

Perception Towards Asthma Clinical Practice Guidelines and Appropriateness of Prescribing Practices – A Comparison Between Government and Private Doctors

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SUMMARY

A self-answered, anonymously completed, nationwide questionnaire survey was conducted between June 2002 and May 2003 among Malaysian doctors through post and at medical meetings. Findings based on 116 government and 110 private doctors who satisfactorily completed the forms (effective respondent rate: 30.1%) showed that more than 70% of government and private doctors claimed familiarity with asthma CPGs but proportionately more private doctors considered them "unworkable" and were reluctant to adopt them in their practice setting, quoting cost as the primary reason. Between those who frequently adopted the CPGs and those who did not, there was an equally high proportion of inappropriate prescribing. Despite the shortcomings of such a survey, our findings suggest that medicinal cost and practitioner's prescribing practices are important in the acceptance and execution of asthma CPGs recommendations.

KEY WORDS:

Clinical Practice Guidelines, Asthma, Government, Private, Malaysia, Perception, Prescribing

INTRODUCTION

Asthma management Clinical Practice Guidelines (CPGs) are important tools to educate clinicians and provide guidance in the treatment of asthmatic patients¹. Effective dissemination of CPGs, willingness to adopt the recommendations on the part of doctors and the nature of clinical practice are important factors to decide the success of any CPGs.

Currently, healthcare delivery in Malaysia is dichotomised into government and private sectors. Government healthcare is largely supported by the Ministry of Health Malaysia whilst the cost of private healthcare is entirely borne by patients or private medical insurances. Such a dichotomy invariably affects the prescribing patterns among doctors.

Recognising well that information alone does not necessarily lead to change^{2,3} and to understand whether differences in practice settings (government vs. private) affect doctor's perception towards asthma CPGs, we conducted a self-answered, anonymously completed, questionnaire nationwide survey among doctors from the government and private sectors between June 2002 and May 2003. This questionnaire study was a large study addressing questions relating to prescribing patterns and factors influencing them

and doctor's perception towards asthma clinical practice guidelines. The findings relating to prescribing patterns and its related factors were recently published⁴. This paper presents the findings on doctor's perception towards asthma CPGs and their association with the appropriateness of the practitioner's prescribing practices.

MATERIALS AND METHODS

Study design

A more complete description of the methodology has been published earlier⁴. Briefly, from June 2002 to May 2003, a total of 750 self-completed questionnaires was sent (A) by post to individual doctors randomly selected from a list of doctor names (every first 10 names from every page) registered with Malaysian Medical Association (n= 350) and to all doctors registered with the Malaysian Thoracic Society (n= 102); (B) by hand or post to heads or representatives of Respiratory Units in eight government hospitals in Malaysia (2 University hospitals and 6 urban-based large hospitals; all in West Malaysia) (n=212), and (C) by hand to delegates at two pharmaceutical firm-sponsored asthma seminars for specialists and general practitioners (n=86). Completed questionnaires were either posted back in provided stamped envelopes or collected back by hand at asthma talks.

Questionnaire survey

The four-page questionnaire was divided into 6 sections. The first section dealt with doctor's practice information; the second to fourth sections dealt with prescribing practices, and the final two sections dealt with familiarity and perception towards asthma CPGs. Questions asked were either those requiring answer of a four-point scale in Likert format, e.g. "Always", "Sometimes", "Rarely", "Never"; or those whose answers are provided in categories, e.g. "Cost incurred to patients", "Ability to technically handle it", "Personal preferences (non-technical)" or "Others (please specify)".

Appropriateness of prescribing practices

The following criteria are used to define "inappropriate" prescribing: The selection of inhaled long-acting β_2 -agonist, inhaled anticholinergics and oral corticosteroids as first-line treatment of asthma; or the choice of inhaled anticholinergics and oral corticosteroids as second-line treatment of asthma. All other selections are considered "appropriate". These criteria are based on the established evidence that inhaled anticholinergics and oral

This article was accepted: 2 June 2007

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corticosteroids should not be used early in treatment of chronic asthma in view of a lack of efficacy of anticholinergics compared to β_2 -agonist in asthma and the long-term systemic complications of oral corticosteroids.

