

# Establishing the content validity in Hong Kong of the prioritised criteria of consultation competence in the Leicester Assessment Package (LAP)

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## Summary

**Objective:** To test the content validity in Hong Kong of the prioritised criteria of consultation competence in the Leicester Assessment Package (LAP).

**Design:** A detailed questionnaire was sent to doctors with experience of family medicine in Hong Kong to seek their views on the seven prioritised consultation categories and 39 component competences in the LAP on a six-point scale (strongly approve to strongly disapprove). Respondents also had the opportunity to reject or suggest alternative categories, components and/or weightings. Background demographic and professional data were collected.

**Subjects:** 489 full members of the HKCFP with current Hong Kong postal address.

**Main outcome measure:** The respondents' collated levels of approval of the LAP consultation categories, component competences and weightings and any consensus for changes.

**Results:** There was a response rate of 57%. Of the respondents 92%, and 82% to 97% either strongly approved or approved of the overall LAP set of consultation categories and the individual categories respectively. Thirty-seven of the 39 suggested

component competences were supported by more than 80% of respondents. There was little support for excluding, including or shifting any categories or component competences. Ninety-three percent of respondents were in favour of the need to identify priorities between any categories of consultation competence and 88% of respondents expressed approval of the suggested weightings.

**Conclusion:** The high levels of approval from respondents suggest that the content validity of the categories and components of consultation competence in the LAP has been established in Hong Kong and that the LAP weightings of consultation categories have also been validated. Indeed, the results closely correlate with the findings of the original study in the United Kingdom. The LAP criteria of consultation competence may be used with confidence as measures against which consultation performance can be judged in formative or regulatory assessment (and improvement) of consultation competence in family medicine in Hong Kong.

**Keywords:** Validation, criteria of consultation competence, Leicester Assessment Package, Hong Kong

## 摘要

**目的:** 評估李斯特評估準則 (Leicester Assessment Package) 有關診症能力的優先次序指標的內容是否適用於香港。

**設計:** 向香港有經驗的家庭醫生。發出一份詳細的問卷, 用六個點量度方法 (從絕對同意至絕對不同意), 就七個優先次序的分類和 39 個診症能力標準進行調查。回答者可以否定或建議不同類別、成份或比重。問卷亦收集了回答者的個人及專業資料。

**對象:** 489 位 HKCFP 在香港有郵寄地址的會員。

**測量內容:** 回答者對 LAP 的同意程度, 分診症和成份能力比重和其他改變。

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結果：回應率為57%，其中92%絕對同意或同意LAP整體，82%至97%絕對同意或同意單項LAP分類，39項能力標準之中，37項得到超過80%的支持。很少數人提議排除增加或改動分類或內容。93%回應者認同應先分別出診症能力分類的優先次序。88%認同LAP的比重分配。

結論：高度認同顯示LAP的內容和分類在香港是成立的。比重亦是有適用的。其實，我們的結果和英國的結果是很吻合的。所以LAP的分類指標可以用來量度香港家庭醫生診症表現，用於正式或定期評估，以及提升診症能力等方面。

主要詞彙：確實，診症能力指標，LAP，香港

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## Introduction

The Hong Kong Academy of Medicine (HKAM) was established in 1993 as a statutory body to regulate the standard of specialist training and practice in Hong Kong. Since 1993, registered doctors must be fellows of the HKAM to be listed in the Specialist Register of the Medical Council of Hong Kong. Family medicine was recognised as a specialty and the Hong Kong College of Family Physicians (HKCFP) became one of the foundation colleges of the HKAM. The examination requirements for HKAM fellowship in all specialties were standardised to include an intermediate examination after three to four years of basic training and an exit assessment at the end of two to three years of higher training. This has resulted in the extension of the previous four-year family medicine vocational training programme to six years and the introduction of a regulatory exit assessment (EA) to assure the standard of a specialist family physician.

In 1997, the HKCFP held the first EA of its Higher Education Training Programme. One of the three components of the EA is a consultation skills assessment<sup>1</sup> in which candidates engaged in consultation with a minimum of six unselected and consecutive patients in the doctor's own consulting room are directly observed by two College assessors. Performance is judged against the explicit and prioritised criteria of consultation competence as contained in the Leicester Assessment Package (LAP).<sup>2,3</sup> The LAP was selected by the HKCFP because it was specifically designed for assessing consultation performance, its criteria for assessment were clearly defined

to facilitate a more objective assessment and there were preliminary data available on its validity and reliability.

