

SELF MANAGEMENT EDUCATION IN ASTHMA AND COPD: WHAT DOES IT INVOLVE AND DOES IT WORK?

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ABSTRACT

Major advances have been made in the delivery of care and outcomes for those with asthma and COPD over the last few decades. However, much of that progress represents the success of the pharmaceutical industry in producing and promoting efficacious medications. Further improvements in outcomes for those with common lung diseases is only likely to occur if doctors embrace the wider non-prescription elements of care with such elements including everything from enhanced communication, shared decision making, self-management support, pulmonary rehabilitation and easier and more convenient follow up.

This review concerns one vital element of that wider package of care, namely self-management support.

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INTRODUCTION

It is possible to find several definitions of self management within the published literature. Some suffix the term as self management education whilst others would regard this as being pejorative as it implies inadvertently that our client group are 'uneducated'. Preferably we should instead think of this subject as being self management support and it is important from the outset to stress that any such intervention is of limited value unless it is associated with a behavioural change by the patient.

Can we think of self management in another more tangible way? One recent study of patients with asthma and COPD surveyed over 1022 patients with asthma and 719 patients with COPD in 5 European countries¹. The survey was concerned with patients' expectations of their interaction with health care professionals but as part of that study those with asthma were asked to recount how often they went to see their general practitioner for review of their asthma and the recalled duration of the consultation. 83% of those with asthma surveyed in the 5 European countries reported that they had been to their GP for review of their asthma but the frequency of attending was a median of every 13.4 months and the patients'

recall of the average duration of each consultation was 12 minutes.

If we recalculate this data we can see that for each year for 364 days, 23 hours and 49 minutes the person with asthma looks after their own condition by themselves. This is thus the reality as to why self management support is so important, for it is our responsibility as health professionals to provide those with asthma (and COPD, where the data was similar) with the tools, skills and knowledge to enable them to look after themselves appropriately for all but the 12 or 13 minutes a year when they are sitting alongside us in our consulting rooms.

Indeed in the same survey those with both asthma and COPD regarded the most important aspects of their relationship with their doctor as having doctors who:

- ❖ Listen carefully when I talk about my symptoms and problems.
- ❖ Understood clearly what I am trying to express.
- ❖ Explained well what my condition is and the problems it can cause.
- ❖ Devoting appropriate amount of time to the visit.
- ❖ Explained clearly how to use the inhaler.
- ❖ Explained clearly the possible side effects of medication.
- ❖ Understood clearly what concerns me.
- ❖ Offered me support to help me manage my own condition

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- ❖ Consulted me with regard to the choice of inhaler

The concept of self-management support is not new for in the “Guidelines for Management of Asthma in Adults, section 1 :Chronic Persistent Asthma” published in the British Medical Journal in 1990², it is clearly stated 'as far as possible patients should be trained to manage their own treatment rather than be required to consult their doctor before making changes'. However, if we fast forward from 1990 to for example 2007, we can find studies³ which look at whether practices comply with key recommendations of the British Asthma Guideline and find that major recommendations such as those concerning self-management are still not being implemented and we can see that if receipt of a written action plan is used as a marker of whether the patient received self management support, only 23% of patients surveyed had had this recommendation applied to their care.

When health professionals were questioned as to what the barriers to offering self management support were they reported:

- ◆ Doubt about whether the evidence applied to them in primary care.
- ◆ An honest recognition that they lacked the knowledge and skills to implement this recommendation.
- ◆ Misconceptions about what it involved.

- ◆ Perceived lack of time.
- ◆ Non availability of resources such as templates upon which advice is written.
- ◆ Poor team work (doctor thinking that the nurse had undertaken it and nurse thinking versa versa).

