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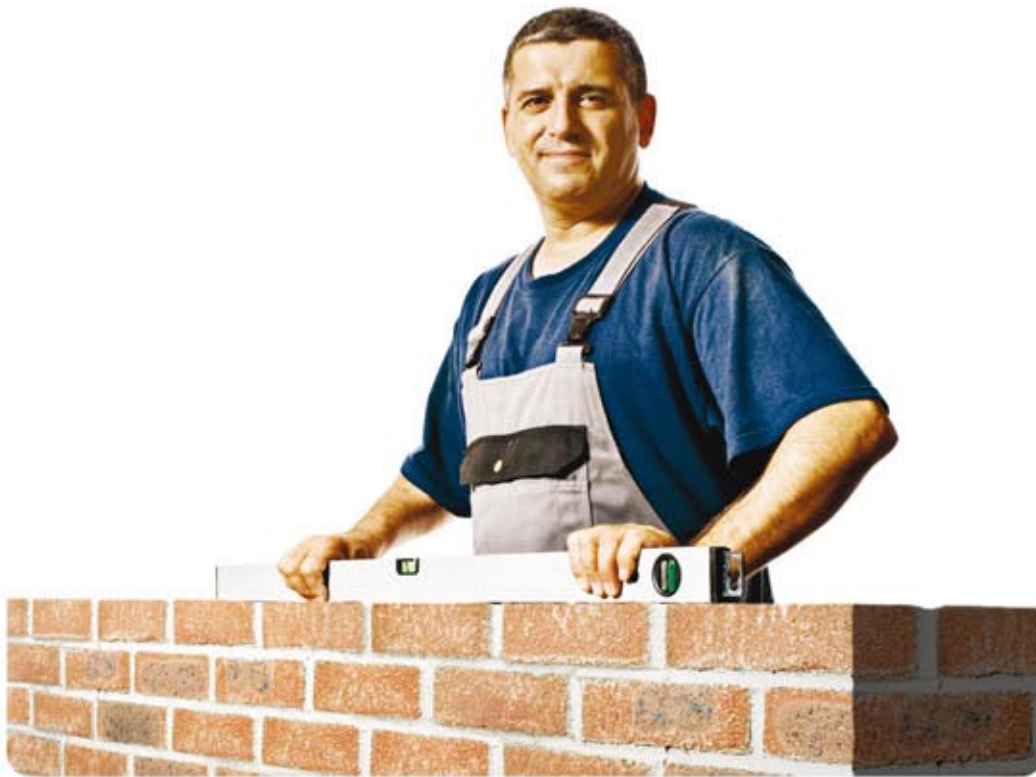
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The way forward for undergraduate medical education

Albert Lee 李大拔

Priority for medical education should be based on the emerging health needs of the community. Our medical graduates should carry the mission to ensure the health of our future population. They must be well aware of the emerging health burden not only within their own localities but also globally as we are now living in a globalised world. They must not only know the current health burden and associated risk factors, but also be forward thinking of the future health of our population. Paper by Lopez *et al* reported that an estimated 45% of global mortality and 36% of global disease burden were attributable to the joint hazards of the 19 selected global risk factors including risk factors for non-communicable diseases and injuries, unsafe sex, indoor smoke, and unsafe water and hygiene.¹ The advancement of medical technology does not replace the comprehensive and holistic approach to personalised health care. Paper by Kitsios and Kent in *BMJ* pointed out that despite the advancement of pharmacogenomics with identification of numerous gene-drug associations, few have been incorporated into clinical practice, and the reality of personalised medicine is beyond our genes.² It is no longer a debate which branch of health science should be given more emphasis. One should call for integration of biomedical, clinical and population science for better population health. The *BMJ* editorial on ensuring the health of future populations by Graham has highlighted the importance of social determinants of health to be set within the wider biophysical environment.³ She drew on the concerns of recent published review of health in Europe by Marmot that most published research and policies are concerned less with environment than lifestyle, and more with current risks at individual level rather than population level, calling for broader mission of public health.⁴ All these provide us foresights of future medical education with more coherent integration of different perspectives of science affecting human health and development.

The health care system will need to be transformed towards integrated care meeting the emerging needs of our contemporary society. The failure of transformation would lead to inefficiency of health care delivery system

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not only creating greater burden to the society but also to the workload of health care professionals. Although the merits of integrated care is beyond argument, BMJ editorial by Godlee has pointed out that it is still a tough journey with opposition from skeptical, suspicious and unwilling colleagues including clinical staff who are needed to drive the change.⁵ The argument for integrated medical education would still face great obstacles unless transformation of health care system has taken place. This would be chicken and egg situation. However if we would equip our graduates the skills and competencies to deliver quality health care conducive to the needs of the contemporary society, this would facilitate the process of system transformation.

For integrated health care, the clear line of demarcation between hospital and community settings is no longer applicable as patient management requires medical professionals to adopt clinical pathway approach to ensure seamless health care. Community based teaching is not only intended for graduates going into primary care and graduates need to possess the basic skills in handling common health issues in both hospital and ambulatory settings. The generic skills should be the ability to handle clinical conditions at different stages of development and identify which clinical specialty would be most appropriate at different stages of disease development. A conference in revisiting the mission of medical schools in 2008⁶ has pointed out that all medical schools should ensure students becoming familiar with critical subject matter if not yet incorporated sufficiently in the typical curriculum, for example:

- Knowledge and skills for improving the quality and safety of patient care
- Application of information sciences and system thinking
- Principles of public health and prevention
- Role of non-biological determinants of illness
- Health implication of cultural diversity
- Organisation, financing and performance of health care system
- Creation and impact of health policy

The conference report also suggests that medical schools should adopt promising pedagogical innovations to enrich students' learning with extensive community as well as hospital based experiences, and underscoring the relevance of basic science topics by integrating preclinical and clinical education.

Medical education needs to enable students to zoom their lens at the level of patient and family, and population and society as well at cellular and molecular, and bodily organs and systems level. Teaching in primary health care would enhance the capability of students in 'zooming their lens' as primary care model combines the effort of upstream, midstream and downstream approaches to improve population health and reduce health inequities.^{7,8} Paper by Lam and Poon discusses review on skills in undertaking continuing professional education by primary care physicians.⁹ The transformation of learning skills of primary care physicians in practice will add synergistic effect in transforming medical education as well as health care delivery system. ■

This article is based on the Visiting Professor Seminar for Faculty of Medicine, University Sains Malaysia on 19 June, 2014.

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A study on what influences medical undergraduates in Hong Kong to choose family medicine as a career

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Summary

Objective: To evaluate the preferred medical specialties among Hong Kong's final year medical students when they graduate from medical schools, and the factors they considered in making their choices, especially those associated with the decision of whether to choose family medicine, as a career.

Design: A cross-sectional survey with anonymous self-reporting questionnaires.

Subjects: All final year (5th year) medical students from the University of Hong Kong and the Chinese University of Hong Kong.

Main outcome measures: The top 3 specialty choices, the 3 strongest reasons to consider when students make their specialty choice, and the students' opinion towards family medicine, the key influential factors for choosing or not choosing family medicine.

Results: From an overall response rate of 94% or 200 valid questionnaires received, 18 (9%) respondents put family medicine as their first choice. Seventy-five (37.5%) included family medicine in their top 3 career choices. Interest was a major factor considered in the choice of specialty. Female sex (OR 2.264; 95% C.I. [1.276 – 4.016]), adequate opportunity to interact with patients (OR 3.733; 95% C.I. [1.991 – 6.996]) and less stressful working environment (OR 2.723; 95% C.I. [1.329 – 5.582]) were factors independently associated with the choice of family medicine. Lack of a well-developed primary care system in Hong Kong, perceived lack of intellectual stimulation and perceived inferiority of family medicine to other specialties were the top three reasons which discouraged medical students from choosing family medicine.

Conclusion: Family medicine remains the third popular choice of specialty for final year medical students in Hong Kong. Efforts to build up family medicine as a preferred career choice for medical undergraduates should be explored although it may take a system change in healthcare delivery that enhances the delivery of quality of primary care to arouse more interest in family medicine.

Keywords: career choice, specialty choice, medical undergraduates, family medicine

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摘要

目的: 評估香港醫科畢業生首選的醫療專業, 以及他們作出選擇的因素, 特別是與是否選擇家庭醫學 (FM) 的相關考慮原因。

設計: 自我報告的匿名問卷橫斷面調查。

研究對象: 所有最後一年 (第五年) 的香港大學和香港中文大學醫學生。

主要測量內容: 前3位的專業選擇, 3大影響學生選擇專業的原因, 學生對家庭醫學 (FM) 的觀感, 選擇或不選擇FM主要考慮因素。

結果：總回覆率為94%。200份有效問卷中，18（9%）位受訪者把家庭醫學作為他們的首選。75（37.5%）位，把FM括入其前3名的職業選擇。興趣是專業選擇的主要考慮因素。女性（OR2.264;95%CI[1.276-4.016]，與患者互動的時間充足（OR3.733;95%CI[1.991-6.996]）和工作環境壓力較小（OR2.723;95%CI[1.329-5.582]）是選擇家庭醫學的獨立關連因素。香港缺乏發展良好的基層醫療系統，感覺專業知識的水準不夠高和認為家庭醫學較其他醫療專業地位低是阻攔醫學生選擇家庭醫學的三個最重要原因。

結論：家庭醫學仍然是香港應屆醫科畢業生的第三熱門專業。應該努力去探索鼓勵醫科生以家庭醫學作為首選專業，雖然它可能需要醫療服務體系的改變，增強基層醫療服務的質量，以喚醒醫科畢業生對家庭醫學的興趣。

主要詞彙：職業選擇，專業的選擇，醫學本科生，家庭醫學

HK Pract 2014;36:123-131

Introduction

A robust primary health care system is one of the key factors in providing cost effective and quality health care services to the population. However, it will be difficult to build up such a system without sufficient numbers of well-trained family doctors. Historically, family medicine (FM) has been an unpopular career choice among Hong Kong's medical graduates^{1,2} and recruiting medical graduates into FM residency training programmes have been difficult, especially when there were doctor shortages.

