

## THE ROLE OF NURSES IN THE APPLICATION OF CONTROL DIARY TO PATIENTS WITH BRONCHIAL ASTHMA

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Severe asthma has major adverse effects on patients' quality of life, the use of healthcare resources and society as a whole. Asthma exacerbations can be fatal, and many deaths could probably be avoided with appropriate patient support, management and referral. Nurses in primary care play a key role in checking how well patients are managing their condition and refer them when appropriate. In specialist severe asthma services, respiratory nurse specialists assess patients, help define their asthma subtype and administer novel therapies. This article provides an overview of severe asthma management and the role of nurses. Asthma is a chronic inflammatory disease of the lungs with complex aetiology. Patients' airways become hyper-responsive to certain triggers, including animal fur, tobacco smoke, house dust mites, pollution and pollen. Exposure to a trigger promotes bronchoconstriction and airway inflammation, leading to ongoing infiltration of inflammatory cells (including eosinophils, basophils and mast cells), secretion of pro-inflammatory cytokines (including interleukin [IL]-4, IL-5 and IL-13) and accumulation of inflammatory cells in the airways (Chung, 2015). Ongoing airway inflammation results in a thickening of the airway smooth muscle, which increases bronchoconstriction and gives rise to the characteristic signs and symptoms of asthma. These include excessive mucus formation, breathlessness, wheezing and cough (Chung, 2015; Burns, 2013).

Patients with severe asthma are those whose condition remains poorly controlled despite the prescription of optimal treatments, including oral corticosteroids, at steps 4 and 5 of the BTS/SIGN stepwise approach. Severe asthma manifests in different ways: some patients have almost constant symptoms; others experience sudden, unexpected exacerbations requiring emergency care, or have a combination of constant symptoms and frequent exacerbations (Asthma UK, 2010).

Consequences of severe asthma

The impact of severe asthma on individuals is clearly expressed in Asthma UK's Fighting for Breath report, in which patients describe the effects of treatment and exacerbations on their daily lives. These include:

- Severely restricted physical and social activities;
- Anxiety, depression and fear of fatal or near-fatal asthma attacks and corticosteroid-related side-effects;
- Discrimination, loss of work and educational opportunities, and financial difficulties

#### Asthma subtypes

Severe asthma is divided into two subtypes: ‘difficult’ and ‘severe refractory’ asthma (Bel et al, 2011). In patients with severe refractory asthma, symptoms remain poorly controlled despite adherence with optimal treatment. In patients with difficult asthma, poor adherence with treatment – which can be due to a variety of reasons (including complex psychosocial factors, ongoing exposure to triggers and poor control of comorbidities) – contributes to ongoing symptoms and exacerbations. Some patients may have symptoms attributable to asthma but no objective evidence of genuine uncontrolled disease (Bel et al, 2011).

These two patient categories may present with similar symptoms and all require a referral to specialist asthma centres. Thorough and accurate assessment by a multidisciplinary team of specialists is required to identify the underlying causes of poor asthma control and define effective personalised management strategies. Timely identification of patients with severe asthma and a referral to specialist services for phenotyping and personalised treatment has major benefits to patients, the NHS and society as a whole.

#### Managing asthma in primary care

Since asthma is a lifelong condition, effective self-management is essential. Practice nurses play an important role in evaluating and systematically reviewing how well patients manage their condition. Box 1 features a checklist to help practice nurses identify patients who may have difficulties in achieving adequate asthma management. If areas of concern are identified, various measures can be put in place (Newell, 2015):

- Stepping up medication;
  - Helping patients with their inhaler technique;
  - Helping patients avoid asthma triggers by giving support and advice, including on smoking cessation;
  - Following up patients who do not attend appointments;
  - Increasing the frequency of reviews;
  - Working in partnership with patients to develop a personalised asthma action plan.
- Specialist asthma services provide detailed, complex evaluations of patients with severe asthma using a systematic approach, thereby ensuring patients receive an appropriate diagnosis, support and access to specialist treatments (Holmes, 2012). Although each specialist service has its own locally defined pathway, all services are commissioned under a standard NHS contract to ensure comparable patient care, and all adopt a multidisciplinary approach.

- Teams are composed of at least two severe asthma respiratory consultants, severe asthma nurse specialists, dietitians, physiotherapists, allergy specialists and clinical psychologists (NHS England, 2013), and may include pharmacists and speech therapists. The multidisciplinary team evaluates newly referred patients to define their asthma phenotype (observable characteristics), as well as the most appropriate individualised treatment plan.
- Patients managed by specialist severe asthma services show improved outcomes, including a decreased steroid burden, fewer hospital admissions and improved QoL (Gibeon et al, 2015). The benefits for patients cannot be overestimated; click to see the life-changing impact of this care on one patient.
- Respiratory nurse specialists play a central role in specialist asthma services, carrying out initial and follow-up assessments, acting as patient advocates, providing continuity of care and ensuring a holistic approach to management.
- Specialist therapies

Once patients have been evaluated, their subtype of asthma ascertained, and adherence and concordance with treatment checked, a personalised treatment plan using newer specialist therapies can be defined based on disease characteristics and comorbidities. Most of these therapies are only available for patients with severe refractory asthma through specialist centres (Table 1), so it is all the more important to refer eligible patients in a timely manner to ensure they have access to these treatments.

Quality of life indicators of a total of 40 patients from Khavos, Sirdarya, Boyovut, and Gulistan districts of Syrdarya region were studied. After that, these patients kept a self-monitoring diary for 3 months. During the first week, they struggled with setting and understanding the peak flow meter readings in the diary. Gradually, from the second week, patients almost did not make mistakes in setting the diary. As a result of performing peak flowmetry in the morning and before going to bed and recording their average readings in a diary, the patients managed to control their kidney disease, identify the danger zones early, contact their treating doctors and eliminate the danger.

Summary. The creation of an asthma school in family polyclinics and the implementation of a control diary by nurses who have completed a special training course to self-care and prevent symptoms of the disease prove to have the most positive effect.

### Used Literature

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