Statistical analysis

Analysis was performed with respondents grouped as "government" or "private" doctors, and as having "appropriate" or "inappropriate" prescribing practices. Differences between groups were analyzed using Chi Square tests. All computations were made using statistical package SPSS version 11.5 for Windows (Chicago, Illinois, USA). In all cases, the significance was defined at the 5% level. The protocol of the study was approved by the local university ethics committee (IMU 021/2002).

RESULTS

The respondent rates were 21.7% from the Malaysian Medical Association; 18.6% from the Malaysian Thoracic Society;

48.6% from the eight government institutions, and 45.3% from delegates attending asthma seminars. After exclusion of 11 unsatisfactorily completed questionnaires, the effective respondent rate was 30.1%. One hundred and sixteen were from the government and 110 were from private doctors. There are significant differences in the practices between the government and private doctors in terms of patient load and type, and the locations of practice (Table I).

The majority claimed familiarity with published asthma CPGs (Government vs. Private: 82.8% vs. 75.5%) and among them, most also claimed familiarity with the national asthma CPG (92.4% vs. 87.3%). 72.9% of the government doctors considered CPGs "workable" in the Malaysian healthcare system, compared to only 51.8% of the private doctors [p=0.004] [Figure 1]. For the government doctors, the main reasons for the CPGs being "not workable" were the cost (29.4%), doctors' prescribing habits (29.4%) and patient factors (23.5%). For private doctors, the prevailing reasons were cost (55.6%), followed by patient factors (29.6%) [Table II].

In those who were familiar with asthma CPGs, there was a trend towards more government doctors being more willing to adopt them in daily practice, e.g. 66.3% government vs. 37.3% private doctors "always" adopted the CPGs in practice [p<0.001] [Figure 2]. None claimed to have "never" adopted the CPGs. Of the 6 (all private doctors) who "rarely" adopted the CPGs, 4 quoted cost as the primary reason, 1 quoted patient factor (i.e. Too difficult to change patients' misconceptions on inhalers and their demands) and 1 quoted the issue of practicality as the primary reason (i.e. CPGs are too complicated or cumbersome to follow).

Proportions of doctors with "appropriate" and "inappropriate" prescribing were 36.9% and 63.1% respectively. There was a trend towards higher proportions of private doctors having "inappropriate" prescribing, compared with government doctors (71.8% vs. 60.3%; p=0.069). Among those who would frequently (i.e. "always" category) adopt the asthma CPGs, the proportions of doctors with "inappropriate"

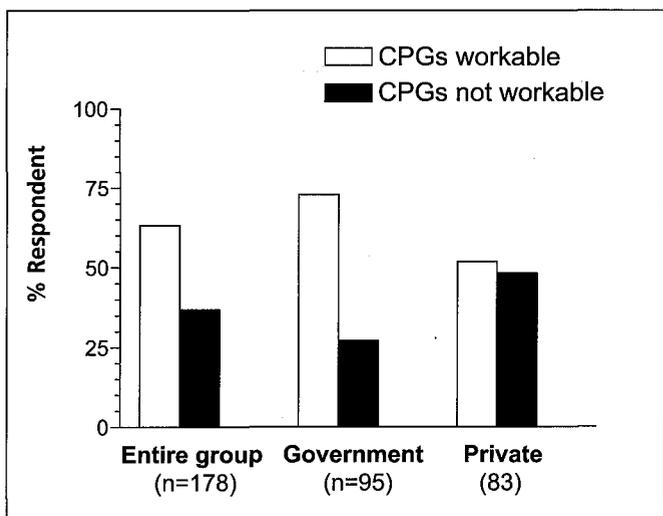


Fig. 1: Perception of government and private doctors towards the workability of asthma management Clinical Practice Guidelines (CPGs) in Malaysian healthcare system.