This situation is not unique to Hong Kong. Australia, Canada, and the United States, which have strong primary healthcare systems, also encounter similar difficulties.^{3,4} To explore the reasons for this and to promote recruitment of medical graduates to work in FM, research has been conducted to study the demographic, attitudinal and educational factors affecting the choice of a specialty of medical students. However, due to cultural differences and variations in undergraduate medical training programmes, the findings of overseas studies might not be directly applicable to Hong Kong. There is also little data of relevance to the Hong Kong setting, with a literature review identifying only one unpublished cross-sectional survey studying the career choice of Hong Kong medical interns in 2010.² The response rate of this survey was only 41%, limiting the study's validity. Therefore, a local study is necessary to answer the following questions:

1. What are the top career choices among Hong Kong medical students?
2. How many students of the 2012 cohort of fifth year medical students would consider FM as their career choice?
3. What factors would medical students consider when they make their career choice?
4. What are the factors associated with their choice of FM as their career?
5. What are the factors discouraging medical students to choose FM as their career?

Methodology

Study Population

This was a cross-sectional survey study conducted on final year (fifth year) medical students of the University of Hong Kong (HKU) and the Chinese University of Hong Kong (CUHK), the only two universities providing undergraduate medical education in Hong Kong. Fifth year students were selected as the target population for this study because this group of students should have a clearer idea about their future career choices than younger years.

Questionnaires

The questionnaire was self-reported and anonymous. Questions were based on the validated National Physician Survey (NPS) led by the College of Family Physicians of Canada⁵ and a survey studying career choices of medical students in Greece in 2007⁶, with minor modifications adapted for the local situation. Basic demographic data, top 3 specialty choices and 3 biggest reasons to consider when making specialty choice were asked.

To assess students' knowledge of the core values of FM, a question was designed based on the Greek questionnaire⁶ in which students were asked to choose the **best definition** of FM out of 4 choices. The best description was option (c) "Humanistic oriented approach of medicine with aims to prevent, treat and rehabilitate." General questions about students' opinion towards FM were assessed by a 4-point Likert scale. Respondents who chose FM as one of the top 3 specialty choices were invited to complete part A, which assesses the key factors influencing their choice of FM. Respondents who did not choose FM were invited to complete part B, which identifies the top 3 reasons behind this choice.

A field test was conducted between May 2011 and June 2011 to evaluate the content validity and applicability of the questionnaire. Eight local medical students, either second year or fourth year, were recruited during their clinical attachments to a general outpatient clinic and were invited to complete the questionnaire. Their feedback on ease of understanding and difficulties in completing the questionnaire were collected and amendments were made accordingly.

The questionnaires were distributed and collected in-person by the primary investigator between November 2011 and January 2012 during a scheduled whole class lecture. It was made clear during the informed consent process that answering the questionnaire was entirely voluntary, that anonymity was guaranteed and their answers would not affect their academic results. Ethical approval was granted by New Territories West Cluster Clinical & Research Ethics Committee.

Statistical analysis

Data were first analysed with descriptive statistics. Subjects were then divided into 2 groups according to whether they had put FM as one of their top 3 career choices. χ^2 test was used for categorical variables. Factors shown to be significant in χ^2 test were further analysed by logistic regression using FM as dichotomous outcome. A p-value < 0.05 was considered to be significant.

Results

133 out of 141 and 114 out of 122 fifth year medical students in the CUHK and HKU returned their questionnaires respectively, giving a response rate 94.3% and 93.4% respectively. After excluding questionnaires with missing data in demography, career choice or reasons for career choice, 200 questionnaires were considered suitable for analysis, of which 54% were CUHK respondents and 46% were HKU respondents.

Table 1: Association between background characteristics and choice of FM

		Number (Total = 200)	%	p-value
Age	21	13	6.5	-
	22	66	33.0	
	23	79	39.5	
	24	15	7.5	
	25	12	6.0	
	26	7	3.5	
	27	4	2.0	
	28	2	1.0	
	29	1	0.5	
	30	1	0.5	
Sex	Male	109	54.5	0.027
	Female	91	45.5	
University	HKU	92	46.0	0.059
	CUHK	108	54.0	
Marital status	Single	200	100	-
Monthly family income	<\$20,000	65	32.5	0.988
	\$20,000 - \$40,000	61	30.5	
	>\$40,000	74	37.0	
Possession of primary degree	Yes	15	7.5	0.070
	No	185	92.5	
Have family member working as doctor	Yes	37	18.5	0.645
	No	163	81.5	
Have own family doctor	Yes	59	29.5	0.872
	No	141	70.5	

Table 1 shows the basic demographic data of the respondents. The mean age was 23 years old (standard deviation 1.49, [range 21-30]). Female students were more likely to choose FM ($p = 0.027$).

Students with family members working as doctors were asked to further specify the specialties that their family members work in. Thirty-four out of 37 respondents gave valid answers. Among them, 64.7% would choose the same specialty as their family member in their first 3 priorities. There were 5 students having family members practicing FM and all of them indicated that they would choose FM.

Table 2 shows the distribution of specialty choice. Internal Medicine and Surgery were the most popular choices. Family Medicine ranked 3rd with 18 out of 200 students (9%). 75 out of 200 students (37.5%) selected FM as one of their first three choices.

“Interest” was the strongest reason students considered when they chose their specialty, although this was not significantly related to choosing FM statistically (**Table 3**). 81% indicated “interest” as their 1st reason and 94.5% of them put it as one of the top 3 reasons. Favourable working hours, high income potential and good research opportunities were not related to choosing FM after adjusting for sex in

logistic regression. Adequate opportunity to interact with patients (OR 3.733; 95% C.I. [1.991 – 6.996]) and less stressful working environment (OR 2.723; 95% C.I. [1.329 – 5.582]) were significant predicting factors for choosing FM, while good chance of promotion was the significant factor for not choosing FM (OR 0.239; 95% C.I. [0.079 – 0.723]).

Among the 75 students who considered FM as their specialty choice, most of them agreed or strongly agreed that FM clinical attachment ($n=67$, 90.5%) and the undergraduate FM module ($n=66$, 88%) were facilitating factors. Only 28 students (37.3%) thought that their own family doctors influenced their choice. Results of other factors are presented in **Figure 1**.

Among the 125 students who did not choose FM, the most common reason was “lack of a well developed primary care system” ($n=79$, 63.2%), followed by “lack of intellectual stimulation” ($n=62$, 49.6%) and “feeling FM is inferior to other specialties” ($n=51$, 40.8%) (**Table 4**).

Discussion

The low percentage of students (9%) choosing FM as a career is similar to a previous unpublished study on interns (8%).² According to the discussion paper “Manpower

Table 2. Top 3 specialty choices for future career

Specialty	1 st choice Frequency (%)	2 nd choice Frequency (%)	3 rd choice Frequency (%)
Internal Medicine	57 (28.5%)	39 (19.5%)	30 (15.0%)
General Surgery/Orthopaedics/ENT	50 (25.0%)	30 (15%)	25 (12.5%)
Family Medicine	18 (9.0%)	27 (13.5%)	30 (15.0%)
Obstetrics and Gynaecology	16 (8.0%)	13 (6.5%)	17 (8.5%)
Ophthalmology	13 (6.5%)	7 (3.5%)	15 (7.5%)
Paediatrics	12 (6.0%)	23 (11.5%)	10 (5.0%)
Psychiatry	11 (5.5%)	13 (6.5%)	11 (5.5%)
Anaesthesiology	5 (2.5%)	11 (5.5%)	9 (4.5%)
Radiology	5 (2.5%)	11 (5.5%)	14 (7.0%)
Emergency Medicine	4 (2.0%)	15 (7.5%)	23 (11.5%)
Pathology	4 (2.0%)	2 (1.0%)	4 (2.0%)
Oncology	2 (1.0%)	2 (1.0%)	-
Cardiothoracic Surgery	1 (0.5%)	1 (0.5%)	-
Urology	1 (0.5%)	-	-
Intensive Care Medicine	1 (0.5%)	-	-
Plastic Surgery	-	1 (0.5%)	-
Community Medicine	-	2 (1.0%)	2 (1.0%)
Missing data	0	3 (1.5%)	10 (5%)

Requirement and Strategies for Doctors” published by Hospital Authority in 2010⁷, the annual intake requirement of FM doctors was 44 from 2010 to 2016. This number is expected to increase to 55 from 2022 to 2026. With such

a low percentage of medical students putting FM as their first choice, and the expected parallel manpower shortage in other specialties, it is likely that there will be an increasing shortage of medical graduates to fill vacancies in FM

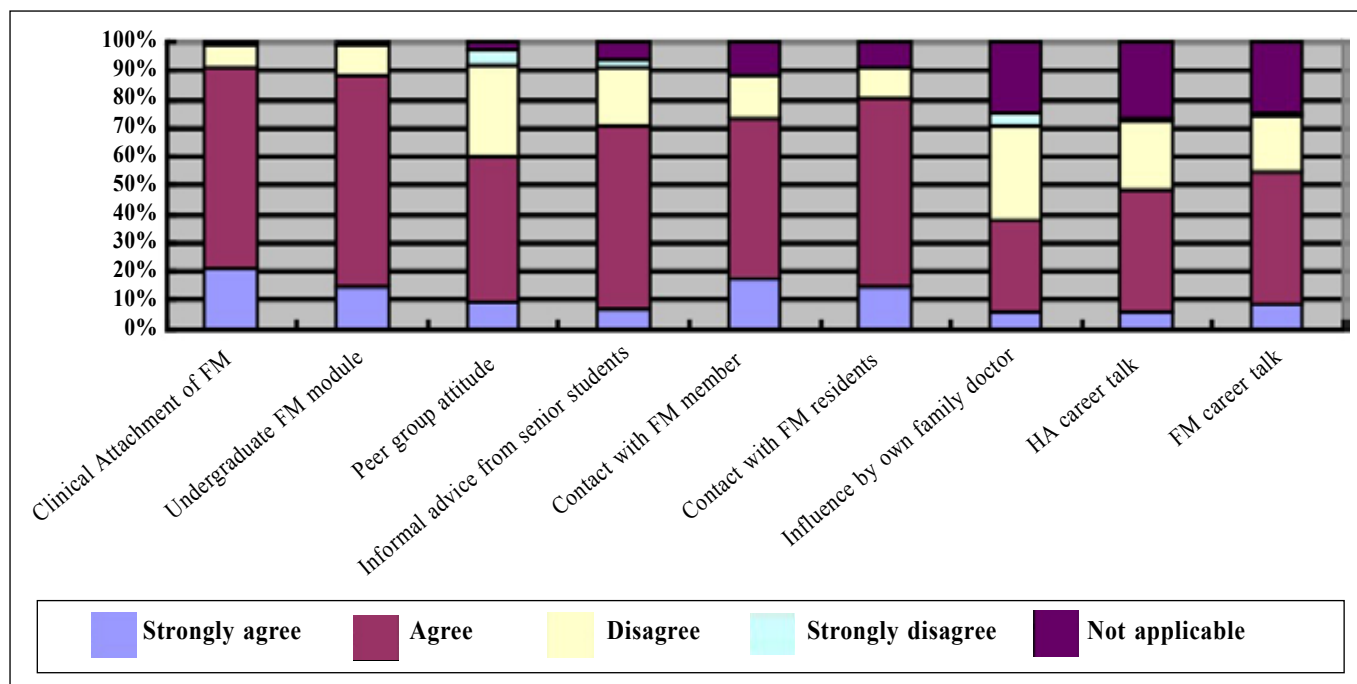
Table 3: Factors to consider when making specialty choice and relationship with choosing FM

