

# Suboptimal Treatment in Chronic Diseases - Time to go Back to Basics

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As Malaysia progresses from a developing to a newly developed nation status by 2020 one thing is almost certain to happen; diseases associated with aging and urbanised lifestyle will be on the rise. The recently published Third National Health and Morbidity Survey of 2006 (NHMS 3)<sup>1</sup> concurred with this gloom prediction; almost all risk factors which contributes to the most common chronic diseases in this country had increased in prevalence compared to the last survey of 1996. Hypertension in those age 30 years or more is now 43% (from 33%), diabetes mellitus 14.9% (from 8.3%) and overweight/obese Malaysians has increased in prevalence to 43% (from 27%). Not only is the increasing prevalence of these risk factors a concern, our collective failure to manage it optimally is also a concern. For example in the NHMS 3 only 26% of treated hypertensives were treated to target. This was exactly the figure seen 10 years earlier in the NHMS 2<sup>2</sup>. Similar depressing findings of suboptimal management had been seen with other chronic diseases. In this issue of the Journal for example, Tan *et al* reported that only 26% of diabetics attending a major tertiary hospital in this country achieved a HbA1C of < 7%<sup>3</sup>. What are the possible reasons for this widespread phenomenon? There are three main reasons why chronic diseases are poorly managed a). medication non-compliance b). prescriber's attitude and c). disease complication which make optimal control difficult. This editorial will elaborate on the first two only, arguably two most important reasons.

Practitioners are quick to point out that medication non-compliance is a major problem and contributes to sub optimal control. Indeed data from Malaysia has shown that medication non-compliance is thriving<sup>4</sup>. Although it is an acknowledged factor, little is known and much less work has been done to understand factors contributing to medication non-compliance. We have recently shown that predictors of medication non-compliance can be identified<sup>5</sup> and with its intervention strategies can be instituted. More work is needed and is in progress to understand this further in the Malaysian context. As practitioners, it is imperative that we look at our own practice when it comes to prescribing. Despite the plethora of well conducted randomised control trials and well written Clinical Practice Guidelines our prescribing practice more often than not fall sort of 'evidence based practice' expectation. A case in point, Lean *et al*<sup>6</sup> reported in this issue of the Journal that close to half of patients with chronic heart failure attending a major teaching hospital in Malaysia are not on ACE inhibitors, a must have first line drug in practically all patients with systolic heart failure. Even when drugs are prescribed, chances are

practitioners will use suboptimum doses or uses monotherapy in conditions where monotherapy will less likely to be effective in achieving control. Indeed this issue of the Journal<sup>7</sup> reported an important major finding from the Use of Prescriptions Medicines in Malaysia 2005 survey. It reported that antihypertensive medicine are the most common prescribed medication in 2005 but the study estimated that 81% of patients with hypertension in Malaysia was prescribed a median of only one anti hypertensive medication. This may explain why there are so many uncontrolled hypertensive patients in the country. We<sup>8</sup> and others<sup>9,10</sup> have previously shown that patients on combination therapy (especially combinations containing diuretics) are more likely to achieve target blood pressure than patients on monotherapy or on combination therapy without diuretics. Another aspect of suboptimal treatment is suboptimal doses being used. Intuitively practitioners in Malaysia are more likely to prescribe drugs at a much lower dose than that used in the West. Advocate of this approach points at the smaller body size of Malaysians as compared to Caucasians on whom most drug develop research took place.

Indeed there is evidence to show that Asians also absorb certain drugs better than Whites<sup>11</sup>. However there are no evidence that the therapeutic response to pharmacotherapy in Asians differs from Caucasians. Two recently completed major clinical trials<sup>12,13</sup> recruited a sizeable numbers of Asian (including Malaysians) and no dose adjustments based on ethnicity were made in the study protocol. The outcome of the trials were favourable to both Asians and Caucasians population.

Importantly no differential side effect profiles were seen across the different ethnicities. We have shown that in treating congestive heart failure first dose hypotension with ACE inhibitors if anything was less than seen in Caucasian patients with similar disease phenotypes for the same dose used<sup>14,15</sup>.