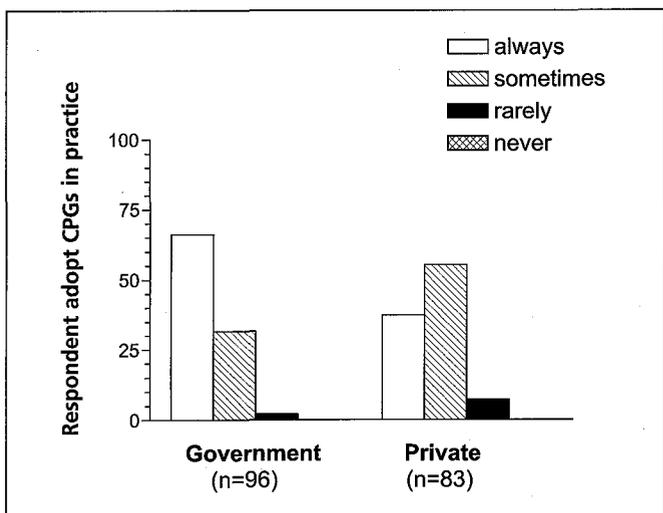


Fig. 2: Adoption of asthma management Clinical Practice Guidelines (CPGs) in day-to-day clinical practice among government and private doctors.

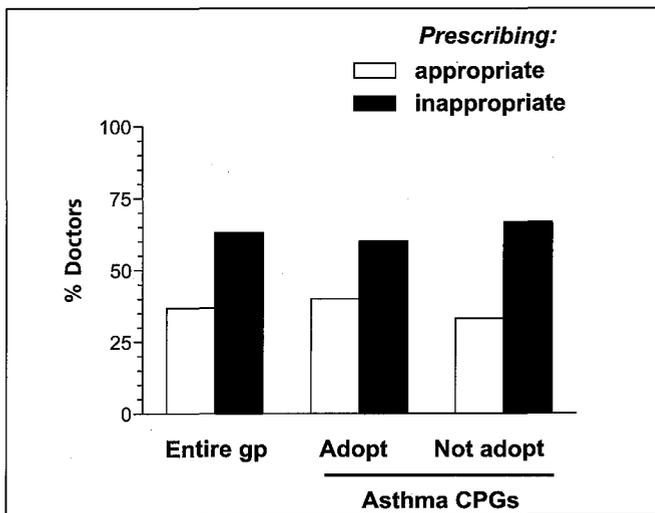


Fig. 3: Relationship between appropriateness of asthma prescribing and adoption of asthma management Clinical Practice Guidelines (CPGs).

Table I: General information on the government and private doctors

	No recorded	All (n=226)	Government (n=116)	Private (n=110)	p*
Patient load, n/week					
≤ 5	223	83.4	97.4	68.8	-
> 5		16.6	2.6	31.2	<0.001
Patient type					
Adults	200	38.5	58.9	12.5	-
Children		11.0	18.8	1.0	-
Both		50.5	22.3	86.4	<0.001
Practice location					
Cities or major towns	223	83.4	97.4	68.8	-
Outside major towns		16.6	2.6	31.2	<0.001
Patient insurance cover					
< 50%	226	53.1	55.2	50.9	-
≥ 50%		46.9	44.8	49.1	0.521

Figures are percentages unless otherwise stated

* p value between government and private doctors

Table II: Reasons selected for perceiving that asthma CPGs are not workable in Malaysian health-care system

	Entire group (n=44)	Government (n=17)	Private (n=27)
Too costly	44.5	29.4	55.6
Too difficult to change patients' misconceptions on inhalers & their demands	27.3	23.5	29.6
Too difficult to change doctors' prescribing habits	15.9	29.4	7.4
These guidelines are too complicated or cumbersome to practice	4.5	5.9	3.7

Figures are percentages unless otherwise stated. Respondents could choose more than 1 reason provided.

prescribing were similarly high to those who would not do so ("sometimes" or "rarely" category) (60% vs. 66.7%; $p=0.356$) [Figure 3].