Factors	Number of students choosing the factor as one of the top 3 reasons (N = 200)	Students choosing FM, n=75	Not choosing FM, n=125	p-value of χ^2 test	OR of choosing FM (95% CI)	p-value of logistic regression
Interest	Yes	189	72	0.471	-	-
	No	11	3			
Favorable working hour	Yes	81	37	0.049	0.554 (0.344 – 1.138)	0.051
	No	119	38			
Adequate opportunity to interact with patient	Yes	66	39	0.000	3.733 (1.991 – 6.996)	0.000
	No	134	36			
High income potential	Yes	31	6	0.023	0.386 (0.149 – 1.000)	0.050
	No	169	69			
Good research opportunities	Yes	21	3	0.020	0.299 (0.083 – 1.073)	0.064
	No	179	72			
Good chance of promotion	Yes	30	4	0.003	0.239 (0.079 – 0.723)	0.011
	No	170	71			
Less stressful working environment	Yes	40	23	0.003	2.723 (1.329 – 5.582)	0.006
	No	160	52			

Table 4. Top 3 reasons why students did not choose FM

Reason	1 st biggest reason Frequency (%)	2 nd biggest reason Frequency (%)	3 rd biggest reason Frequency (%)
Lack of well developed primary care system	38 (30.4%)	25 (20.0%)	16 (12.8%)
Lack of intellectual stimulation	28 (22.4%)	23 (18.4%)	11 (8.8%)
Feeling FM is inferior to other specialty	19 (15.2%)	15 (12.0%)	17 (13.6%)
No interest	12 (9.6%)	4 (3.2%)	4 (3.2%)
Poor role model of FM doctor	9 (7.2%)	8 (6.4%)	8 (6.4%)
Don't think there's need of training to work in FM	6 (4.8%)	5 (4.0%)	6 (4.8%)
Lack of research opportunities	5 (4.0%)	7 (5.6%)	10 (8%)
Inadequate exposure of FM in undergraduate curriculum	2 (1.6%)	9 (7.2%)	6 (4.8%)
Lack of teach opportunities	1 (0.8%)	4 (3.2%)	8 (6.4%)
Influence of my family expectation	1 (0.8%)	7 (5.6%)	6 (4.8%)
Lower earning potential	-	8 (6.4%)	6 (4.8%)
Poor quality of vocational training program	-	2 (1.6%)	9 (7.2%)
Poor FM result in undergraduate training	1 (0.8%)	-	-
Can easily enter FM later	1 (0.8%)	-	-
Low job security	-	1 (0.8%)	1 (0.8%)
Poor promotion opportunity	-	-	1 (0.8%)
FM is the 4 th choice	1 (0.8%)	-	-
Lack of opportunity for surgical procedure	1 (0.8%)	-	-
Missing data	0	7 (5.6%)	16 (12.8%)

Figure 1: Facilitating factors for choosing FM among medical students who put FM as their top 3 choice



training posts. Ultimately this will result in an insufficient supply of trained family physicians to meet service needs.

Similar to previous studies^{8,9}, female students were more likely to choose FM. It was postulated that traditional females might prefer a specialty with greater flexibility and regular working hours so that it would be more compatible with their domestic responsibilities. Unlike studies in other countries, which showed that older students preferred FM^{9,10}, age was not a significant factor related to choosing FM in our study. The narrow age range among the study population indicates a relatively low proportion of students with a degree prior to their medical school entry, which differs from other countries where medicine is actually a graduate degree. In Hong Kong, only 7.5% of medical students possess a primary degree prior to their studying of medicine.

Although the medical curricula between the University of Hong Kong and the Chinese University of Hong Kong were different, it did not show significant influence on students' career choice on FM (Table 1). High family income or having family member working as doctor in other specialties were shown to be the negative factors of choosing FM in foreign studies.^{10,11} However, both factors were not shown to be related to choosing FM in this study. In contrast to overseas studies, students with family members working as FM doctors seemed more likely to choose FM. The difference may be due to different healthcare economic system in Hong Kong.

Similar to other local and foreign studies^{2,6,12}, lack of interest and intellectual stimulation were factors that were negatively correlated with choosing FM. It seems that students do not appreciate the breadth and depth of knowledge required for FM. Together with the need for a holistic, comprehensive and continuing whole person care, the intellectual stimulation is certainly equal if not over that of other specialties.

Measures must be taken in order to arouse students' interest in FM. This study highlighted that students value their undergraduate FM clinical attachments. Therefore the two universities, together with input from the Hong Kong College of Family Physicians, should consider further enhancing these clinical components.

Another two major reasons that students did not choose FM were their related perceptions of an underdeveloped primary care system in Hong Kong and the inferiority of FM to other specialties. Without a sound primary care system, family medicine maybe undervalued by the general public, and the perceived "social status" of FM doctors will be lower. This can be discouraging for students who have interest in FM. If our government believes that a good primary care system is important to provide efficient and cost effective medical care to our citizens, more resources should be allocated for family medicine development. Acceptance of family medicine by the general public can also be enhanced by TV drama, newspaper articles, public

Key messages

1. Only 9% of final year medical students put FM as their first career choice, but more than one third of the students put FM as one of their top three career choices.
2. Interest is the strongest factor when final year medical students consider their specialty choice.
3. Female sex, adequate opportunity to interact with patients and less stressful working environment were favouring factors for choosing FM.
4. Lack of a well-developed primary care system in Hong Kong, perceived lack of intellectual stimulation and perceived inferiority of family medicine to other specialties were the top three reasons for not choosing FM.
5. A system change in healthcare delivery is necessary to enhance the delivery of quality of primary care to arouse more interest in family medicine.

health talks and public exhibitions showing the core spirit and value of family medicine.

This study's high response rate and the involvement of both universities are the main strengths of this study. However, findings cannot be generalised as only one year of students were selected. Further studies on pre and post evaluation, as well as studies on future generations should be considered.

Conclusion

Family medicine was not a popular first choice among final year medical students, but more than one third of them

considered it in their top three choices. In order to promote family medicine as a preferred career choice for medical undergraduates, measures to enhance undergraduate family medicine teaching and fostering research potentials in family medicine should be taken to let students understand family medicine better and arouse their interest.

Acknowledgment:

The authors would like to thank the final year students of Hong Kong University and the Chinese University of Hong Kong for their support and participation in the study.

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Questionnaire on Medical Students' View of Choosing Family Medicine (FM) as their Career

- * This is an anonymous questionnaire.
- * All information collected will be confidential.
- * This questionnaire takes ~ 3 min.

Basic information: *circle most appropriate answers

Age: _____ Sex: _____ Marital status: *Single / Married / Divorced

Household monthly income: * <20,000 / \$20,000 - \$40000 / > \$40000

Which university do you come from? * HKU / CUHK

Do you have any primary degree? Yes / No, If yes, what is it? _____

Do you have any family member working as doctors? *Yes / No

If yes: Which specialty? _____

Do you have your own family doctor? *Yes / No

About Specialty Choice:

Q1. Do you wish to specialise with further training after obtaining basic medical degree? *Yes / No

If no, are you going to work in general practice after graduation? *Yes / No

If yes, which specialties? (Please indicate your top 3 priorities by giving numbers i.e. 1=first priority, 2=second priority, 3=third priority)

_____ General Surgery/Orthopaedics/ENT	_____ Emergency Medicine
_____ Obstetric & Gynaecology	_____ Internal Medicine
_____ Family Medicine	_____ Ophthalmology
_____ Radiology	_____ Psychiatry
_____ Anaesthesiology	_____ Paediatrics
_____ Community Medicine	_____ Pathology
_____ Other, please specify: _____	

Q2. What factors influence most on your career choice? (Please choose top 3 reasons and rank: 1 as the biggest reason, 2 as the second biggest reason, and 3 as the third biggest reason)

_____ High income potential
_____ High job security
_____ Interest
_____ Good research opportunities
_____ High passing rate in professional exam
_____ Good chance of promotion
_____ High chance of entering the chosen specialty
_____ Wide variety of patient problems
_____ Adequate opportunity to interact with patients
_____ High Social prestige
_____ Favorable working hours
_____ Flexibility of training e.g. allowed to suspend or extend training period
_____ Less stressful working environment
_____ Others, please specify: _____

About Family Medicine

Q3. Do you think you understand what Family Medicine is? *Yes / No

Which do you think is the best definition of Family Medicine? (Please √ one)

- General approach of Medicine with basic knowledge of the main Medical specialties.

- First aid to emergency medical situations in *community*.
- Humanistic oriented approach of Medicine with aims to prevent, treat and rehabilitate.
- Primary care of common medical problems and referral to the suitable expert.

Q4. Which of the following opinions on family medicine find you in agreement?

	Strongly Agree	Agree	Disagree	Strongly Disagree
FM is a unique specialty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FM is a basic and very important component of health care system in HK	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Doctors who want to work in general practice should be encouraged to join the vocational training of FM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FM in the undergraduate course is useful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q5. If you have chosen Family Medicine in Q1, please proceed to **Part A**. If not, please proceed to **Part B**.

Part A: (For those who have chosen Family Medicine in Q1)

Do you think the following are beneficial parameters for your choice of Family Medicine?

	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Applicable
Clinical attachment of FM in clinical year	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FM module in undergraduate course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Peer group attitude	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Informal advice from senior students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact with FM mentors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact with FM residents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Influence by own family doctor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Career talk organised by Hospital Authority	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Career talk organised by FM Department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part B: (For those who have NOT chosen Family Medicine in Q1 or No plan for specialty training)

Please choose **top 3 reasons** why you think FM or FM vocational training is not suitable for you and rank: **1** as the biggest reason, **2** as the second biggest reason, and **3** as the third biggest reason.

