Asthma in adolescents

With the aim of improving asthma symptom control among adolescents, Mary Hughes outlines her research in this challenging area.

Inadequate management of asthma symptoms is the cause of unnecessary morbidity for children and adolescents and places an unnecessary burden on the health service. Gaining an insight into how adolescents manage their asthma symptoms and the impact of asthma on their daily lives could play a significant role in developing future treatment guidelines and plans to manage their care in ways that are relevant to them.

A national initiative was launched in 2009 on behalf of the Department of Health and Children, the HSE and the Asthma Society of Ireland with the aim of improving asthma management. Education was highlighted as the principal aim of this initiative to facilitate self-management of asthma among patients.

Incidence among adolescents

Ireland has the fourth highest incidence of asthma in the world, with 18.9% of 13-15 year olds having asthma. According to the Irish data from the International Study of Asthma and Allergies in Children (ISAAC), the incidence of asthma among adolescents in Ireland continues to rise. This has implications for both the health service and the adolescent population concerned, as despite the development and enhancement of asthma medications in the past two decades, there has been an increase in the morbidity associated with asthma. This is an important issue for adolescents as the ISAAC study found that adolescents who had severe and moderate persistent asthma and who had low use of anti-inflammatory drugs underestimated and subsequently undertreated their symptoms.

There is increased morbidity and a mortality rate four to six times higher among older adolescents with asthma than among younger children. This may suggest a poor understanding of the disease and management of symptoms, or poor adaptation to living with the symptoms of asthma. It is known that as a result of their poor recognition of the severity of symptoms, adolescents are less likely to seek medical assistance in an emergency.

Although national and international asthma management guidelines exist, it is accepted that the symptom control of asthma among the adolescent population in Ireland is poor. Gaining an insight into how adolescents manage their asthma symptoms and the impact of asthma on their daily lives could play a significant role in developing future treatment guidelines and plans to manage their care in ways that are relevant to them.

Guidelines have been developed to standardise methods for diagnosis and treatment of asthma, with the goal of achieving and maintaining control of the disease. There are specific guidelines for children under five years, but the disease management of adolescents with asthma is highlighted as being a problematic area, and a partnership approach is promoted in order to achieve symptom control.

The focus of the Irish Asthma Guidelines, based on Global Initiative for Asthma (GINA) protocols, is also predominantly on the disease management issues related to medications for the control of symptoms, and there are no specific guidelines for the adolescent age group as in other periods of childhood.

Objectives of study

- Explore how asthma affects the normal day-to-day lives of Irish adolescents
- Explore the understanding adolescents with asthma have about symptom control and management
- Explore the perceived effectiveness of adolescents regarding the management strategies they employ to control their asthma symptoms
- Explore the preferences of adolescents with asthma for the type and mode of information they need to control their asthma symptoms

Study on adolescent symptom control

The overall aim of the research study ‘Adolescent Asthma Symptom Control: A Grounded Theory’ is to explore how adolescents with asthma manage and control their asthma symptoms. This will allow for a deeper understanding of the issues affecting how adolescents assess and manage their symptoms, and the impact asthma has on their day to day lives. This could play a significant role in developing age appropriate treatment guidelines and plans to manage asthma care in adolescents. The broad objectives of this study are outlined in the Table.

Grounded theory

A grounded theory approach is being used in this study to investigate social processes and to generate theory to explain human behaviours. Interviews were conducted with 18 adolescents in their own homes. The interviews lasted for an hour on average and notes, capturing
observations and interactions, were taken during and after the interviews.

The adolescents were also invited to record an asthma diary for two weeks following the interview; this was not mandatory for inclusion in the study and five agreed to keep a diary. The interviews were guided by three key questions:
• What are they doing?
• How are they doing it?
• How do they resolve their concern?

Descriptive data is presented here, which will be further refined and developed into a theory on the behaviour of this group.

Descriptive findings
All of the adolescents who participated in this study had a diagnosis of asthma for longer than one year, with most since early childhood. They could describe symptoms and triggers but had little understanding of what asthma was. Use of peak expiratory flow rate (PEFR) as part of a personal management plan was poor in those who attended a paediatrician, and non-existent in those who attended a GP service only.

