Sir,

BTS/SIGN Guideline Query
Doubling the dose of inhaled steroids

We read with interest the correspondence on doubling the dose of inhaled corticosteroids during asthma exacerbations. As we were involved in writing and reviewing the section of the new BTS/SIGN guideline relating to this issue, we would like to make the following points.

When the effect of doubling the dose of inhaled corticosteroids has been investigated in tightly controlled clinical trials both in primary and secondary care settings, there has been no effect seen on exacerbations. The lack of any effect on exacerbations is almost certainly not due to inadequate trial design as the Foresi study, which investigated the effect of a five-fold increase in dose, was able to show a reduction in exacerbation frequency. On the other hand, self-management plans,which usually recommend a doubling of the dose of inhaled steroids at the time of an exacerbation, are clearly of benefit and are strongly endorsed in the new guidelines.

We think there are two possible explanations for this apparent paradox. As pointed out by some of your correspondents, self-management plans are a complex intervention and doubling the dose of inhaled steroids is only one component of this. It is quite possible that the effects seen when using a self-management plan for reducing exacerbations are due to other factors such as better compliance with regular treatment, earlier use of oral corticosteroids, or more appropriate behaviour during an exacerbation. An alternative explanation, and one that we favour, is that in the tightly controlled trials where compliance is good and usually of the order of 80-90%, patients are taking their regular inhaled steroids, and when they have an exacerbation the effect of doubling is not apparent. However, in the real-life studies of self-management plans, many patients as we know, stop taking their inhaled steroids completely. When they have an exacerbation of their asthma, they restart the inhaled steroids and the effect we see in the self-management plans is not really because of doubling, it is because of restarting inhaled steroids. Of course, one of the advantages of evidence-based guidelines is that they throw up these type of anomalies, which then generate research in order to try and arrive at an answer to the question.

Yours sincerely,

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Sir,

What constitutes an 'at risk' COPD patient?

Last April I was dragged kicking and screaming onto the professional executive committee of our PCT. As a hospital practitioner for many years I was naturally made the respiratory lead GP. Two years ago the local hospital trust and PCG set up a 'telemedicine project' to monitor at risk COPD patients at home. The funding for this project was as per usual 'non recurring' so the new PCT is left with the job of sorting it out. We like the idea of targeting at risk COPD patients and wish by some early intervention to prevent expensive admissions to the DGH. The 'telemedicine' aspect of it with pulse oximeters at home etc is probably not cost effective. We hope that our respiratory nurse specialists will be able to contact these patients on a regular basis and nip in the bud any exacerbation.

But who are these at risk COPD patients? The telemedicine project was set up by simply asking the consultant chest physician for a list of suitable patients. We could also ask the GPs for a list as well but it's not very scientific. What do others do?

In Plymouth (Rupert Jones, personal communication), they concentrate their immediate care resources on COPD patients with the following:

- Those with previous admissions
- Social concerns
- Pscychological concerns
- Long Term oxygen therapy
- Co-morbidity
- Nebulisers

David Bellamy (personal communication) says that we should consider those patients for close follow up who fall into the severe category i.e. <40% of predicted FEV_1, those with respiratory or cardiac failure and those on long-term oxygen therapy (LTOT). My only problem with this is that I am sure that we can all think of patients cruising along with FEV_1's of 0.5 litre who pose no trouble to anyone?

The 'DOCTOR' magazine [3rd Feb 2003] pointed me to an article in *Thorax* (2003;**58**:100-5), 'Risk factors of readmission to hospital for a COPD exacerbation: a prospective study'. Its findings were:

- Activity > 60mins walk per day reduced hospital admissions by 50% even when corrected for severity of COPD
- Being under the care of the respiratory physician, on anticholinergics and oral steroids were all indicators of a higher re-admission rate
- The existence of a previous admission may play a role in 'confounding by indication'. The mere fact that there was a previous admission means that the patient was perceived to be a more severe case
- Influenza vaccination is associated with an increased risk of readmission (presumably because the less severe are less inclined to be vaccinated, thereby skewing the figures).
- Even passive smokers are at higher risk

- The lower the FEV_1 and pO2, and the higher the pCO2 at admission were all factors.

In the ideal world we should create a COPD 'at risk' score using the above information and then simply target those above a certain score but in practice I suspect we will go back to square one and ask our colleagues for a list of their at risk patients but make sure they have taken note of the above findings.

Now that we have got our data base of patients to be targeted what do we do with it? I think that our respiratory nurse specialist will contact the patients on a regular basis and hopefully identify those about to have an exacerbation. They will be asked questions such as whether their sleep was disturbed and if they are starting a cold etc..

Then what? I expect that the nurse will tell the patient to take a crash course of steroids and antibiotics. Maybe the nurse will measure the oxygen saturation with a portable pulse oximeter? And if the saturation is below 90%, the nurse could refer the patient to the medical assessment unit where they might be assessed by another respiratory specialist nurse and then sent back home with the support of intermediate care services.

In between exacerbations we can make sure that COPD patients are not smoking, are not exposed to passive smoking, and that they are vaccinated against influenza and pneumococcus. We will refer them for pulmonary rehabilitation but in our area this service is a victim of its own success and vastly oversubscribed. So perhaps we should just make sure that they take a walk round the park each day.

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