## What can be done to optimise chronic disease management?

The logical approach is to go back to basics, addressing the two most likely causes of suboptimal treatment. The issue of medication non-compliance requires a multidisciplinary approach. Patients must be counselled on the importance of taking medications as instructed. As the most important stake holder, patients must be empowered to be an active participant in the therapeutic process. They must be educated on the natural history of the diseases that they are

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suffering from and the implications of medication non-compliance or sub optimal compliance. In fact in an attempt to get patients on 'equal footing' in the care of their own conditions, the word compliance has now been slowly replaced by the word adherence.

Compliance gives the impression that patients have to 'obey' what is instructed by their doctors, while adherence allows patients to feel equally responsible for the care of their own conditions. Patients should be made to feel like partners in the care of their own medical conditions. Another important stakeholder is of course the pharmacists. Malaysia may have been one of the leaders in clinical pharmacy education in the region but in terms of clinical pharmacy practice there is room for improvement<sup>16</sup>. With the implementation of compulsory four years service of newly graduated pharmacists, lack of manpower cannot now be used as an excuse for not practicing clinical oriented pharmacy practice. In a nutshell clinical pharmacy is discipline in pharmacy where pharmacists are also actively involved in the clinical care of patients, in collaboration with the doctors. There are ample evidence elsewhere to show that pharmacist interventions leads to clinical positive outcome in patient care in particular in achieving optimal care<sup>17,18</sup>.

#### What of the role of doctors as prescribers?

To start with, the teaching of medical students, both undergraduate and post graduate must emphasise more on pharmacotherapeutics, not just on pharmacology. Drugs are classically taught in pharmacology modules in the pre clinical years. The increasing shift towards an integrated, problem based learning curriculum more often than not meant the teaching of pharmacology is sidelined and not as systematic as it was in the past. Therapeutics should be incorporated in the clinical years curriculum systematically and more so in post graduate clinical education. The teaching of therapeutics meanwhile must be based on an evidence based approach. Indeed a survey among pharmacist published in this journal some years ago showed that pharmacist do not view doctors as being adequately trained in prescribing of drugs<sup>19</sup>.

Recently a round table discussion between the author (on his capacity as Chairman of Continuous Professional Development Subcommittee of the National Patient Safety Council) and medical school deans agreed to adopt the Ministry of Health approved Clinical Practice Guidelines as a core curriculum in the teaching of therapeutics. So committed is the Ministry of Health in implementing evidence based medicine, a special division under the Health Technology Assessment Unit comprising of dedicated officers to be in charge of Evidence Based Medicine and its implementation has been set up. Indeed evidence based medicine is a popular mantra mentioned by many but probably practiced by a few. It is high time that we practise, not just preach Evidence Based Medicine<sup>20</sup>. Cynics of Clinical Practice Guidelines often points to the fact that there is no evidence that Clinical Practice Guideline based therapy translate into better patient outcome. On the contrary Loh *et al* in this issue of the Journal<sup>21</sup> showed that asthma management using a novel approach from latest trial evidence as recommended by International guidelines

translates into better clinical outcome than those managed by standard approach even in a tertiary hospital clinic.

Not only are untreated chronic diseases expensive in terms of increase disease burden, suboptimal treatment is also very costly. It is estimated in Europe alone the cost associated with uncontrolled hypertension was a staggering 10.3 billion Euros in 2002<sup>22</sup>. This huge cost is due to the cost incurred in treating an estimated more than 2 million cardiovascular events in Europe that year, many due to suboptimum treatment of hypertension. In Malaysia in 2005 an estimated RM110 million was spend in managing hypertensives patients admitted to government hospitals<sup>23</sup>. Many if not all of these admissions were preventable had blood pressure been optimally controlled.

Efforts to optimally control chronic diseases entail going back to basics, not rocket science. While a lot of research money had been spend and will continue to be spent in trying to find the panacea of personalised molecularly driven therapeutics<sup>23</sup>, it is the attention to basic details which will help practitioners and in optimally managing their patients diseases and the risks factors associated with them.

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