- _____ Feeling Family Medicine is inferior to other specialties, i.e. lack of status and prestige
- _____ Lack of Intellectual stimulation/challenge
- _____ Lower earning potential
- _____ Inadequate exposure of family medicine in our undergraduate medical curriculum
- _____ Don't think there is a need to have training to work as a family doctor
- _____ Lack of well-developed primary care system in Hong Kong
- _____ Lack of Research opportunities
- _____ Lack of Teaching opportunities
- _____ Poor role model of doctors in FM
- _____ Influence of my family's expectation/suggestion
- _____ Poor quality of vocational training program in FM
- _____ Others, please specify: _____

~ Thank you for completing the questionnaire ~

~ End ~



The Editorial Board would like to thank all readers, contributors, sponsors and the College Secretariat for the tremendous support to the Journal throughout the year.

Wishing you all

 **Merry Christmas**
and Happy New Year 

The Hong Kong Practitioner

Use of ambulatory electrocardiography (AECG or Holter) for patients with symptoms related to cardiac arrhythmia in the primary care setting: a case series review

Lap-kin Chiang 蔣立建 · Lorna Ng 吳蓮蓮

Summary

This case series involved 318 consecutive Holter monitoring performed in a regional primary care clinic of Hong Kong during the period 2010 to 2013. The most frequent presenting symptom was palpitation, which accounted for 76.7% of cases. 139 cases (43.7%) of Holter monitoring showed significant cardiac arrhythmia. Long QT syndrome (10.7%) was the commonest condition detected. Patients older than 80 years, or with concomitant hypertension or ischaemic heart disease were more likely to have significant cardiac arrhythmia ($P < 0.05$).

摘要

此案例研究分析了2010年至2013年間，香港某間基層醫療診所檢查的連續318例動態心電圖監測的案例。最常見表現症狀是‘心悸’，佔所有案例的76.7%。139例（43.7%）動態心電圖監測出現重要的心律失常。最主要的表現是長QT綜合症（10.7%）。如果患者年紀超過80歲，或者伴有高血壓或缺血性心臟病更可能有顯著性心律失常（ P 值 < 0.05 ）。

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Introduction

Ambulatory electrocardiography (AECG or Holter) is a portable recorder that registers the ECG continuously during a prolonged period, usually for 24 hours. It allows diagnosis of transient disturbances of cardiac rhythm and conduction. According to the recommendations from the American College of Cardiology and American Heart Association (ACC/AHA)¹, Holter can be used to assess symptoms suggestive of underlying cardiac rhythm disturbance, including unexplained recurrent palpitations, unexplained syncope, near syncope, or episodic dizziness where the cause is not obvious.

The Family Medicine and General Outpatient Department (FM & GOPD) of Kwong Wah Hospital has direct access to Holter monitoring. This case series report will review the patient characteristics, clinical features and outcomes of all Holter monitoring ordered by FM & GOPD doctors in the primary care setting.

Objectives

1. To delineate the presenting symptoms of patients arranged for Holter monitoring;
2. To examine outcomes of Holter monitoring;
3. To determine patient characteristics associated with significant cardiac arrhythmia.

Methodology

Study population

Consecutive patients presenting with symptoms suggestive of cardiac arrhythmia and had Holter

monitoring performed during the period 1st January 2010 to 31st December 2013 in the Kwong Wah Hospital FM & GOPD were studied. (**Figure 1**). Clinical details including demographics, presenting symptoms and Holter results were collected. Presenting symptoms were stratified into five categories: palpitation, dizziness, syncope/presyncope/loss of consciousness, combined symptoms and “others” (including chest pain, incidental abnormal electrocardiography (ECG) finding etc). Presenting symptoms were further divided into ‘new onset’ (symptoms that occurred within three months before clinic visit) or ‘old’ symptoms (symptoms present for more than three months). Patients with confirmed non-cardiac causes of their symptoms or requiring urgent referral for specialist care were excluded.

Holter Monitoring and Definition

All Holter monitoring performed by the Cardiac Unit at Kwong Wah Hospital used a standard device (Philips Zymed Digitrak Plus). Standardised reports verified by authorised Cardiac unit doctors are generated and sent to the referring physicians. Content of the reports included patient demographic data, heart rate data and variability, QT analysis, ST episode analysis, pacemaker analysis, ventricular ectopy, supraventricular ectopy and atrial fibrillation.

The Holter outcome classification in our study was dichotomous (significant cardiac arrhythmia versus insignificant cardiac arrhythmia or normal) to reflect the reality of general practice decision making.² All diagnosis of significant cardiac arrhythmia will be referred to medical specialist for further evaluation and management.

The following definitions for various Holter abnormalities were used:

- Frequent ectopy: >15/1,000 atrial or ventricular ectopic beats.³
- Significant pause: RR interval of ≥ 2.8 seconds.³
- Paroxysmal atrial fibrillation (PAF): an irregular rhythm without P-wave activity sustained for ≥ 10 beats.³
- Long QT syndrome: corrected QT interval (QTc) ≥ 440 ms.⁴
- Bigeminy: pairs of normal and premature complex.⁵
- Trigeminy: a premature complex that follows two normal beats.⁵

The following were considered to be significant Holter findings:^{2,6}

- ventricular tachycardia (VT),
- paroxysmal supraventricular tachycardia (PSVT),
- atrial fibrillation (AF, including paroxysmal atrial fibrillation, PAF),
- atrial flutter,
- atrial tachycardia,
- supraventricular or ventricular ectopy (SVE or VE) occurring in couplets or having a multifocal origin,
- high grade atrioventricular (AV) block, i.e. second degree or third degree,
- sick sinus syndrome (SSS),
- long QT syndrome,
- or significant change in ST segment.

Insignificant cardiac arrhythmia encompassed patients with non-pathological atrial or ventricular ectopy, e.g. sporadic, occasional unifocal ectopy.²

Statistical analysis

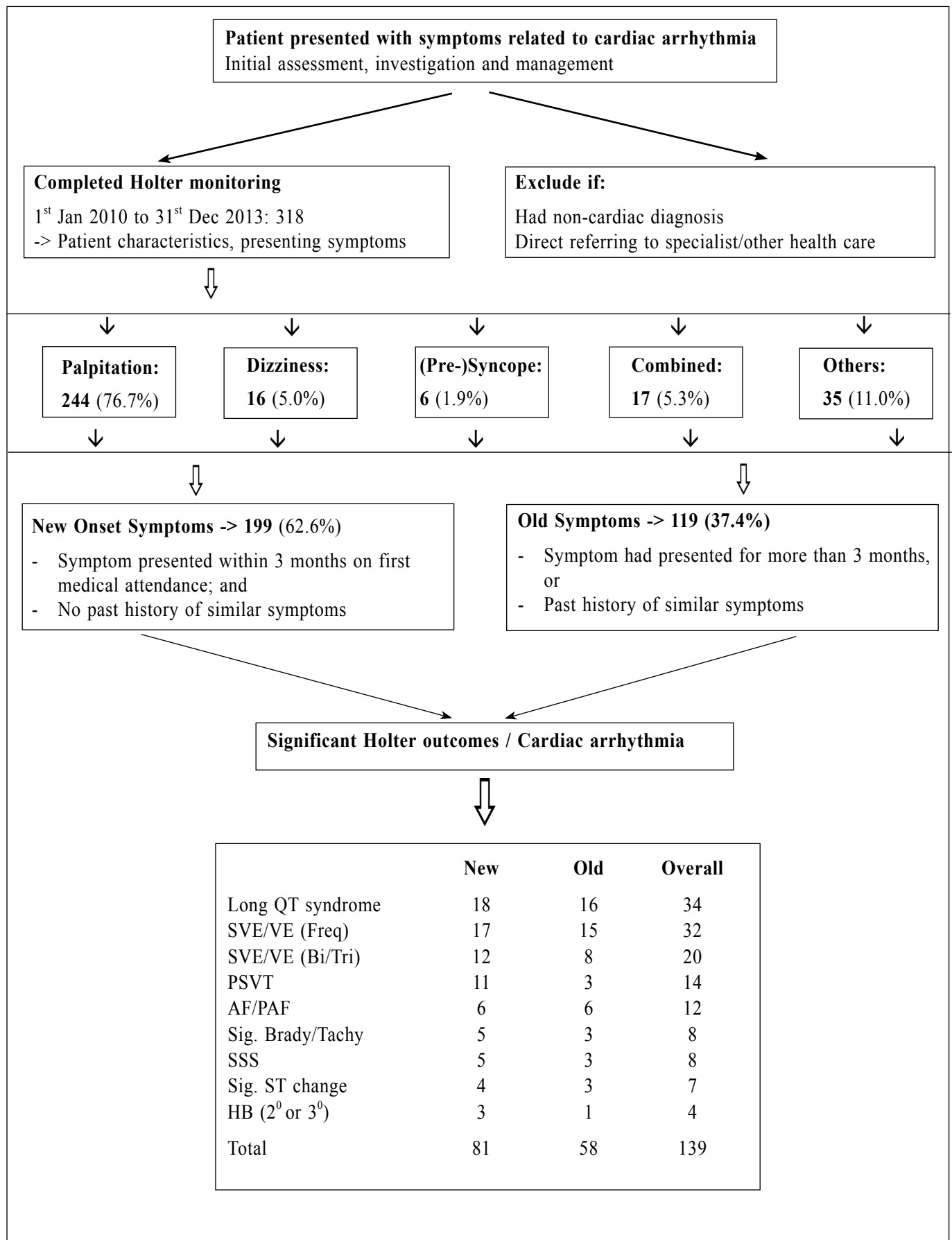
Descriptive statistics including mean, standard deviation, frequency and percentages will be used to summarise the baseline characteristics and outcome measures. Chi-square test and multivariate analysis with regression were used to assess the predictive patient characteristics associated with significant cardiac arrhythmia. All analyses were conducted using Statistical Package for the Social Sciences version 19 (SPSS Inc., United States).

Results

In the period from 1st January 2010 to 31st December 2013, 318 Holter monitoring were performed for 97 male and 221 female patients. Their mean (SD) age were 62.8 (16.7) and 58.3 (14.3) years old respectively. The demographic characteristics of patients are summarised in **Table 1**. 62.6% patients had at least one chronic comorbidity. Patients’ presenting symptoms are summarised in **Table 2**. The majority of patients 244 (76.7%) presented with palpitations. 199 (62.6%) patients presented with new onset symptoms.