The LAP is an integrated assessment tool which contains 7 prioritised categories of consultation competence and 39 components. It has been designed for both formative and regulatory purposes and can be used in both live and video-recorded consultations and with real or simulated patients. The LAP consultation categories and component competences have been demonstrated to be valid for general practice in the United Kingdom (UK).<sup>4</sup> The LAP has also proved to be reliable, feasible and acceptable in a variety of situations: with simulated patients in an experimental situation,<sup>5</sup> in regulatory assessments of general practice registrars in Kuwait,<sup>6</sup> with established general practitioners in the UK<sup>7</sup> and with medical undergraduates.<sup>8</sup>

Although the LAP has been successfully used as a tool for consultation skills assessment in the EA,<sup>1</sup> its criteria of consultation competence have not been formally validated in the specific context of Hong Kong family medicine. Accordingly, we set out to test the content validity in Hong Kong of the prioritised criteria of consultation competence as contained in the LAP among family physicians.

## Method

A detailed questionnaire, modelled on the questionnaire used in the UK validation study, was sent to 489 full members of the HKCFP having a current mailing address in Hong Kong. These were doctors who had been predominantly engaged in family medicine for a minimum of three years (to include at least one year in Hong Kong), who had at least one higher qualification in family medicine recognised by the HKCFP and who had fulfilled three consecutive years of quality assurance before obtaining full member status. Those who fail to respond received postal reminders after two and five months.

The questionnaire sought the views of the College members on the content validity of the seven categories of consultation competence and their 39 components. Opinions on the relative weightings of the different categories were also sought. Respondents were given the opportunity to respond to a series of statements or questions on a six-point scale (strongly approve, approve, tend to approve, tend to disapprove, disapprove, strongly disapprove).

Respondents also had the opportunity to reject any of the proposed categories, components or weightings; suggest additional categories or components; state whether particular components should be re-allocated to other categories; give their opinion on the principle of prioritisation; and to propose amendments to the suggested weightings. Recipients of the questionnaire were also invited to provide some background demographic and professional information.

## Results

There was a response rate of 57% with 279 questionnaires returned after three mailings. Almost three quarters (73%) of respondents were over 40 years of age, 52% were Fellows of the HKCFP, 32% were also Fellows of the HKAM, 22% were trainers and 11% were trainees in family medicine.

**Table 1** shows that 92% of respondents either strongly approved or approved of the overall set of LAP consultation categories and 82-97% either strongly approved or approved of the individual categories. Only 12 respondents (4.3%) wanted to exclude any categories. Although 50 respondents (17.9%) suggested a variety of new consultation categories such as communication skills (7 respondents), time management (4), continuity of care and evidence based care (3 each), there was no consensus among them.

The responses to the 39 components of consultation competence are shown in **Table 2**. Twenty-one components

were strongly approved or approved by 90-97% of respondents, 16 components by 80-90%, while "Introduces self to patients" received the lowest rating (59%). This latter component was also the only one to attract statistically significant differences in responses from trainers (72.1%), trainees (64.5%) and the remaining respondents (53%).

The differences between proportions of strongly approved or approved responses among three subgroups of respondents (trainer, trainee and neither according to their training status in family medicine) were not significant when they were compared together or by every two subgroups, except for component (1) "Introduces self to patients". There was a higher proportion of the trainer subgroup who strongly approved or approved of this component than the other two subgroups when they were compared together ( $X^2=7.41$ ,  $p=0.02$   $df=2$ ).

Only 9 respondents (3.2%) believed that any of the listed components should be shifted to another broad LAP category and only 23 respondents (8.2%) suggested additional components but with no clear consensus.

When asked if they agreed with the statement "If consultation competence is to be formally assessed, some attempt must be made to identify relative priorities between any agreed categories of component consultation competence", 74% of the 260 respondents strongly approved or approved of such a principle. This increased to 93% when the tended to approve group was included.

**Table 1: Response to proposed categories of consultation competence**

	Strongly approve		Approve		Tend to approve	Tend to disapprove/ disapprove/ strongly disapprove
	n	%	n	%		
Interviewing/history taking	207	74.2%	63	22.6%	2	2
Physical examination	151	54.1%	113	40.5%	9	1
Patient management	175	62.7%	89	31.9%	9	0
Problem solving	152	54.5%	105	37.6%	16	1
Behaviour/relationship with patients	136	48.7%	115	41.2%	20	3
Record keeping	123	44.1%	117	41.9%	29	5
Anticipatory care	93	33.3%	135	48.4%	36	9
Overall	127	45.5%	129	46.2%	11	3

Total no. of respondents (n = 279)