We therefore need to think about ways in which we can help busy health professionals to give advice and that is an issue which was addressed in studies by Roberts et al^{4,5}. who devised a simple computer programme which permitted the doctor and patient sitting together to construct a pictorial asthma action plan (see figure 1) which permitted the patient to receive advice about their usual therapy, when they should increase their therapy, when they should start a course of steroid tablets for asthma (or antibiotics and/or steroids for COPD: see figure 2) and when they should seek urgent medical attention. These simple software programmes (which can be downloaded free from <http://www1.imperial.ac.uk/medicine/people/m.partridge/>)

address the barriers outlined in the earlier survey, in that they provide a template upon which advice can be given and they prompt the health professional as to the correct information to give to the patient.

Figure 3 shows a detailed written action plan for the support of those self managing their COPD. It includes lifestyle advice and advice

Figure 1: A pictorial Asthma Action Plan

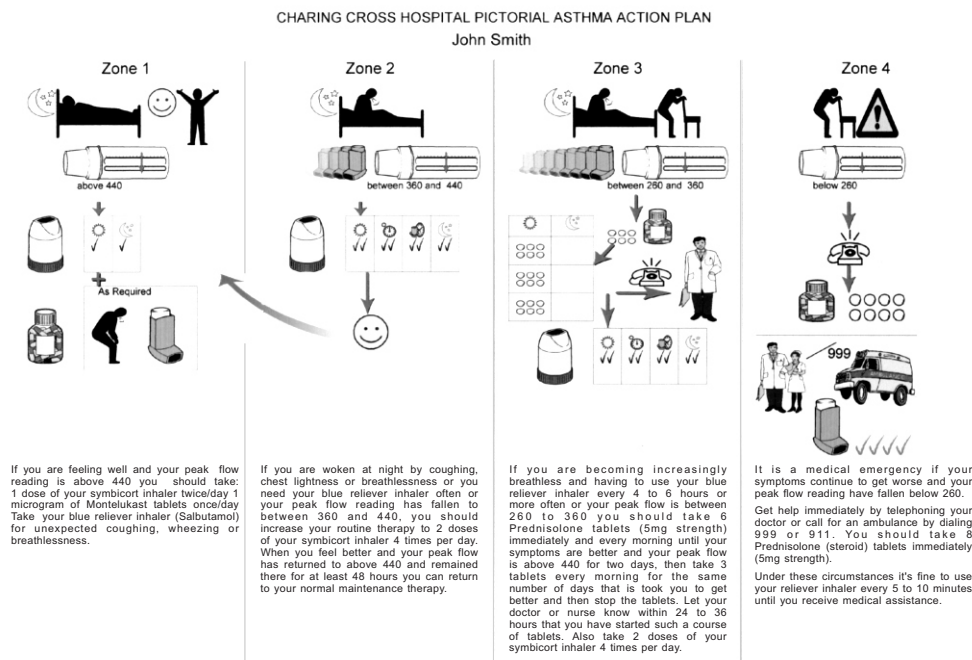
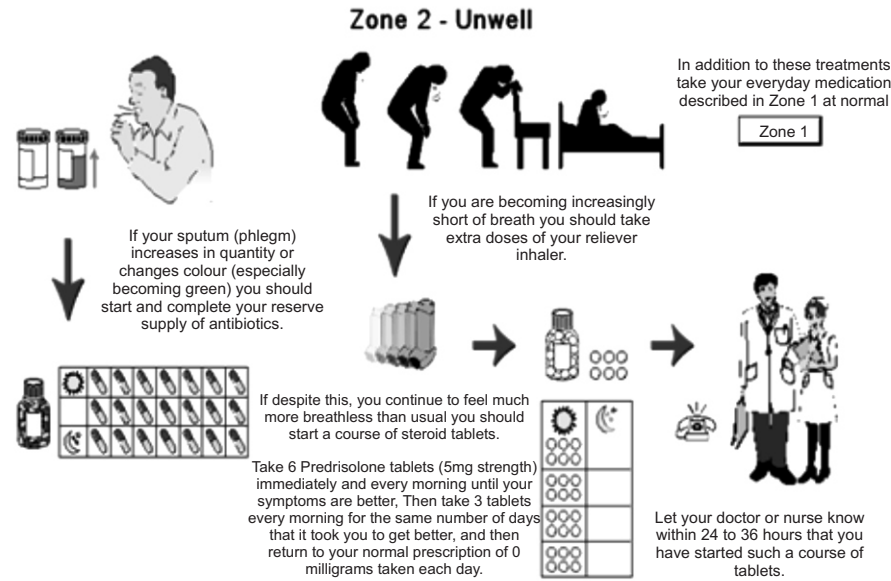