139 patients (43.7%) were detected by Holter to have significant cardiac arrhythmia and all of them were referred

Figure 1: Study Flow Chart



to our Department of Medicine for further management. 81 (40.7%) and 58 (48.8%) patients with new and old onset symptoms respectively had significant cardiac arrhythmia (**Table 3**). Among patients with significant cardiac arrhythmias, the majority presented with combined symptoms (70.6%), and a large proportion presented with palpitation (41.0%), or syncope/presyncope/loss of consciousness (50%). (**Table 4**)

The Holter monitoring defined significant cardiac arrhythmia included 34 cases of long QT syndrome, which accounted for 24.3% of all significant Holter outcomes. Other significant findings (**Table 3**) included 32 cases (23.0%) frequent supraventricular or ventricular ectopy, 20 cases (14.4%) supraventricular or ventricular ectopy in bigeminy or trigeminy, and 14 cases (10.1%) of paroxysmal supraventricular tachycardia etc.

The predictive patient characteristics associated with significant Holter outcome or cardiac arrhythmia are

summarised in **Table 1**. Using Chi-Square test, it was found that patients who were aged more than 80 years old, with chronic comorbidity, with hypertension, with ischaemic heart disease, with atrial fibrillation or paroxysmal atrial fibrillation were statistically significant associated with significant cardiac arrhythmia ($p < 0.05$). The odd ratio (OR) of patients aged more than 80 associated with significant Holter outcome was 7.27 (95% CI: 2.01 to 26.29). The OR(95% CI) of hypertensive patients and ischaemic heart disease patients associated with significant Holter outcome was 1.83 (1.17 to 2.88) and 10.87 (1.34 to 87.98) respectively.

Multivariate analyses by stepwise backward regression procedure were applied to determine the patient characteristics associated with significant Holter outcome. The factors including age, concomitant of chronic disease, hypertension, or ischaemic heart disease and patient's presenting symptoms including dizziness or combined were included for analysis. The final fitted model revealed that patient age and combined presenting symptoms were

Table 1: Patient demographics and predictive characteristics with significant Holter outcomes:

	Frequency	Sig. Outcome	X ² test, p-value	OR	95% CI
Study population:	318	139 (43.7%)			
Gender:					
Female	221	94 (42.5%)	-	1	-
Male	97	45 (46.4%)	0.523	1.17	0.72 – 1.89
Age distribution:					
<= 40	34	13 (38.2%)	-	1	-
41 – 60	131	38 (29.0%)	0.300	0.66	0.30 – 1.45
61 – 80	131	70 (53.4%)	0.114	1.85	0.86 – 4.01
>80	22	18 (81.8%)	0.001	7.27	2.01 – 26.29
No chronic comorbidity:	119	43 (36.1%)	-	1	-
Chronic comorbidity:	199	96 (48.2%)	0.035	1.65	1.03 – 2.63
Hypertension	(136)	71 (52.2%)	0.008	1.83	1.17 – 2.88
Diabetes mellitus	(37)	19 (51.4%)	0.319	1.42	0.71 – 2.81
IFG /IGT	(20)	12 (60.0%)	0.129	2.02	0.80 – 5.09
Dyslipidaemia	(55)	27 (49.1%)	0.376	1.30	0.73 – 2.33
Ischaemia heart disease	(9)	8 (88.9%)	0.006	10.87	1.34 – 87.98
CVA/TIA	(8)	6 (75.0%)	0.071	3.99	0.79 – 20.09
AF/PAF	(10)	9 (90.0%)	0.003	12.32	1.54 – 98.47

IFG /IGT: Impaired fasting glucose /Impaired glucose tolerance;

CVA/TIA: Cerebral vascular accident/transient ischaemic attack;

AF/PAF: Atrial fibrillation / paroxysmal atrial fibrillation;

X² test: Chi-Square test;

Note: patients may have more than one comorbidity.

significantly associated with significant Holter outcomes. (Table 5)

Discussions

FM & GOPD of Kwong Wah Hospital is a primary care clinic affiliated to a regional hospital. Patients can register as walk-in basis consulting for their cardiac related symptoms. The attending primary care doctor can book Holter monitoring directly at Cardiac Unit of the hospital. The overall diagnostic yield of Holter monitoring reported in the literature was 1-20%.^{7,8,9} However, it strongly depended on the population studied.¹⁰ The number of significant Holter findings in our series was 43.7%, which was remarkably higher than local and international non-primary care studies.^{3,6}

Palpitation

Palpitations are non-specific and represent one of the commonest symptoms in general medical settings, reported by as many as 16% of patients.¹¹ Establishing the cause of palpitation may be difficult because historical clues are not always accurate.¹² Discerning cardiac from non-cardiac causes is important, given the potential risk of sudden death in those with an underlying cardiac aetiology. Holter monitor is usually used to determine the cause of palpitation; however, the yield of this instrument is low especially in patients whose symptoms occur infrequently, i.e. 2-20% of the Holter outcomes are significant.^{2,13-16}

Syncope and Presyncope

Syncope and presyncope presenting in the community can be a challenging task in diagnosis.¹⁷ Patients with syncope undergo extensive and repeated investigations without a diagnosis. Holter monitoring are done for almost all patients with syncope, despite the fact that, in several studies, only 2% to 4% of tests results in symptom-rhythm correlation.^{9,18,19} Arrhythmia are the most common cardiac

cause of syncope, and include bradyarrhythmias (such as sinus node dysfunction), atrioventricular conduction disorders, atrial fibrillation with slow or rapid ventricular response, and ventricular tachyarrhythmias.^{9,20,21}

In our study, only 6 cases (1.9%) of Holter recording were indicated for patients with syncope. The proportion is very low as compared to a hospital or emergency department setting. It is likely that those patients presented with history of syncope or presyncope have already been referred early by the primary care doctor to a specialist for further workup and treatment.

Dizziness

Dizziness is very common in the primary care and also is one of the most common symptoms referred to neurology and otolaryngology practices.^{22,23} In the review of 10 studies, dizziness was attributed to a cardiac arrhythmia in 1.5% of study population.²³ In our study, 16 cases (5.0% of total) of Holter monitoring were indicated for dizziness. 4 patients (25%) had significant cardiac arrhythmia. As the number of cases was too small, it was difficult in making comparison with other studies.

Limitations

Patients with symptoms related to cardiac arrhythmia are not all included for Holter monitoring, and secondly, arrangement for Holter monitoring was ordered by all doctors in the department, therefore a patient selection bias cannot be excluded. This study involves patients from one primary care clinic only, it is uncertain whether this study group represent all patient population of primary care setting or not.

The outcome measure of our study focus on yield of Holter monitoring, the correlation between symptoms and diagnosis was not investigated. It is uncertain whether

Table 2: Presenting symptoms of patients indicated for Holter monitoring

Symptoms	Frequency of cases	Percentage
1. Palpitation	244	76.7%
2. Dizziness	16	5.0%
3. Syncope / Presyncope / Loss of consciousness	6	1.9%
4. Combines symptoms	17	5.3%
5. Others, such as chest pain, incidental abnormal ECG findings, Follow up assessment etc	35	11.0%
Total	318	100%

Table 3: Frequency of significant cardiac arrhythmia stratified by new or old resenting symptoms

	Frequency of significant Holter findings for				
	New Onset (199)	old symptom (119)	Overall (318)	% of overall	% of significant
Long QT syndrome	18	16	34	10.7%	24.3%
SVE/VE (Freq)	17	15	32	10.1%	23.0%
SVE/VE (Bi/Tri)	12	8	20	6.3%	14.4%
PSVT	11	3	14	4.4%	10.1%
AF/PAF	6	6	12	3.8%	8.6%
Sig. Brady/Tachy	5	3	8	2.5%	5.8%
SSS	5	3	8	2.5%	5.8%
Sig. ST change	4	3	7	2.2%	5.0
HB (2 ⁰ or 3 ⁰)	3	1	4	1.2%	2.9%
Total	81	58	139	43.7%	100%
Significant, %	40.7%	48.7%	43.7%		

New onset symptom(s): presented less than 3 months at first medical consultation and there was no similar symptoms in the past.

SVE/VE (Freq): supraventricular ectopy/ventricular ectopy (Frequent);

SVE/VE (Bi/Tri): supraventricular ectopy/ventricular ectopy (Bigeminy/Trigeminy);

AF/PAF: atrial fibrillation/Paroxysmal atrial fibrillation;

Sig. Brad/Tachy: significant bradycardia/trachycardia;

SSS: sick sinus syndrome;

Sig. ST change: significant ST segment change;

HB (2⁰ or 3⁰): Heart block (Second or third degree).

Table 4: Frequency of significant cardiac arrhythmia stratified by presenting symptoms

	Frequency of significant Holter findings for					
	Palpitation (244)	Dizziness (16)	Syncope (6)	Combined (17)	Others (35)	Overall (318)
Long QT syndrome	25	0	1	4	4	34
SVE/VE (Freq)	23	1	1	2	5	32
SVE/VE (Bi/Tri)	14	1	0	0	5	20
PSVT	11	0	0	2	1	14
AF/PAF	10	0	0	2	0	12
Sig. Brady/Tachy	5	1	0	0	2	8
SSS	5	0	1	1	1	8
Sig. ST change	5	0	0	1	1	7
HB (20 or 30)	2	1	0	0	1	4
Total	100	4	3	12	20	139
Significant, %	41.0%	25%	50%	70.6%	57.1%	43.7%

SVE/VE (Freq): supraventricular ectopy/ventricular ectopy (Frequent);

SVE/VE (Bi/Tri): supraventricular ectopy/ventricular ectopy (Bigeminy/Trigeminy);

AF/PAF: atrial fibrillation/Paroxysmal atrial fibrillation;

Sig. Brad/Tachy: significant bradycardia/trachycardia;

SSS: sick sinus syndrome;

Sig. ST change: significant ST segment change;

HB (2⁰ or 3⁰): Heart block (Second or third degree).

Table 5: Factors associated with significant Holter outcomes (final fitted model)

Variable	Sig	OR	95% CI
Age	0.000	1.03	1.02 – 1.05
Combined symptoms	0.021	3.73	1.22 – 11.39

Key messages

1. Holter is a portable recorder that registers the ECG continuously during a prolonged period and allows diagnosis of transient disturbances of cardiac rhythm and conduction.
2. Palpitation was the commonest presenting symptoms for which Holter was arranged in a primary care clinic of Hong Kong.
3. Significant cardiac abnormalities were detected in 43.7% of Holter monitoring which required referral to specialist for further management.
4. Advanced patient and combined presenting symptoms correlated with significant cardiac arrhythmia.

the Holter diagnosis has causal relationship with patient's presenting symptoms or not.

