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North of England Commissioning Support

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Care Bundle

Adult patients with asthma prescribed high dose inhaled corticosteroids (ICS)

North of England Commissioning Support
Medicines Optimisation on behalf of Cumbria CCG

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1. Introduction

1.1. What is a care bundle?

A care bundle is a set of interventions that, when used together, significantly improve patient outcomes. The measures chosen reflect best practice and are based on NICE quality standards or other national guidance. Care bundles have been used extensively and successfully in Secondary Care, their use in Primary Care is more recent. This care bundle is based on the work of Healthcare Improvement Scotland and the Scottish Patient Safety Programme in Primary Care.

Reliability in health care is a failure-free operation over time. This equates to ensuring patients receive all the evidence-based care they are entitled to receive.

A care bundle is a structured way of improving processes of care to deliver enhanced patient safety and clinical outcomes. In relation to care bundles, this means ensuring that patients receive optimum care at every contact. The process for achieving reliability is to implement this set of measures (a care bundle). The key measure in a care bundle is the score which measures the level of compliance with all measures for all patients.

The care bundle data collection tool is a way of sampling whether optimum care is being delivered by applying the bundle to a sample of patients. This approach is therefore very different from traditional auditing approaches that are designed to identify whether individual measures are being implemented.

1.2. What makes up a care bundle?

- 4-5 measures
- All or nothing compliance
- Measurement done by a non-clinician if possible
- Spread over patient's journey
- Evidence based
- Creates teamwork and communication
- Multiple functions of care essential for desired outcome

1.2.1. How should a care bundle be used in practice?

A care bundle is a quality improvement tool which can be used in general practice to identify both where care is in line with best practice and where improvements are needed. Some are disease specific and some are medication specific. The latter may also be known as patient safety bundles if they relate to high risk medication.

Bringing about changes in practice is not easy. To be an effective tool the results of the care bundle measurements must be discussed by ALL members of the team involved in the care of the patient. The practice team then need to take ownership of the issues identified and commit to changing the way care is provided, using tools such as the 'Plan, Do, Study. Act' (PDSA) cycle.

Principles of successful measurement:

- The support of all members of the practice team should be obtained
- Data should be collected anonymously
- The results should be discussed by every member of the team
- The results should be used to plan and implement improvement initiatives
- Clinician support may be needed initially by the data collector until they are familiar with the measures.

1.3. Records

The care bundle is not a performance tool and so there is no requirement to report the measures achieved. The practice should keep a reflective log of improvements.

1.4. Resources

This care bundle has the following supporting resources:

- A word document data collection form
- An excel spreadsheet data collection form with a graphing function
- A reflective log template

Further information on Care Bundles and Improvement Models can be found at www.healthcareimprovementscotland.org/pspc.aspx

Further advice can be obtained from the Medicines Optimisation team, and specific queries about this care bundle can be directed to the author (details are on the front page).

2. Adult patients with asthma prescribed high dose inhaled corticosteroids (ICS)

2.1. Search Criteria

Please identify a random sample of up to 20 adult patients a month in your practice with a diagnosis of Asthma prescribed a high dose corticosteroid inhaler* on repeat prescription. Use the data collection form to record the answer to each measure and transfer this to the spreadsheet. This should be repeated over a period of time, and the results discussed by the clinical team at regular intervals. Use of the spreadsheet will enable changes in practice to be monitored and compliance with the care bundle to be measured.

*High dose corticosteroid inhalers –

- Symbicort 400/12 Turbohaler®
- Duoresp 400/12®
- Seretide 500 Accuhaler®
- Seretide 250 Evohaler®
- Flutiform 250®
- Fostair 200/6®
- Relvar 184/22®

2.2. Measures

01

Measure	**Has the diagnosis been confirmed in accordance with NICE guidance?**
Rationale	All patients should have had objective tests including Exhaled Nitric Oxide testing (FeNO), Spirometry, Bronchodilator reversibility or Peak Expiratory Flow (PEF) diary. In ADULT patients, do not use symptoms alone to diagnosis without an objective test to diagnosis asthma If objective tests cannot be done immediately, carry them out when acute symptoms have been controlled. Results of spirometry and FeNO tests may be affected by treatment with inhaled corticosteroids Consider occupational asthma in newly diagnosed adults or if asthma is uncontrolled.