Overuse of reliever inhalants is prevalent across all participants interviewed and this was not seen as being problematic to them. Inhaler technique in general was excellent but use of a spacer device/valved holding chamber is minimal in this age group. They felt embarrassed to use the device in public and were unwilling to use it when in the company of their peers. I probed this with them, asking if it led to them being highlighted as different, or to episodes of peer pressure or bullying, but they denied this. It was because the device was cumbersome and as most of their peers with asthma did not use them, it was viewed as a childish or juvenile apparatus.

Asthma is seen as normal among this age group, as it is so prevalent in school and social groups, whereas other chronic illnesses are frequently cited as the cause for bullying behaviour. Children and adolescents who were diagnosed with autism or diabetes were groups cited as recipients of such negative peer behaviour. The most frequent suggestions as to the reason for this bullying was related to their associated aids/treatments, which stigmatised the characteristics of the conditions. The adolescents in this cohort felt that these issues with the other chronic conditions gave rise to the normalisation of asthma among their peer group as they only used an inhaler which was small and easily disguised if usage was required.

The adolescents interviewed saw themselves as teenagers with asthma and not asthmatic teenagers. They saw a distinction in this and were vocal in stressing that they were typical of their peer group in every facet of their lives and did not see asthma as deterring them from engaging in recreational, educational, social or physical activities of their choice.

The adolescents didn’t know what asthma was and had little or no interest in investigating this. Mothers or doctors were the sources of knowledge for learning how to manage symptoms. The participants in this study had a deep mistrust of health information on the net. All were IT literate and used the web on a daily basis for sourcing information or services, but they didn’t know about the Asthma Society of Ireland website and didn’t trust health websites. They said information or advice should come from the HSE or their doctor or they would not believe it. They didn’t use blogs or forums or consult the net about asthma.

Maternal support appears critical still in the adolescent management of symptoms. They rely heavily on mothers for advice and confirmation of treatment decisions, especially as mothers predominantly were the ones who managed their asthma when they were younger. They told me that they do not interact in consultations if a parent is present as they know the parent is listening. They ‘tune-out’ when they get the advice as they know their parent is listening. They do as they are told and don’t ask questions, it is not discussed even with peers who also have asthma.

Mothers are the people who notice if they have forgotten their medication also, and frequently remind them of their medication regimen. Some have an alarm on their phones to remind them but others have merely a routine of daily activity which involves taking prescribed medication. All of the participants were interested in the app currently under development by the Asthma Society of Ireland and said they would use it. It would be instantly available and convenient to give direction on symptom control if they were concerned about their asthma.

Sport was seen by both boys and girls as essential for the management of symptoms. It also allowed them to be competitive and this is important to them. Teens who do not involve themselves in sport were seen as ‘fat and lazy’ and interfered with how adolescents with asthma are regarded by teachers and coaches. Most teachers and coaches have a good understanding of symptoms and were accommodating, but some have had difficulties on occasion. Knowing about sports role models such as John O’Shea and Ronan O’Gara was important for boys; girls knew about these too but didn’t know any female celebrities with asthma and would like to. These role models were seen to encourage participation in activities and promote healthy lifestyles for all.

‘Teen-friendly’ guidance
This grounded theory study is designed to uncover how pre-teens and young teenagers manage their asthma and control their asthma symptoms. It is hoped that we can learn how they manage their symptoms and what they do to control their asthma. It is well known that adolescents face issues specific to that stage of development and it is interesting to explore with them the additional issues that having asthma brings to their daily lives. This study should also help to guide the development of ‘teen-friendly’ information and education in the way adolescents would like to get information to help them control their symptoms in the future and prevent their asthma from being poorly controlled.

Mary Hughes is a lecturer practitioner at the School of Nursing and Midwifery, Universit of College Cork

Acknowledgement
With thanks to the Asthma Society of Ireland for its support in conducting this research through the Oran O’Muir Bursary 2010 and 2011

References
8. Rhee H, Byrnes ML, Ellward KS. Patterns of asthma control perception in adolescents: associations with psychosocial functioning. J Asthma 2008 Sept; 45(7): 600-6
9. Asthma Society of Ireland. Helping Asthma in Real Peo- ple (HARP), Preliminary Results July 2008
10. GINA Guidelines, Global Strategy for Asthma Manage- ment and Prevention Updated 2010

WIN June 2012 Vol 20 Iss 5

Asthma Management