Ranked according to the total of strongly approve and approve

Table 2: Response to individual components of consultation competence

	Strongly approve n	Strongly approve %	Approve n	Approve %	Tend to approve	Tend to disapprove/ disapprove/ strongly disapprove
<b>A) Interview/history taking</b>						
4) Listens attentively	180	64.5%	84	30.1%	10	3
10) Elicits relevant and specific information from patients and/or their records to help distinguish between working diagnoses	143	51.3%	114	40.9%	18	2
6) Phrases questions simply and clearly	151	54.1%	104	37.3%	16	6
11) Considers physical, social and psychological factors as appropriate	153	54.8%	102	36.6%	19	3
3) Allow patients to elaborate presenting problems fully	149	53.4%	104	37.3%	21	3
5) Seeks clarification of words used by patients as appropriate	129	46.2%	121	43.4%	24	3
2) Puts patients at ease	122	43.7%	127	45.5%	25	3
8) Recognises patients' verbal and non-verbal cues	148	53.0%	101	36.2%	23	5
9) Identifies patients' reasons for consultation	169	60.6%	75	26.9%	12	4
12) Exhibits well-organised approach to information gathering	110	39.4%	123	44.1%	38	6
7) Uses silence appropriately	98	35.1%	133	47.7%	33	11
1) Introduces self to patients	49	17.6%	114	40.9%	71	39
<b>B) Physical examination</b>						
13) Performs examination and elicits physical signs correctly and sensitively	155	55.6%	107	38.4%	15	1
14) Uses the instruments commonly used in general practice in a selective, competent and sensitive manner	136	48.7%	119	42.7%	21	2
<b>C) Patient management</b>						
18) Demonstrates understanding of the importance of reassurance and explanation and uses clear and understandable language	163	58.4%	98	35.1%	13	3
15) Formulates management plans appropriate to findings and circumstances in collaboration with patients	160	57.3%	98	35.1%	16	3
16) Makes discriminating use of investigations, referral and drug therapy	150	53.8%	104	37.3%	17	6
19) Checks patients' level of understanding	119	42.7%	130	46.6%	23	6
20) Arranges appropriate follow-up	102	36.6%	139	49.8%	31	6
17) Is prepared to use time appropriately	120	43.0%	115	41.2%	30	11
21) Attempts to modify help-seeking behaviour of patients as appropriate	76	27.2%	128	45.9%	62	11
<b>D) Problems solving</b>						
24) Correctly interprets and applies information obtained from patient records, history, physical examination and investigations	164	58.8%	100	35.8%	10	2
22) Generates appropriate working diagnoses or identifies problem(s) depending on circumstances	141	50.5%	114	40.9%	21	1
25) Is capable of applying knowledge of basic, behavioural and clinical sciences to the identification, management and solution of patients' problems	131	47.0%	122	43.7%	19	4
23) Seeks relevant and discriminating physical signs to help confirm or refute working diagnoses	138	49.5%	110	39.4%	25	2
26) Is capable of recognising limits of personal competence	123	44.1%	113	40.5%	34	5
<b>E) Behaviour/relationship with patients</b>						
27) Maintains friendly but professional relationship with patients with due regard to the ethics of medical practice	162	58.1%	96	34.4%	17	2
28) Conveys sensitivity to the needs of patients	118	42.3%	135	48.4%	21	3
29) Demonstrates an awareness that the patient's attitude to the doctor (and vice versa) affects management and achievement of levels of co-operation and compliance	110	39.4%	126	45.2%	30	11
<b>F) Anticipatory care</b>						
30) Acts on appropriate opportunities for health promotion and disease prevention	113	40.5%	139	49.8%	22	3
31) Provides sufficient explanation to patients for preventive initiatives taken	122	43.7%	121	43.4%	28	5
32) Sensitively attempts to enlist the co-operation of patients to promote change to healthier life-styles	99	35.5%	135	48.4%	38	4
<b>G) Record keeping</b>						
33) Makes accurate, legible and appropriate record of every doctor-patient contact and referral	140	50.2%	110	39.4%	22	2
<b>Minimum</b>						
35) Relevant history and examination findings	198	71.0%	71	25.4%	5	1
36) Any measurement carried out (e.g. BP, etc.)	181	64.9%	86	30.8%	8	1
37) The diagnosis/problem	153	54.8%	102	36.6%	17	3
39) If a prescription is issued, the name(s) of drug(s), dose, quantity provided and special precautions intimated to the patient should be recorded	157	56.3%	98	35.1%	11	9
34) Date of consultation	198	71.0%	53	19.0%	4	1
38) Outline of management plan, investigations ordered and follow-up arrangements	116	41.6%	115	41.2%	37	6

Total no. of respondents (n = 279)

Ranked according to the total of strongly approve and approve

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Only two respondents expressed strong disapproval of the statement.

Concerning the suggested weightings of consultation categories, 65% of the 264 respondents strongly approved or approved while a further 23% tended to approve. Only three respondents strongly disapproved of the suggested weightings.

**Table 3** shows the high degree of agreement between the original weightings and those suggested by respondents. However, 81 respondents (29%) suggested alternatives when offered the opportunity to change the distribution of weightings between consultation categories. Fifty respondents (17.9%) suggested changes to the category of "Problem solving" while twenty-seven respondents (9.7%) suggested changes to "Record keeping". The other categories all had an average of forty respondents (~14%) who suggested changes to the weightings. Nevertheless, there was no consensus for change in the original weightings.

