler technique before starting any new inhaler treatment.* **BTS/SIGN guideline** *Before initiating a new drug therapy practitioners should check adherence with existing therapies, inhaler technique and eliminate trigger factors. BTS/SIGN 2.4* **NRAD** *An assessment of inhaler technique to ensure effectiveness should be routinely undertaken and formally documented at annual review, and also checked by the pharmacist when a new device is dispensed.* **Git Hub notes** **Data and methodology report:** Page 26 **Other notes:** None
Influenza immunisation		
16.	**COPD and asthma** The percentage of people with asthma and/or COPD who have had the influenza immunisation	**COPD** **NICE CG101 COPD**

	in the preceding **1 August to 31 March.**	*Pneumococcal vaccination and an annual influenza vaccination should be offered to all patients with COPD as recommended by the Chief Medical Officer.* *People with chronic respiratory illness who are infected with the influenza virus have more serious illness and are at higher risk of mortality. The vaccine has variable effectiveness according to season and current health status when given. It is safe and the highest value intervention for the treatment of COPD but is used less than some other COPD interventions that have less value.* **Asthma** **BTS/SIGN guideline** *Immunisations should be administered independent of any considerations related to asthma. Responses to vaccines may be attenuated by high-dose inhaled corticosteroids.* **Git Hub notes** **Data and methodology report:** Page 26 **Other notes:** None
Smoking cessation		
17a.	**COPD and asthma** The percentage of people (18 years and older) with asthma and/or COPD who were recorded as a current smoker at any time in the last 2 years who have received or had a referral to a behavioural change intervention **AND** had a stop smoking drug prescribed **in the last year** [15 months].	**COPD** **NICE Quality Standards** ***NICE QS10** is linked to **QS43 - Smoking: supporting people to stop:*** ***NICE QS43 - Quality statement 2*** *People who smoke are offered a referral to an evidence -based smoking cessation service.* ***NICE QS43 - Quality statement 3*** *People who smoke are offered behavioural support with pharmacotherapy by an evidence -based smoking cessation service.* ***NICE QS43 - Quality statement 4*** *People who seek support to stop smoking and who agree to take pharmacotherapy are offered a full course.* ***NICE QS43 - Quality statement 5*** *People who smoke who have set a quit date with an evidence -based smoking cessation service are assessed for carbon monoxide levels 4 weeks after the quit date.* **Asthma** **BTS/SIGN guideline** *Parents with asthma should be advised about the dangers, to themselves and to their children with asthma, of smoking, and be offered appropriate support to stop smoking.*

		Clinicians should be aware that higher doses of inhaled corticosteroids may be needed in patients who are smokers or ex-smokers. **NRAD** *A history of smoking and/or exposure to second-hand smoke should be documented in the medical records of all people with asthma. Current smokers should be offered referral to a smoking-cessation service.* **Git Hub notes** **Data and methodology report:** Page 27 **Other notes:** None
17b.	**Asthma** The percentage of children (0-18 years old) with asthma who were recorded as a current smoker at any time in the last 2 years who have received or had a referral to a behavioural change intervention **OR** had a stop smoking drug prescribed **in the last year** [15 months].	**As above** **Git Hub notes** **Data and methodology report:** Page 26 **Other notes:** None
Pulmonary rehabilitation		
18a.	**COPD only** The percentage of people with COPD who are breathless (any MRC score) and have been referred to pulmonary rehabilitation **in the last 3 years.**	**NICE QS10 - Quality statement 4** *People with stable COPD and exercise limitation due to breathlessness are referred to a pulmonary rehabilitation programme.* **Git Hub notes** **Data and methodology report:** Page 24 **Other notes:** None
18b.	**COPD only** The percentage of people with COPD who are breathless (MRC score 3-5) and have been referred to pulmonary rehabilitation **in the last 3 years.**	**As above** **Git Hub notes** **Data and methodology report:** Page 24 **Other notes:** None
Drug therapies		
19.	**COPD and asthma** Use of drug therapies in the **last 6 months** of the audit period. NOTE:	**COPD** **NICE CG101 COPD** • *In people with stable COPD who remain breathless or have exacerbations despite use of short acting bronchodilators as required, offer the following as*