Conclusions

In this study, palpitation was the commonest presenting symptoms for which holter was arranged. Significant cardiac abnormalities were detected in 43.7% of Holter monitoring which required referral to specialist for further management. Advanced patient age and patient presented with combined symptoms correlated with significant cardiac arrhythmia. ■

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INFORMATION FOR AUTHORS

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The aim of the journal is to promote the development of quality family medicine/general practice in Hong Kong and the region, by publishing editorials, original articles, update reviews, letters to the editor, and self-assessment materials.

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Papers submitted for publication should fulfil the following criteria:-

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- d. List of full names (both in English with Western name(s) first, then Chinese names hyphenated or initials, and then family name and if applicable in Chinese characters) with a maximum of six authors, giving basic and higher qualifications and current appointment of each.
- e. A maximum of four qualifications will be included for each author. All qualifications should be identified and include name of awarding body or institution.
- f. The principle author should give his or her address for correspondence.
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They should be set out in a standard format with an Introduction giving background and objectives; Method giving details of subjects, study design and measurements, interventions, outcomes, and statistical methods; Results; Discussion; Conclusions; References; and Acknowledgements.

Papers should be between 1,500 and 3,500 words in length.

Graphs and tables should be limited to six and references to 40.

A structured summary of up to 200 words should be set out under the headings of Objective, Design, Subjects, Main Outcome Measures, Results, and Conclusions. Up to five keywords should be given to aid index cross-reference.

Educational Update Articles

They should be relevant to the Family Physician who is trying to keep up to date with recent advances in primary care.

Articles should be between 1,500 and 3,500 words, and structured with a summary, introduction, and main body of article with appropriate subheadings.

Graphs and tables should be limited to six and references to 40.

Discussion Papers

Papers on topics and issues of relevance to primary care are welcome. They should present a hypothesis or problem, and offer a way of solving it or a solution for discussion. They should be between 1,500 to 3,500 words, and structured with a summary, introduction, and main body of article with appropriate subheadings.

Case Reports

These articles should be up to 1,500 words reporting cases of particular interest, difficult management, unusual presentations or outcomes, carrying a useful message to other doctors; with no more than one table or illustration and five references.

Letters to the Editor

Letters should be up to 500 words with no more than one table or illustration and five references.

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Review on skills in undertaking continuing professional education among primary care physicians

Man-kay Poon 潘文基, Tai-pong Lam 林大邦

Summary

Medical knowledge and technologies have made advances more rapidly than ever before. The public is also requesting accountability and transparency of healthcare services. Primary care physicians (PCPs) play the roles of promoting public health, preventing diseases and offering early treatment of chronic diseases to decrease the healthcare burden. Therefore, they need to respond to public's expectations and the changing needs of healthcare services by undertaking continuing professional education. In this article, we discuss the skills which PCPs should acquire in undertaking continuing professional education. The literature is searched for skills in undertaking continuing professional education among PCPs and a review of the skills was made. Critical thinking, information literacy and knowledge management are essential skills. Traditional undergraduate medical curriculum emphasises on didactic teacher-centred learning. Reformed medical curriculum is focused on training students the skills to prepare them to pursue continuing professional education in their working lives. PCPs who acquire the skills can learn independently addressing their learning needs in their workplace. PCPs should acquire skills in undertaking continuing professional education to maintain and improve their clinical competency.

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摘要

現今醫療知識和技術發展突飛猛進，速度比以往任何時候都快。公眾要求醫療機構的服務要有問責性和透明度。基層醫生的角色主要是促進公共衛生及健康，預防疾病，為患有慢性疾病的病人提供早期治療，以減少社會的醫療負擔。因此，他們需要通過在職的持續專業學習以改善服務，滿足公眾的期望和不斷變化的醫療服務需求。本文是從學術文獻中檢閱基層醫生應掌握持續專業學習的資料，從而概述他們應掌握持續專業學習的技能。持續專業學習是一種在職的自我主導的終身學習。基層醫生應該有批判性思維，理解信息和知識管理的能力。傳統的本科醫學課程強調老師為中心說教式的學習。改革後的本科醫學課程，注重培養醫科學生主導的終身學習技能，以適應未來工作的需要。基層醫生獲得持續專業學習的能力，以便他們可以在工作的場所獨立解決工作的挑戰。基層醫生應該掌握持續專業學習的技能，以保持並提高他們治病的能力。

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Introduction

In many big-income countries and regions including Hong Kong, ageing populations and high prevalence of chronic illness have resulted in higher healthcare expenditures. Primary care physicians (PCPs), who provide first contact, convenient, comprehensive, timely and continuous care to the public, have a role in promoting public health and offering early management to patients with chronic diseases to decrease the healthcare burden.¹ Knowledgeable and skilful PCPs are expected not only to improve practice outcomes, but also to contribute to healthcare system sustainability.

Much medical information is available on the Internet, resulting in the general public being able to request for more accountability and transparency of healthcare services. With rapid advances in medicine

and technology, PCPs must undertake life-long learning after their medical graduation to maintain and improve clinical competence.² The traditional continuing medical education (CME) lectures are not able to address all the specific learning needs of PCPs.³ This article is focused on the skills which PCPs should attain to pursue continuing professional education. In this article, continuing professional education refers to any clinical practice relevant learning activities which PCPs undertake.

Methods

Cambridge Dictionaries Online describes skill as an ability to do an activity or job well, especially because you have practised it. Good outcome brought by the learned capacity is emphasised in the definition. In the literature review, we focus on the medical doctors' learned capacities which bring forth the solutions of clinical problems in the problem-solving process.

A literature search was conducted using electronic databases through MEDLINE, CINAHL Plus, Academic Search Premier and Google Scholar. We used the search terms "continuing medical education", "continuing professional development", "medical curriculum", "physicians", "primary care physicians", "general practitioners", "general practice", "family medicine", and "clinical competence" combined with the terms "life-long learning", "self-directed learning", "adult learning", "learning in workplace", and "skills".

We used Google Scholar to search for the relevant articles, book chapters and documents to broaden our database. We selected the materials relevant to PCPs fulfilling the following criteria: "learning skills in CME and Continuing Professional Development", "learning skills in self-directed learning and workplace learning", and "learning skills trained in traditional and reformed undergraduate medical curricula".

Articles about skills in self-directed learning and workplace learning in general were also considered because majority of studies on learning skills were focused on medical students, interns and specialists who perform operative procedures. No restriction was applied on the study design. We excluded articles on learning skills for operative procedures, and those targeting medical undergraduates and interns.

Only studies published in English after 1989 were included.

Results

Thirty English articles, book chapters and documents were accepted using the key words and combinations of them. (**Appendix 1 and 2**)

Patient management is directly related to clinical context. As a "bottom-up approach", clinical problem guides the PCPs to acquire what they need to improve their performance in practice.³ CME refers to life-long medical education which fulfils the criteria of accreditation institutes. PCPs may solve their clinical problems by participating in the available content relevant CME activities. With the rapid advances of medical knowledge and computer technology, PCPs need to adapt for the changing practising environment. Otherwise, their medical care services are deemed to be out-dated.⁴ The format of continuing professional education gradually evolves from CME into a practice-based self-directed approach in which new learning skills are needed.

Observations

1) *Skills in practice-based learning*

Competence in both medical knowledge and clinical skills are essential for PCPs to enhance practice outcomes. The gap between clinical knowledge and actual practice can be overcome by practice-based learning. This is because PCPs encounter context specific clinical problems in daily clinical practice and need to solve these problems to achieve the clinical outcomes at the point of care.⁵ In practice-based learning format, PCPs do not need to await the relevant CME activities to acquire the knowledge to solve their clinical problems and their learning is directly addressing their clinical problems. Therefore, practice-based life-long learning addresses and responds to the clinical problems and the changing needs of patients in clinical practice.

2) *Skills in self-directed learning*

To maintain high clinical competence, PCPs have the responsibility to determine their clinical needs.⁶ Clinical problems drive PCPs to undertake practice-based life-long continuing professional

education in self-directed approach, rather than to follow the pre-designed CME programmes. In self-directed approach, PCPs have the initiatives and responsibility in the whole learning process, from actively identifying learning needs, setting learning objectives, adopting appropriate learning methods, achieving and evaluating the learning outcomes.⁷ In this approach, three elements which are related to the motivation and direction of learning are context, motivation and universality of learning.⁸

Firstly, the context is the learning environment which determines what PCPs will learn and allow them to explore their needs and curiosity. In a facilitating learning context, self-directed learning is more effective to help PCPs to achieve learning outcomes, compared with learning in an environment which they are required to comply with institutional regulations. The attitudes and work arrangements of their working practices are important factors to determine their self-directed learning in workplace. For instance, forming study group in workplace can facilitate self-directed learning. In this self-directed learning process, a sense of personal responsibility is developed and enhanced.⁹

Secondly, motivation of self-directed learning among PCPs is determined by their personal values, attitudes and abilities which shape the learning in a continuum of different degrees among PCPs. It is their own choice what they should learn in their workplace.

Thirdly, in the learning process, they will acquire the ability to create meaning, and reflect and integrate what they have learned to solve their problems. This learning ability is not only restricted to one specific discipline, but also can be generalised to other disciplines. This capacity is stated as the universality of the acquired learning skill. In return, their competent problem solving capacity will facilitate them to participate in more self-directed learning in the future.⁸

Since continuing professional education is shaped by personal factors, social practices, cultural factors, regulations of the working practices and societal expectations, no single approach of continuing professional education matches all PCPs' learning needs.⁹ Self-directed learning is so highly flexible that PCPs determine their own learning foci and strategies, and independently manage the learning activities under their own control.¹⁰ However, self-reflection on PCP's

self-assessment of their clinical needs is shown to be inaccurate.¹¹ The low achievers over-estimate their abilities while the high achievers under-evaluate theirs. Accurate self-assessment of their medical knowledge and clinical capacity can be improved over time with the help of evaluation from their peers and mentors. This capacity helps PCPs to recognise their clinical problems.¹¹ To engage in efficient self-directed learning after identifying the clinical problems, PCPs should be able to formulate appropriate clinical question which consists of population, intervention, comparison and outcome, and the level of evidence of the collected information.¹² Acquired the capacity, PCPs could be able to identify the required information in response to the public demands and expectations.^{9,11}

3) *Skills in information literacy and knowledge management*

Obtaining the ability to identify clinical problems and formulate the appropriate clinical questions, PCPs should acquire information literacy which is the capacity to locate, evaluate and analyse the relevant information and transfer the knowledge into their practice.¹³ Computer literacy, the ability of using computer in information management is an indispensable part of information literacy because computer is a tool for PCPs to access the required information on the Internet anytime and anywhere. PCPs should be able to locate their required details in loads of irrelevant information on the Internet.¹⁴ They can seek information on specific clinical problems and newly advances on medical knowledge through the Internet websites, such as Medscape, Skyscape and National Institutes of Health (NIH). Although the learning format of online learning is different from the traditional one, online CME learning was shown to be as effective as traditional CME format in terms of knowledge transfer.¹⁵ Further, PCPs who participated in online learning were shown to be able to improve their medical knowledge and practice pattern.^{10,16} Knowledge management is another imperative ability of competent PCPs in self-directed learning.¹³ Through the application of the information to their clinical problems, they gain experiential knowledge which allows them to put the new information into context to solve their problems. They are able to integrate and generate new knowledge in the process, rather than just recalling the relevant information.