Figure 2: Part of the Electronic pictorial COPD Action Plan

about when to increase their usual medication and when to start reserve therapies and when to seek urgent medical attention. In contrast the illustrations shown in figures 1 and 2 include pictorial representations of the same advice. The reasons for this are that in many countries, including the United Kingdom and the United States of America, health illiteracy is an under addressed problem and impaired literacy and an inability to use usual health related information may be a problem in around 15% of people attending chest clinics in the UK and a higher percentage in the US.

Those with limited literacy skills report⁶;

- Poorer overall health
- Are less likely to make use of screening
- Present in later stages of disease
- Are more likely to be hospitalised
- Have poor understanding of treatment
- Have lower adherence to medical regimens

Others have also described quite detailed pictorial prescription charts for those with limited literacy including examples where pictorial advice is given both about when to take the medication but also about what each pill is for⁷. More recently respiratory physicians might also be interested to know of the publication of a pictorial Epworth Sleepiness Scale which gets round the problems encountered in sleep clinics when patients cannot complete satisfactorily the more traditional written Epworth Sleepiness Scale⁸. This use of pictorial representations to give advice to patients for both

self management and other reasons has been shown conclusively to improve both patient comprehension and patient compliance⁹.

Is all of this effort appropriate for those with impaired literacy and does it improve their self management skills? That is a question tackled by Paasche-Orlow and colleagues¹⁰ and in a large study they detected that 22% of patients who had been hospitalised for severe asthma exacerbations had impaired health literacy. They offered those patients advice in a more easily assimilable manner and found that equally good results as those achieved in the fully literate were then recorded. Health professionals thus have a responsibility to ensure that they offer to all, information about self management in a manner which is usable by all patients.

Are other sources of information used?

In the European study referred to earlier¹, the patients were also asked from whom they sought information about asthma and COPD and 58% of those with asthma reported that the doctor looking after their lung condition was the first source of further information but 65% reported that they sought information from the web. In COPD the respective figures were 62% and 51%. However less than 5% of patients with asthma and COPD reported having had any website recommended to them by a doctor or a nurse and we should therefore consider recommending respected websites as a source of confirmatory information to our patients.


Are there other interventions we should be promoting in addition to self management support?

Self management support for those with asthma carries Grade A evidence in all international guidelines and we have so far considered ways in which we might enhance its implementation. However in addition to self management support the evidence is now increasingly strong that shared decision making is important and in one large study patients desire to be involved in choice regarding the inhaler which they used was a prominent preference¹. Wilson S R et al¹¹ have looked in great detail at whether such shared treatment decision making improves adherence and outcomes in poorly controlled asthma. In a study of 612 patients with poorly controlled asthma the patients were randomised to either usual care or to shared decision making. The latter involved the doctor very carefully eliciting the patients' goals for treatment and their relative priorities regarding symptom control. They discussed with the patient their desires regarding how convenient the therapeutic regimen should be and the amount of concern they had about the costs of any medications. The health professional then showed the patient a list of all available treatments, both devices and dosing, and using a work sheet the clinician and patient together worked out together the pros and cons of each treatment regimen before a decision was made. The main outcomes of this study were adherence with medication and the results were better for all classes of medication, need for unscheduled healthcare was less, and quality of life was better. Furthermore, this was a long lasting effect on patient behaviour because short acting beta agonist use was still significantly less in the intervention group at two years than in the control group.