Source	NICE Recommendation 2,12,13,14,15: https://www.nice.org.uk/Guidance/NG80 **Phased implementation (**see: https://www.nice.org.uk/guidance/ng80/chapter/Putting-this-guideline-into-practice**)** NICE is recommending objective testing with spirometry and FeNO for most people with suspected asthma. This is a significant enhancement to current practice, which will take the NHS some time to implement, with additional infrastructure and training needed in primary care. New models of care, being developed locally, could offer the opportunity to implement these recommendations. This may involve establishing diagnostic hubs to make testing efficient and affordable. They will be able to draw on the positive experience of NICE's primary care pilot sites, which trialled the use of FeNO. The investment and training required to implement the new guidance will take time. In the meantime, primary care services should implement what they can of the new guidelines, using currently available approaches to diagnosis until the infrastructure for objective testing is in place.

02

Measure	**Has the dose been prescribed in accordance with the NICE stepwise management plan?**
Rationale	The aim of asthma management is control of the disease. Complete control is defined as: • no daytime symptoms • no night time awakening due to asthma • no need for rescue medication • no exacerbations • no limitations on activity including exercise • normal lung function (in practical terms FEV1 and/or PEF >80% predicted or best) • minimal side effects from medication. 1. Start treatment at the step most appropriate to initial severity. 2. Achieve early control 3. Maintain control by: • stepping up treatment as necessary • stepping down when control is good. 4. Before initiating a new drug therapy practitioners should check compliance with existing therapies, inhaler technique and eliminate trigger factors. 5. Low dose ICS (200-400 micrograms/day Budesonide or equivalent in adults) are the first choice preventer drug for both adults and children. 6. High dose ICS refers to doses i.e. >800micrograms/day Budesonide or equivalent in adults;
Source	NICE : https://www.nice.org.uk/Guidance/NG80

03

Measure	**Has the patient had a medication review (including inhaler technique) in the past 12 months to start, review & stop medications in accordance with NICE guidance?**
Rationale	Before initiating a new drug therapy, practitioners should check compliance with existing therapies, inhaler technique and eliminate trigger factors. **Prescribe inhalers only after patients have received training in the use of the device and have demonstrated satisfactory technique.** The choice of device may be determined by the choice of drug • If the patient is unable to use a device satisfactorily, an alternative should be found • The patient should have their ability to use an inhaler device assessed by a competent health care professional • The medication needs to be titrated against clinical response to ensure optimum efficacy • Reassess inhaler technique as part of structured clinical review. Regular review of patients as treatment is stepped down is important. When deciding which drug to step down first and at what rate, the severity of asthma, the side effects of the treatment, time on current dose, the beneficial effect achieved, and the patient's preference should all be taken into account. Patients should be maintained at the lowest possible dose of inhaled steroid. Reduction in inhaled steroid dose should be slow as patients deteriorate at different rates. Reductions should be considered every three months, decreasing the dose by approximately 25-50% each time.
Source	NICE Recommendation 39: https://www.nice.org.uk/Guidance/NG80

04

Measure	Has the patient been stepped down to lowest controlling dose?
Rationale	The aim of asthma management is control of the disease. Complete control is defined as: • no daytime symptoms • no night time awakening due to asthma • no need for rescue medication • no exacerbations • no limitations on activity including exercise • normal lung function (in practical terms FEV1 and/or PEF >80% predicted or best) • minimal side effects from medication. All patients should be maintained on the lowest possible dose of ICS which effectively controls their asthma symptoms. Use of high dose ICS should be considered in only a small proportion of patients with asthma. Reduction in inhaled steroid dose should be slow as patients deteriorate at different rates. Reductions in ICS dose should be considered every three months, decreasing the dose by 25 to 50% each time, where clinically appropriate. Regular review of patients as treatment is stepped down is important. When deciding which drug to step down first and at what rate, the severity of asthma, the side effects of the treatment, time on current dose, the beneficial effect achieved and the patient's preference should all be taken into account.
Source	NICE Recommendation: https://www.nice.org.uk/Guidance/NG80