4) *Skills in critical thinking and problem solving training*

Every day, PCPs are required to solve clinical problems by their knowledge and skills in their practices. They pursue continuing professional education which is different from the formal medical education in medical schools. The former one is practice-based life-long learning undertaken in workplace while the latter one is learning between teachers and students in classroom in their medical study period.¹⁷ The factual medical knowledge which they acquired in medical schools is no longer enough for them.¹⁸ In practice, they need to identify what they should know and prioritise their own learning needs. Therefore, they should be not only competent in information literacy and knowledge management but also problem solving capacity which requires them to have the abilities of critical thinking, clinical reasoning and decision making in undertaking continuing professional education.^{19,20} Critical thinking is a reflective learning process which enables PCPs to keep open-minded and compare, analyse, judge and challenge the assumptions, conduct inductive reasoning, and make rational and logical deduction.²¹ At the same time, they are able to tolerate uncertainties and refuse to accept premature conclusion.²⁰

In 1993, "Tomorrow's Doctor", a document published by the General Medical Council criticised that the traditional undergraduate medical curriculum which emphasised on memorisation and regurgitation of medical information was unable to fulfil the expected role of PCPs in providing holistic and compassionate care to patients.²² Since problem-based learning was shown to be effective to promote critical thinking, new curriculum based on problem-based approach was designed and gradually introduced to medical schools.²³ The curriculum is emphasised on enhancing the medical graduates' critical mind and self-directed learning ability to pursue self-directed continuing professional education to face the challenges in their future working lives.²⁴

The learning outcomes of medical graduates trained in the new medical curriculum were evaluated and it was revealed that they had improved problem solving skills and self-directed learning ability, compared with graduates trained under traditional medical curriculum.²⁵ The new medical curriculum can train the graduates to attain critical thinking and self-directed learning

ability which are shown to be sustainable.^{26,27} The medical graduates trained in new curriculum also show better performance in general competence skills including communication skill, scientific attitudes and working in a team and improvement in social ability.^{27, 28} Subjective assessment of medical knowledge among the graduates of the reformed curriculum was lower than that of the traditional ones. However, objective assessment of medical knowledge of the graduates trained in reformed curriculum revealed that their knowledge was comparable to those trained in traditional curriculum.²⁹ The younger PCPs received the self-directed problem-based learning and critical thinking training in new curriculum while the senior PCPs who were trained in traditional curriculum did not receive the training. The behaviours of knowledge seeking and clinical problem solving capacity were demonstrated to be different between these two groups of PCPs, echoing what they were taught in their medical education programme.²⁹ Senior PCPs need to acquire these skills in recognising their education needs, constructing the clinical problems and finding out the solutions by themselves. Besides problem solving skills and self-directed learning ability, the computer literacy of the senior physicians were also identified to be less competent than the junior ones.¹⁴

Another review showed that the PCPs trained under a problem-based medical curriculum were more capable to cope with uncertainties and gave more consideration to ethical and legal aspects in practice.²⁰ They were also found that in their daily practice they improved their self-directed life-long learning ability and tended to search for their required information on the Internet in which rich medical information is readily available. The new medical curriculum was shown to be able to prepare the graduates to pursue self-directed continuing professional education in their daily practice while graduates from traditional curriculum have much room to improve in this area.

Conclusions

The learning needs of PCPs are highly individualised and context specific. No single approach of learning is appropriate to all PCPs. Practice-based self-directed learning is flexible and address the clinical problems encountered in practice. To maintain and improve clinical competence, PCPs need strong

Key messages

1. Continuing professional education in the form of practice-based self-directed life-long learning is essential for PCPs to maintain and improve their clinical competence.
2. PCPs need strong skills in undertaking practice-based self-directed life-long learning.
3. Critical thinking capacity, clinical reasoning, decision making and scientific attitudes are pre-requisites for PCPs to undertake continuing professional education.
4. PCPs should be competent in information literacy, especially computer literacy, and knowledge management to solve their clinical problems at the point of care.

skills in critical thinking, information literacy and knowledge management to undertake the practice-based self-directed life-long learning. Although PCPs taught under traditional undergraduate medical curriculum were not trained in the problem-solving and self-directed learning skills, patients request their medical services to be up-to-date and evidence-based. The PCPs who are not proficient in these skills are better to take effort to enhance their ability to meet the daily challenges. ■

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Appendix 1: Flowchart of retrieval and selection of articles, book chapters and documents

The search terms "continuing medical education," "continuing professional development," "medical curriculum," "physicians," "primary care physicians," "general practitioners," "general practice," "family medicine," "clinical competence" combined with "life-long learning," "self-directed learning," "adult learning," "learning in workplace," and "skills."

Databases: MEDLINE, CINAHL Plus, Academic Search Premier
386 full text articles were identified.

Overlapping entries and articles not relevant to PCPs were removed.
(including articles on learning skills of medical undergraduates, interns and specialists who perform operation procedures)
Relevant articles and book chapters identified in Google Scholar were added.
29 articles, book chapters and documents were accepted.

Appendix 2: Tables summarising the final 29 articles, book chapters and documents

Introduction: The background of the paper

1. Starfield B, Shi L, Macinko J. Contribution of Primary Care to Health Systems and Health. *Milbank Q* 2005; 83:457-502.
2. Eva K W, Regehr G. Knowing when to look it up: A new conception of self-assessment ability. *Academic Medicine* 2007; 82(10),S81-S84.
3. Leist J C, Pennington FC. Practice-Based Learning and Improvement: An Introduction. *J Contin Edu Health Prof* 2003, 23, S4.

These three articles provide the background information why PCPs need to acquire skills in undertaking continuing professional education.

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1. Fox RD. Revisiting “Discrepancy analysis in continuing medical education: A conceptual model”. *J Contin Educ Health Prof* 2011; 31:71-76.

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2. Coldeway N A. Self-directed Learning. In: Rosof AB, Felch WC, editors. *Continuing Medical Education: A Primer*. New York: Praeger Publishers, 1992. 179-190.
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4. Creatsas G, Mastorakos G. Continuing education and clinical research for the training of obstetricians and gynecologists in Europe. *Ann N Y Acad Sci* 2010;1205:1-4.
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Skills in information literacy and knowledge management

1. Parboosingh JT. Physician communities of practice: where learning and practice are inseparable. *J Contin Educ Health Prof* 2002; 22:230-236.
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4. Loyens SMM, Magda J, Rikers RMJP. Self-directed learning in problem-based learning and its relationships with self-regulated learning. *Educ Psychol Rev* 2008; 20:411-427.
5. Fordis M, King JE, Ballantyne CM, et al. Comparison of the instructional efficacy of Internet-based CME with live interactive CME workshops: a randomized controlled trial. *JAMA* 2005, 294(9), 1043-1051.

These five articles mention information literacy, including computer literacy, and knowledge management in locating and using the required information.

Skills in critical thinking and problem solving training

1. Teunissen PW, Wilkinson TJ. Learning and teaching in workplaces. In: Dornan T, Mann K, Scherpbier A, Spencer J, editors. *Medical Education: Theory and Practice*. Edinburgh: Churchill Livingstone Elsevier, 2011.193-209.
2. Chanter C. The role and education of doctors in the delivery of health care. *Lancet* 1999; 353:1178-1181.
3. Campbell C, Silver I, Sherbino J, et al. Competency-based continuing professional development. *Med Teach* 2010; 32:657-662.
4. Hendricson WD, Andrieu SC, Chadwick DG, et al. Educational strategies associated with development of problem-solving, critical thinking, and self-directed learning. *J Dent Educ* 2006; 70:925.
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These articles, book chapter and document describe critical thinking and problem solving training. Graduates taught in the traditional undergraduate medical curriculum were not trained to acquire these skills.

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What's on the web for family physicians – Metabolic syndrome and obesity

Alfred KY Tang 鄧權恩, Man-wo Tsang 曾文和

Obesity – Obesitext

<http://www.endotext.org/section/obesity/>

At Endotext.org (<http://www.endotext.org/>), all the educational materials on endocrine diseases are written by physicians expert in the field, and targeted to physicians worldwide. The section on Obesity (Obesitext) has chapters covering obesity, its treatment and prevention, and metabolic syndrome. Educational materials on influencing factors, clinical pathophysiology and health implications of obesity are available. Treatment approaches of obesity are outlined, including pharmacological, exercise, dietary, behavioral modification and surgical treatment. A simple registration process at the website is required for access of information which is free of charge.

Obesity and the Metabolic Syndrome

http://www.merckmanuals.com/professional/nutritional_disorders/obesity_and_the_metabolic_syndrome/obesity.html

The professional edition of the Merck Manual Online have sections dedicated to Obesity, Bariatric Surgery and Metabolic Syndrome. There are chapters covering prevalence, aetiology and complications of obesity. For metabolic syndrome, there are discussions on definitions, diagnostic criteria and clinical implications. For bariatric surgery, its indications, procedures and complications are outlined.

Alfred KY Tang, MBBS (HK), MFM (Monash)

Family Physician in Private Practice

Man-wo Tsang, MBBS (HK), FHKCP, FHKAM (Medicine), FRCP (L.E.G.)