If self management support is to be effective it is not a delegation of responsibilities to the patient and health professionals need to make themselves easily available for further advice by the patient when needed. However, we do need to make that convenient for patients and yet studies of the reason why patients with lung disease do not return for follow up such as that by Van Baar and Colleagues¹² show that patients do not return to follow up sometimes because they forget, sometimes because they did not see the same doctor each time, but note the one further important cause why patients did not come for specialist review was that they were 'kept waiting last time'. We therefore need to make follow up convenient and remind ourselves that many of these patients have their asthma or COPD, for ten, twenty, forty or more years and keeping them waiting and seeing them at inconvenient times is not conducive to the patient wanting to come back for review of their condition.

Figure 3: A written COPD Action Plan

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C.O.P.D. Self-management Card

Name:

Hospital No.:

Chest Consultant:

Respiratory Health Worker:

General Practitioner:

Treatment changes

1. Take yourinhaler in the dose of 2 puffs, 4 times every day.
2. Take yourinhaler in the dose of 2 puffs, twice a day.
3. Take yourinhaler in the dose of 2 puffs, twice a day.
4. If you feel any more breathless you may take your inhaler 2 puffs, every 3 to 4 hours to relieve symptoms.
5. If you get much more breathless or your peak flow readings if you are making them have fallen below....., then you should increase your inhaler to a dosage of..... puffs..... times a day. If despite this you are becoming increasingly breathless and you find you are having to use your blue inhaler very often and your peak flow readings, if you are making them, have fallen below..... you should start a course of steroid tablets by taking 6 tablets (5mg) immediately and repeat this dose every day for 7 days before stopping the tablets (or reducing them according to individualized advice).
6. If you notice more than two of the following situations then you should start your reserve supply of antibiotics and complete the whole course.
 - Increasingly short of breath
 - increasing quantities of phlegm/sputum
 - phlegm or sputum has turned persistently green
7. If your ankles are more swollen than normal you should see your doctor.

If despite all of these measures you still feel worse then you should ring your doctor on....

Lifestyle changes

1. Stop smoking (and avoid smoky environments).
2. Use nicotine replacement therapies as appropriate as advised.
3. Use effective breathing methods.
4. Use effective coughing methods.
5. Undertake your exercise programme as advised during your pulmonary rehabilitation course. Remember: Getting, "puffed" isn't bad for you.
6. Eat a balanced diet: include plenty of fresh fruit and vegetables and drink plenty of fluids to help keep mucus thin. Avoid gas-forming foods such as broccoli, cabbage, onions, beans and sauerkraut. It is often best to eat little and often. If eating makes you breathless, use supplementary oxygen whilst chewing or liquidize solids. Try high energy foods if you are underweight.
7. Adjust daily activities of living. Sit down to do personal tasks such as washing or shaving or doing household tasks such as washing up or preparing meals.
8. Use a stool in the shower and use a hairdryer to dry feet or back.
9. Have flu vaccination every year and pneumovax every 5 to 10 years.

There is very good evidence now that telephone consultations can be equally effective and satisfactory for patients and much more convenient¹³ and we need to offer that form of follow up much more often to our patients with these common lung disorders.

Does the same apply with regards to COPD self management as it does to those with asthma?

There is now increasing evidence of the value of self management education which leads to behavioural change in COPD. Monnikhof et al¹⁴ reviewed eight randomised controlled trials in this field and at that time were unable to show unequivocal evidence of the benefit of self management in COPD. However, it is interesting to note in that early systematic review only two of the interventional studies involved the patient being given a written action plan, a part of asthma self management which has been shown to be very important. Subsequently more studies have involved those with COPD similarly receiving action plans. The later Cochrane review¹⁵ does suggest benefit from self management education in terms of reduction in hospital admissions and some specific studies such as those by Bourbeau J et al¹⁶ have shown in multi centred randomised control trials of those with COPD who have had a recent admission that complex interventions involving education, home exercise, support and an action plan (involving use of antibiotics and steroid tablets), can lead to reduction in hospital admissions and emergency department attendances of around 40%.

CONCLUSION

The evidence is now therefore of such strength that all respiratory physicians need to move on from the making of a diagnosis and the writing of a prescription alone, to accept the wider responsibilities for these issues such as the way in which we organize care, the methods by which we offer patients specialists review and of greatest importance we need to address and implement shared decision making and meaningful self management support.

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