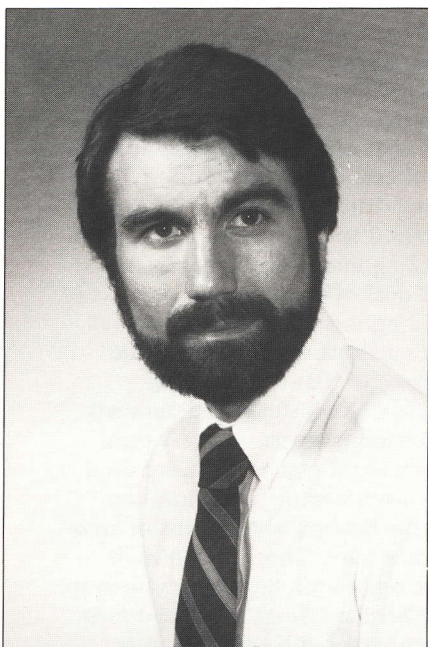


## Achieving Asthma Control "By The Numbers": A Canadian Step-care Protocol

Interview with Dr KR Chapman, MD, MSc, FRCP(C), FACP

—by Rob Smith, (Durban)

Dr Chapman



*Q: Could you give short synopsis of the Canadian Step Care Protocol in the Management of Asthma.*

The most important point to make about the Protocol is that it is a flexible Protocol in which patients and physicians share the care. Patients must be fully aware of the goals of treatment and the signs of changing asthma, so that they can respond accordingly and move from minimal treatment to more aggressive treatment. At times of marked exacerbation, they may move themselves all the way up to systemic steroids if need be. Thus, it is a flexible plan in which physician and patient are partners. The plan indicates first that any external influences making the asthma troublesome, ie cigarette smoking, allergens, occupational exposures, should be removed. If the asthma remains troublesome, we prescribe medications. There are four levels of medication administration.

At the first level, with the mildest of asthma, the patient who has a little bit of intermittent wheezing, we will prescribe an inhaled beta 2 agonist. The patient uses it as needed and not on a regular schedule. Ideally we will hope that the patient has complete relief of symptoms and can undertake all usual daily activities using his beta 2 agonist less than twice per day. But if the patient uses the beta 2 agonist more frequently, or if there are night time awakenings, or if his daily activities are interfered with by asthma symptoms, we will want to move to level two care.

Level two care means the addition of an inhaled anti-inflammatory. In Canada we prefer the inhaled corticosteroids and at this point it

would be a low dose inhaled steroid, ideally administered twice daily to improve compliance, in dosages of up to 800 - 1 000 µg per day. Again the patient would use a beta 2 agonist as needed for the relief of symptoms. Again if asthma control is not achieved, we must move on to another level of care, level 3.

The primary change at level 3 is higher dose inhaled steroids because there is a dose response relationship to inhaled steroids, and increasing the dosage above 1 000 µg will usually produce greater asthma control. It is also at this point that we may add adjunctive bronchodilators such as theophylline, long acting beta 2 agonist, ipratropium and so on. In this country the logical step would be to add a long acting inhaled beta 2 agonist and I point out in this country because you have access to salmeterol. In Canada that is not currently on the market but it is under active investigation. This seems a logical choice at level 2 or 3 patient.

At level 4 if we still have not achieved ideal asthma control we reluctantly add oral steroids and one hopes to achieve control that way. I should point out that this is a flexible plan so that any one patient might move from level to level at different times. For example a patient may use an inhaled steroid in low dosage through the allergy season but use just an intermittent beta 2 agonist in the non-allergy season. The patient, knowing the goals of his therapy, will know when to make that shift. As well, physicians must remember that they can start at any point in this step care protocol. A patient presenting with severe symptoms might begin with level 4 treatment and then we

## ... Achieving Asthma Control

would gradually decrease the amount of medication prescribed as the patient improved.

*Q: Would you say at this stage seeing the patient as part of the team or part of the approach, that if they are at one level they might sometimes change a level on their own and then contact you or do they stay at the level and if there is a change they come back to the practitioner?*

I give my patients permission to make some medication changes themselves. It depends on the patient and it depends on the medication change. For example I teach all of my patients the warning signs of unstable asthma, and I indicate to many of them with a history of difficult asthma that they should at such times begin oral prednisone to self start the treatment. They also have instructions to contact my office within a day or two of that but it seems important that they have the instructions and the prednisone at home so that they can begin the treatment themselves. As you know, these events always seem to happen on a Friday or Saturday when one isn't available and I would rather the appropriate therapy begin by pre-arrangement.