DISCUSSION

An important methodology consideration is our decision a priori not to discriminate between specialist and generalist, and between adult physician, paediatrician and family doctors, in the analysis. This was mainly due to problems with definitions on seniority of expertise and inequality in their distributions among the surveyed population. As such, subgroup analysis can be misleading. This, nevertheless, can create bias in our findings because of the different level of practices under study. Another important consideration concerns our sampling of doctors. Those who responded at meetings or by hand in certain institutions may inherently have a different perception to asthma CPGs compared to those solicited through mail. The potential bias generated from this is real and therefore any conclusions drawn from our findings should be guarded.

Notwithstanding the shortcoming of a self-completed questionnaire study and a low respondent rate, our findings show a high degree of familiarity of asthma CPGs among Malaysian doctors. However, a significantly higher proportion of private doctors, compared to government doctors, considered these asthma CPGs "not workable" or were reluctant to adopt them in their practice setting, quoting cost as the primary reason. Although the group of respondents in this survey is likely to represent those who are better motivated towards continuous professional development by virtue of their willingness to participate in this survey, it is reasonable to assume that the same

perception exists in the Malaysian community of doctors at large, perhaps to an even greater degree.

The familiarity with asthma CPGs claimed by the respondents is encouraging and may be a reflection specific to our surveyed sample only. The finding stands in stark contrast to a smaller questionnaire survey from a local asthma workshop where 71% of respondents admitted to not having seen the Malaysian asthma CPG⁵. The perception that the recommendations in today's asthma CPGs cost more is understandable, since the treatment paradigm is clearly shifted to a much more aggressive and regular daily treatment at "milder" disease state for at least a few months. Also, asthma CPGs advocates the use of inhaler devices that is generally more expensive than oral tablets like salbutamol and prednisolone.

However, it is increasingly recognized that medicinal cost for persistent asthma correlated significantly with the degree of asthma control, meaning that it costs more not to control the disease well⁶. For example, the medical resource utilization in poorly controlled asthmatics in France was shown to be more than double that of well controlled asthmatics⁷, and in Spain, the indirect cost from days lost from work was shown to be twice as high as the direct cost from drugs, emergency visits and hospital stays⁸. As such, paying the apparent "costly" price of daily asthma inhaler medications may in fact cost less in the long run by means of fewer asthma exacerbations and better quality of life and productivity.

Perhaps the issue here is the lack of emphasis or clarity in asthma CPGs on the relationships between the optimal treatment, long-term medical resource utility and personal cost. Addressing these issues more thoroughly by means of

discussion and education will pave the way to greater acceptance and adoption of asthma CPGs among Malaysian doctors especially those in the private sector. More research on this would be enlightening.

Another important but disturbing finding is the equally high degree of "inappropriate" prescribing among those who claimed adoption of asthma CPGs, compared with those who did not. Although the same issue of medicinal cost may be a reason for this, there may be other factors at work such as the changing of prescribing habits, influence of patients' preferences, or a genuine lack of understanding or appreciation of the CPGs recommendations. Changing prescribing habits or behavior is a complex matter. It has been shown that passive dissemination of information such as distribution of education materials have the least effect on changing prescribing behaviors⁹, approaches such as academic detailing where local opinion leaders identified as their peers to disseminate information^{10,11}, and multi-facet interventions involving audit and feedback, reminders, local consensus processes, or marketing^{12,13} are the more efficient means. More research on this is required in order to clearly define the ways of improving appropriateness in prescribing in terms of maximizing treatment effectiveness, minimizing drug side-effects and cost, while respecting patients' preferences.

ACKNOWLEDGEMENTS

The study was funded by International Medical University internal research fund and was assisted in the distribution of questionnaires with much appreciation by the following persons: Dr. I Kupusamy; Datin Dr. AM Aziah; Dr. MZ Norzila;

Professor CK Liam; Dr. CM Wong; Dr. KH Lim; A Professor J De Bruyne; Dr. PWK Chan; A Professor AM Roslina; A Professor H Roslan; Dato" Dr. A Razak Muttalif; Dr. G Simon; Dr. AW Norrashidah, and Dr. MZ Zainudin.

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