05

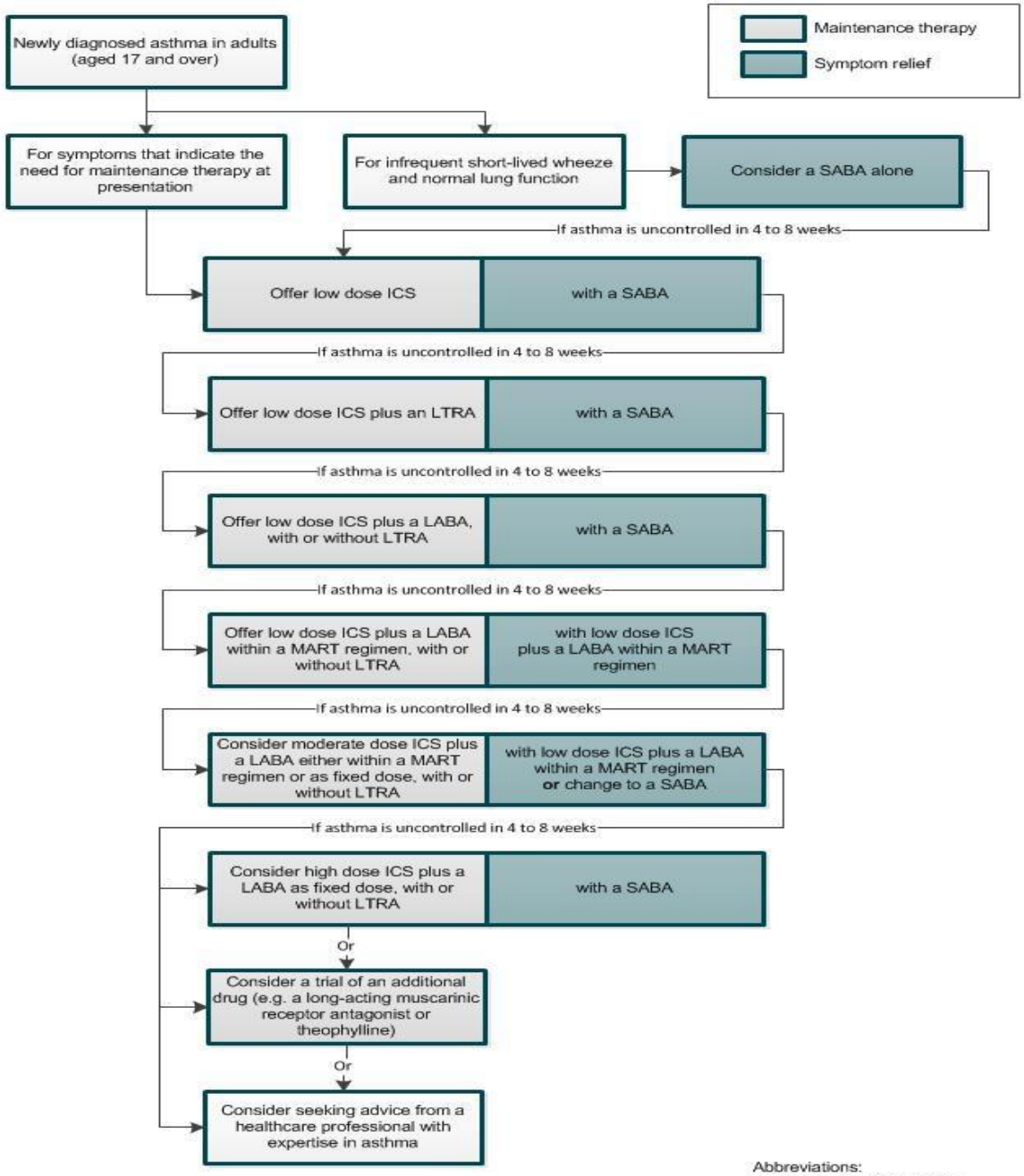
Measure	**Has the patient been given information about the risks & benefits of high dose ICS treatment?**
Rationale	All patients should receive information about the risks and benefits of high dose ICS treatment. High dose ICS carries a risk of systemic side-effects e.g. adrenal suppression, growth retardation, decrease in bone mineral density, cataract and glaucoma. Psychological or behavioural effects may also occur e.g. hyperactivity, depression and aggression (particularly in children). Fluticasone potency is double that of beclometasone or budesonide In mild to moderate asthma, starting at very high doses of ICS and stepping down is not beneficial.
Source	BTS/SIGN guidelines: British Guideline on the Management of Asthma 2016 https://www.brit-thoracic.org.uk/document-library/clinical-information/asthma/btssign-asthma-guideline-2016/

Appendix One: Abbreviations

Abbreviation	Definitions
NICE	National Institute for Health and Care Excellence
SPC	Summary of Product Characteristics
NICE CG	NICE Clinical Guideline
NICE QS	NICE Quality Statement
ICS	Inhaled corticosteroids
BTS	British Thoracic Society
SIGN	Scottish Intercollegiate Guidelines Network
FEV1	Forced Expiratory Volume in 1 second
PEF	Peak Expiratory Flow
PDSA	Plan, Do, Study Act

Appendix 2: NICE guidelines NG80

Algorithm C: Pharmacological treatment of chronic asthma in adults aged 17 and over



Abbreviations:
ICS, inhaled corticosteriod
LABA, long-acting beta agonist
LTRA, leukotriene receptor antagonist
MART, maintenance and reliever therapy
SABA, short-acting beta agonist