## Discussion

The above results demonstrate strong support in Hong Kong for the content validity of the seven categories and the 39 components of consultation competence as contained in the LAP and for the LAP weightings of consultation categories. Indeed, the responses of the Hong Kong doctors closely correlated with those of their UK counterparts.<sup>4</sup> An overwhelming majority of respondents (92%) strongly approved/approved of the overall set of consultation

categories and even the least supported individual consultation category (anticipatory care) was strongly approved or approved by 82% of respondents.

There were also consistently high levels of support for 38 of the 39 individual components of consultation competence with no clear consensus to shift or to include any new components. The least approved component (as also in the UK study) was "Introduces self to patients" which was strongly approved or approved by only 59% of respondents (69% in the UK study). This was the only component competence, however, which produced statistically significant differences in approval for inclusion ratings in the respective responses from the sub-groups of trainers (72.1%), trainees (64.5%) and those who were neither (53%). This may partly be explained by the fact that the latter group of respondents (as in the UK study) were senior and experienced doctors who would already be known to their patients (and vice versa). On the other hand, it is surprising that only two-thirds of trainees recognised the importance of this component as they were the group of junior doctors who were most likely to be consulted by patients they did not know. We would support the continual inclusion of "Introduces self to patients" but stress that this consultation behaviour is only necessary when encountering a patient with whom the doctor is unfamiliar.

The inclusion of weightings on the categories of consultation competence, a feature unique to the LAP, was approved in principle by 93% of respondents; and 88% of respondents expressed some degree of approval for the actual LAP weightings. While 29% of respondents

**Table 3: Comparison of the original weightings for categories of consultation competence and those suggested by 279 respondents**

Consultation category	Original weightings (%)	Weightings suggested by respondents (%)*		
		Average	Range	Standard deviation
Interview/history taking	20	20.68	10-60	4.63
Physical examination	10	11.07	0-30	3.74
Patient management	20	19.43	0-30	3.12
Problem solving	20	18.73	0-30	3.63
Behaviour/relationship with patients	10	10.25	0-20	2.46
Anticipatory care	10	9.85	0-20	2.51
Record keeping	10	10.08	0-20	2.35

\* Collation of new weightings suggested by respondents and the original weightings approved by respondents who did not suggest any changes

## Key messages

1. Any assessment process in clinical medicine, whether for educational or regulatory purposes, must focus heavily on a clinician's ability to perform satisfactorily in consultations with patients.
2. It is essential to have available explicit criteria of consultation competence against which consultation performance can be judged.
3. These criteria must be relevant to, and acceptable in, the particular context in which they are to be used.
4. The identification of validated criteria of consultation competence is the essential first step towards the systematic assessment and improvement of consultation competence.
5. The LAP criteria of consultation competence have been validated for use in family practice in Hong Kong.

suggested alternative weightings, high degrees of agreement were achieved between the original weightings and those put forward by the respondents (see **Table 3**). Consequently, we believe that the LAP weightings have been validated.

The authors wish to emphasise that the scope of this study was limited to testing the content validity in Hong Kong of the explicit and prioritised criteria of consultation competence as contained in the LAP. It was not a study of all the types of validity of the LAP or of the reliability, feasibility, acceptability or educational impact of the LAP. Ideally, validity should be tested against a gold standard but this is not available for consultation competence. The only way to test such content validity is to determine whether an appropriate professional consensus exists. This is a standard method for assessing content validity of psychometric measures.<sup>9</sup> A 57% response rate is comparable or even better than most other surveys among doctors in Hong Kong. Opinions may change but researchers can only test the here and now.

## Conclusion

The criteria of consultation competence as contained in the LAP (7 categories and 39 components) have been field tested by exposure to the scrutiny of senior and experienced doctors in Hong Kong and found to achieve a

high degree of content validity. Overwhelming support was demonstrated for the principle that whatever assessment procedure is used, some attempt must be made to identify the relative priorities between any agreed categories of consultation competence. Although a smaller proportion of respondents expressed approval of the suggested weightings, this however represents a high degree of consensus, as only a negligible proportion expressed outright opposition. Accordingly, the content validity of the prioritised criteria of consultation competence in the LAP has been established in Hong Kong, which strengthens its relevance as an assessment tool for both regulatory and summative purposes. Despite the differences in the funding systems and practice organisation between the two locations, the similar responses of doctors in Hong Kong and UK support the original conceptualisation of the LAP as a generic assessment tool that can be applied to consultations in widely different settings. It is hoped that by establishing the validity of explicit criteria of consultation competence in the context of Hong Kong, the awareness of the utility of the LAP in the assessment and improvement of consultation skills may be enhanced. As a result the standard of family medicine and patient care in Hong Kong may be improved. ■

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