*Q: Leading on from that, what would be your opinion on the use of the home nebulisers?*

We are finding in Canada that there is less and less need for nebulisers simply because most patients can inhale their medications adequately from an inhaler when taught; if not, inhaler with spacing device, or one of the alternative dry powder inhaling systems allows adequate self treatment. It is a rare patient who can't be taught to use some

sort of small hand-held device to administer medications. The exceptions might be in the very youngest of the paediatric population, the child of a few months old.

*Q: With those very young patients plus or minus six months to two years that are relatively severe asthmatics who need some form of steroids, how would you approach administering the steroids at that level?*

I would have to defer to my paediatric colleagues somewhat but I know the usual approach has been to say, well we can't have this toddler inhale it so we will administer it somewhat reluctantly by oral means – we will give oral prednisone. But I think that one can have even infants inhale from a conventional metered dose inhaler plus spacer. It requires a little bit of training of the mother and a period of adjustment for the child but it is possible.

*Q: It appears there is a worldwide increase in asthma death rates. Could you give an opinion as to why this is occurring.*

It is true in all countries that keep reliable statistics that death rates have been rising. It does not appear to be changes in diagnostic trends or fashions; it doesn't appear to be an artifact. It appears to be a real phenomenon. And I think it is multifactorial.

We have been blaming physicians for being poor managers of asthma. I think that is true, but I think we have also neglected to mention that asthma appears to be increasing in prevalence and severity.

Doctors have been bad in managing asthma for some time and they are simply practising on an ever enlarging population of asthmatic patients. The mistakes are showing up more and more frequently. I think that one of the most dubious hypotheses is that some of our asthma drugs are causing harm directly. I speak, for example, of the beta 2 agonists. There has been a great deal of concern that overuse of beta 2 agonists in some direct way makes asthma worse. I think the evidence of that is quite poor. Instead I think the beta 2 agonists are sometimes part of a very poor management plan or they are used without planning. Therefore the patients become the victims of crisis-oriented care. They rely on their quick relief bronchodilators unaware that there are times they need more preventive or anti-inflammatory therapy. At times that lack of anti-inflammatory care becomes critical. For example, the young asthmatic, having no idea that asthma can be severe and fatal, develops a respiratory tract infection and sits at home self-administering the beta 2 agonist until it is much too late. He is rushed to the emergency room in extremis. You would not say that the beta 2 agonist was the culprit, you would say it was a lack of foresight and planning in patient education. I will underscore the need for patient education and involvement in care as a cornerstone of good asthma management.

*Q: Following from that, my impression would be, because of the inflammatory process, you advocate the use of steroids in the majority of asthmatics with intermittent beta 2. Would you say we should use it earlier and more frequently?*

## ... Achieving Asthma Control

As a specialist I tend to see people with more difficult asthma and I would say almost all of my patients are taking inhaled steroids. So I suppose the general answer is yes. But there are still many mild asthmatics out there who will do quite well on an intermittent beta 2 agonist. But I think before you leave an asthmatic on just beta 2 agonist you must be sure the patient is not using it frequently, is able to do everything he or she wants without difficulty, including exercise and that pulmonary function tests are normal between bouts of wheezing. It is that last step that I often see overlooked in private practice. I think we pulmonologists have done a terrible thing by mystifying pulmonary function testing. The rule for asthma is relatively straightforward; if asthma is under good control, the asthmatic patient when coming to your office at a stable time between attacks, should have a normal FEV<sub>1</sub>. If so, you are doing a reasonable job.

*Q: Inhaled steroid medications are presented in different delivery systems, for example, disk forms (Becodisks®), Rotacaps® or Turbuhaler®. Is there a preference you have or are there clinical indications why you would choose one above the other?*

I simply like to have the flexibility. If a patient can use a conventional inhaler then there is no advantage of any other add-on advice like a spacer or switching to a powder etc. Any one device will do as well as another.

However, if the patient has trouble using a conventional inhaler then there is a need to switch to some other form of inhalation and that is

where we see the tremendous advantages of the different devices and I have prescribed them all successfully.

*Q: Should we not be seeing the introduction of a steroid suspension for nebulisation?*

It is an interesting thought. There have been some studies of nebulised steroids, often in paediatrics, and I am not aware that any one company or manufacturer has actually released an inhaled steroid in that form for general prescription use. It has remained investigational. It's a shame. Having such a thing would add to our flexibility. (Since this discussion was first taped nebulised corticosteroids solutions have been marketed in some countries.)