	Prescribing of LAMA, LABA, ICS , LTRA and their combinations will be extracted to support analysis of allocation of resource to low and high value interventions at population level. ***COPD*** *ICS alone* *LABA alone* *LABA + ICS* *LAMA alone* *LABA + LAMA* *Triple therapy* ***Asthma*** *ICS alone* *LABA alone* *LABA +ICS or MART inhaler* *LTRA alone* *LTRA + ICS*	*maintenance therapy: if FEV1 ≥ 50% predicted: either long-acting beta2 agonist (LABA) or long-acting muscarinic antagonist (LAMA) if FEV1 < 50% predicted: either LABA with an inhaled corticosteroid (ICS) in a combination inhaler, or LAMA.* • *Offer LAMA in addition to LABA+ICS to people with COPD who remain breathless or have exacerbations despite taking LABA+ICS, irrespective of their FEV1.* • *In people with stable COPD and an FEV1 ≥ 50% who remain breathless or have exacerbations despite maintenance therapy with a LABA: consider LABA+ICS in a combination inhaler, consider LAMA in addition to LABA where ICS is declined or not tolerated.* • *Offer LAMA in addition to LABA+ICS to people with COPD who remain breathless or have exacerbations despite taking LABA+ICS, irrespective of their FEV1.* • *Consider LABA+ICS in a combination inhaler in addition to LAMA for people with stable COPD who remain breathless or have exacerbations despite maintenance therapy with LAMA irrespective of their FEV1.* • *The choice of drug(s) should take into account the person's symptomatic response and preference, and the drug's potential to reduce exacerbations, it side effects and cost.* **Asthma** **BTS/SIGN guideline** *Long-acting inhaled ß2 agonists should only be started in patients who are already on inhaled corticosteroids, and the inhaled corticosteroid should be continued.* *Combination inhalers are recommended to:* • *guarantee that the long-acting ß2 agonist is not taken without inhaled corticosteroid* • *improve inhaler adherence* **NRAD** *The use of combined inhalers should be encouraged. Where long-acting beta agonist (LABA) bronchodilators are prescribed for people with asthma, they should be prescribed with an inhaled corticosteroid in a single combination inhaler.* **NICE guideline (NG80)** *Asthma: diagnosis, monitoring and chronic asthma management* *Please refer to the following guidance:*

		1.6 Pharmacological treatment pathway for adults (aged 17 and over) ***1.7 Pharmacological treatment pathway for children and young people aged 5 to 16*** ***1.8 Pharmacological treatment pathway for children under 5*** **Git Hub notes** **Data and methodology report:** Pages 28-29 **Other notes:** For future audits NACAP intends to split children with asthma into two groups (6-11 and 12 – 18) to align with prescription guidelines.
Short-Acting Beta Agonist (SABA) use		
20.	**Asthma only** The percentage of people with asthma who have been prescribed more than 2 short-acting reliever inhalers **in the last 12 months**.	**BTS/SIGN guideline** *Anyone prescribed more than one short-acting bronchodilator inhaler device a month should be identified and have their asthma assessed urgently and measures taken to improve asthma control if this is poor.* **NRAD** *All asthma patients who have been prescribed more than 12 short-acting reliever inhalers in the previous 12 months should be invited for urgent review of their asthma control, with the aim of improving their asthma through education and change of treatment.* **Git Hub notes** **Data and methodology report:** Page 25 **Other notes:** Uses prescription data. For future audits NACAP intends to split children with asthma into two groups (6-11 and 12 – 18) to align with prescription guidelines. Repeat prescriptions were not available via the SAIL databank so data are on if there is evidence of at least one prescription for short-acting reliever inhalers. NACAP intends to explore repeats prescriptions again for the next audit.
Inhaled corticosteroid (ICS) use		
21.	**Asthma only** The percentage of people with asthma who have been prescribed fewer than 6 ICS devices **in the last 12 months**.	**NRAD** *Non-adherence to preventer inhaled corticosteroids is associated with increased risk of poor asthma control and should be continually monitored.* **BTS/SIGN Guideline**

		Inhaled corticosteroids are the recommended preventer drug for adults and children for achieving overall treatment goals. *Inhaled corticosteroids should be considered for patients with any of the following asthma-related features:* • *asthma attack in the last two years* • *using inhaled β2 agonists three times a week or more* • *symptomatic three times a week or more* • *waking one night a week* *Give inhaled corticosteroids initially twice daily (except ciclesonide which is given once daily).* *Once a day inhaled corticosteroids at the same total daily dose can be considered if good control is established.* *Before initiating a new drug therapy practitioners should check adherence with existing therapies, check inhaler technique, and eliminate trigger factors.* *Adherence to long-term asthma treatment should be routinely and regularly addressed by all healthcare professionals within the context of a comprehensive programme of accessible proactive asthma care.* *BTS/SIGN 2.2* **NICE guideline (NG80)** *Asthma: diagnosis, monitoring and chronic asthma management* ***1.5 Principles of pharmacological treatment*** *1.5.3 If inhaled corticosteroid (ICS) maintenance therapy is needed, offer regular daily ICS rather than intermittent or 'when required' ICS therapy.* *1.5.4 Adjust the dose of ICS maintenance therapy over time, aiming for the lowest dose required for effective asthma control.* **Git Hub notes** **Data and methodology report:** Page 25 **Other notes:** Uses prescription data. For future audits NACAP intends to split children with asthma into two groups (6-11 and 12 – 18) to align with prescription guidelines.