Endocrinologist in Private Practice

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E-mail: alfredtang@hkma.org

Guidelines on Overweight and Obesity: Electronic Textbook

http://www.nhlbi.nih.gov/health-pro/guidelines/current/obesity-guidelines/e_textbook/intro/12.htm

This online textbook allows easy access to information contained in "The Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report," prepared by the National Heart, Lung, and Blood Institute (NHLBI) in cooperation with the National Institute of Diabetes and Digestive and Kidney Diseases. Topics addressed in the Clinical Guidelines include the health risks associated with obesity; and assessment, treatment, and management of obese patients. The complete text can be downloaded in PDF format at <http://www.nhlbi.nih.gov/sites/www.nhlbi.nih.gov/files/obesity-evidence-review.pdf>. The objective of the publication is to evaluate and summarise currently available information on assessment and treatment of obesity, and then to provide evidence-based guidelines for physicians for the evaluation and treatment of obesity. It also helps to identify areas for future research.

Obesity Action Coalition (OAC)

<http://www.obesityaction.org/>

The focus of OAC is to raise awareness and improve access of educational materials on prevention and treatment of obesity, thus providing evidence-based education on obesity and its treatments. It also helps to eliminate weight discrimination, aggregate the strength of voice on obesity and its impact on health and offer community support for the individual affected. The Obesity Action Alert E-newsletter

(<http://www.obesityaction.org/educational-resources/obesity-action-alert>) is a free monthly electronic newsletter. This e-newsletter features current obesity news in addition to news about the OAC. In the section on Education Resources, there is a library of articles ranging from childhood obesity, medically managed weight loss, bariatric surgery to many other obesity related articles.

International Diabetes Federation (IDF)

<http://www.idf.org/metabolic-syndrome>

The metabolic syndrome is a cluster of heart attack risk factors: diabetes and prediabetes, abdominal obesity, high cholesterol and high blood pressure. IDF believes that it is driving the twin global epidemics of type 2 diabetes and cardiovascular diseases. It would be more important to identify those individuals with metabolic syndrome early, so that lifestyle interventions and treatment may prevent the development of diabetes and/or cardiovascular disease. IDF has then launched a new definition to identify children and adolescents at increased risk of developing type 2 diabetes and cardiovascular disease in later life. The definition has been published in *The Lancet* and is also available as a booklet, downloadable at http://www.idf.org/webdata/docs/MetS_def_update2006.pdf. Metabolic syndrome and diabetes are in fact way ahead of HIV/AIDS in terms of morbidity and mortality, yet, the problem is not well recognised.

The Controversial Question of Metabolic Syndrome

<http://www.ajmc.com/publications/evidence-based-diabetes-management/2013/2013-1-vol19-sp2/the-controversial-question-of-metabolic-syndrome>

The increasing prevalence of diabetes and cardiovascular disease (CVD) alerts the medical community not only to treat but to better identify people at risk for these diseases. However, different organisations have different criteria for metabolic syndrome. Even the concept of metabolic syndrome is somewhat controversial. Many believe that insulin resistance is strongly associated with obesity. On the other hand, some believe that insulin resistance contributes to the development of the risk factors but is not the underlying cause. Identifying a cluster of predictive risk factors would enable healthcare providers to identify and treat patients with metabolic syndrome, thus reducing the risk for a progression to diabetes, CVD, or both.

Diabetology & Metabolic Syndrome

<http://link.springer.com/journal/13098>

Diabetology & Metabolic Syndrome is an open access, peer-reviewed journal published on behalf of the Brazilian Diabetes Society. It encompasses different aspects of the pathophysiology of diabetes and metabolic syndrome. The journal aims to offer an online forum, for exchange of new insights and knowledge on the subject, with the ultimate aim of stimulating and setting directions for further research in the field. ■

This lady presented with acute onset of painful lesion on her leg.

King-man Ho 何景文

Readers are invited to participate in the Clinical Quiz. A prize draw, sponsored by Pfizer Corporation Hong Kong Limited, will be undertaken among the successful entries. For entry into the draw, simply answer the question, fill in the reply slip and return it to the College by 18 February 2015. Each reader is allowed to submit one entry only. The name of the winner and the answer will be published in the March 2015 issue.

Clinical history:

This lady presented with acute onset of painful lesion on her leg. Apart from the skin lesion on her leg, this lady was otherwise well.



What was the clinical diagnosis?

- A. Ecthyma
- B. Insect bite
- C. Vasculitis
- D. Pseudomonas infection

The Hong Kong Practitioner Clinical Quiz – December / 2014

Answer :

Name : _____

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Please send your answer to :- **HKCFP**
Room 803-4, 8/F, HKAM Jockey Club Building, 99 Wong Chuk Hang Road, Aberdeen, Hong Kong.

The slide and the question were prepared by:
Dr King-man Ho, FRCP (Glasg, Edin), MRCP (UK), FHKCP, FHKAM (Medicine)
Consultant Dermatologist-in-Charge,
Social Hygiene Service, PHSB, CHP, DH

Answer to last month's Clinical Quiz



Question:

This gentleman has got this rash on his hand for a few years

Answer:

B. Chronic lichenified eczema

The lesion shown in the clinical photo is a vaguely demarcated hyperpigmented plaque with areas of erosions, fissures, and prominent skin creases on the surface. The whole plaque is involved in the inflammatory process.

The typical chronic lichenified eczema lesion is a plaque of thickened skin with accentuated creases i.e. lichenification on the surface. It is induced by repeated rubbing or scratching of that part of skin. Hyperpigmentation is not uncommonly observed in addition to skin thickening. The scales in chronic lichenified eczema in contrast to psoriasis are adherent. Excoriation, fissures, and sometimes vesicles may be seen in those chronic lesions with acute disease flare. The term lichen simplex chronicus is coined to describe a better demarcated plaque of lesion especially when a history of repeated scratching is elicited from history.

The typical lesion of psoriasis is a well-demarcated erythematous plaque with silvery scales on the surface of the plaque. The scales may only be loosely attached and easily fall off from the skin. The scales can easily be scraped away with a wooden spatula revealing tiny spots of contact bleeding underneath. This is called the Auspitz sign. Though the colour is classically described as “salmon

red”, the redness of a psoriatic plaque in Chinese is usually darker than the pinkish hue as in people of Irish/Scottish origin. The plaques may affect any part of the skin. Sites of predilection of the characteristic plaques include the extensor surfaces of the elbows, knees, lower back and scalp. The genitalia and nails may also be affected. The plaques vary in size. A psoriatic plaque may wax and wane, and not uncommonly be aggravated by trauma and irritation. New lesions may be induced at traumatised skin such as surgical scar, or even scratch marks (known as Köbner phenomenon).

Dermatophytosis of the hand is referred as tinea manuum. While the typical presentation of diffuse hyperkeratosis with powdery scales along the palmar creases is well known, it may also present as annular lesions like the typical tinea corporis but on the dorsum of the hands. Infection of only one hand is common and usually occurs in a patient with concomitant tinea pedis. The plaque shown in the clinical photos is not very demarcated and the whole plaque is involved i.e. with no defined active margin and central clearing. There is also accentuation of some of skin creases on the plaque. All these are the clues to speak against the clinical diagnosis of tinea manuum.

Discoid lupus erythematosus (DLE) lesion presents as an inflammatory erythematous patch or plaque at the initial stage. The inflammatory plaque may enlarge with a well-defined, raised, scaly erythematous edge leaving an atrophic, depressed hypopigmented centre. There may be follicular plugging and the typical carpet tack sign may be demonstrated when the adherent thickened scale is removed gently. The sites of predilection include the ear, nose, other areas on the face, and also the scalp. Hypertrophic DLE is a variant of DLE that can present with well demarcated hyperkeratotic plaque. The sites of predilection of hypertrophic DLE include the forearm and face.

As this gentleman has a long history of eczema and eczematous lesions can be found in the other parts of body, further investigation is not required. If only the hands are affected, patch test can be performed in particular when a history suggestive of contact dermatitis is elicited. Skin scraping for wet mount microscopy and fungal culture may be considered if there is only a lesion on the hand and there are tinea infections on the other parts of body. In such a circumstance, the chronic lichenified plaque presentation may be secondary to scratching because of the underlying tinea infection. Skin biopsy with fresh

specimen for histology and immunofluorescent study is required to establish the diagnosis of DLE.

Enhance skin care is essential for the management of all kinds of eczema. General advice on avoidance of skin irritants including soap, hot

 The winner of the September 2014 Clinical Quiz is **Dr Chung Chak Cheong**

water and prolonged immersion in water is recommended. Liberal use of emollient is recommended. Emollient containing 10% urea cream may be tried in lesions with skin thickening. The urea may not only help to retain water in the skin i.e. as humectant, it can also soften the hard and thicken skin. A drawback of urea cream is that it can be irritating when there is any wounding as a result of scratching/fissuring as illustrated in this case. Potent topical steroid is required for symptom control in thicken lichenified lesion as shown.

Hong Kong Primary Care Conference 2015



Stay Caring, Go Excelling in Primary Care



Hong Kong
Primary Care
Conference
The Hong Kong College
of Family Physicians

30-31 May 2015
(Saturday-Sunday)



December
Issue

Hong Kong Primary Care Conference 2015 “Stay Caring, Go Excelling in Primary Care”

30 – 31 May 2015 (Saturday – Sunday)

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Message from the Organizing Committee



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We are delighted to announce the 5th Hong Kong Primary Care Conference, to be held on May 30 and May 31, 2015 with the theme “Stay Caring, Go Excelling in Primary Care”.

As this annual meaningful event is now in its 5th year, this theme will highlight the achievements of primary care and family medicine in Hong Kong with the advent of primary care reforms as well as what we strive to excel and meet the challenges ahead. As caring family physicians at the forefront of primary care facing a multitude of complex medical conditions, how can we sustain, advocate and advance our discipline for the health and well-being of our patients and community?

This conference serves as an exciting platform for bringing together experts, clinicians and healthcare professionals in addressing present and future challenges in primary care. It will also showcase exciting blends of plenary sessions, workshops, seminars, discussion forum, symposia, poster and oral presentations. We will continue our well-received competitions in stimulating and engaging our family physicians and healthcare professionals towards evidence-based research, academic and clinical exchanges. All of these have become a hallmark in our annual conference.

We warmly invite you all to submit abstracts for Free Paper - Oral and Poster Presentations, to participate in our Full Paper Competition, Novice Research Competition and Clinical Case Competition and most importantly, to register for the conference. Instructions and rules for submission of the aforesaid presentations and competitions will be available soon at our College website.

More details about the conference will follow soon in Hong Kong Practitioner, FP Links and our College website. We are looking forward to your participation and contribution.

A handwritten signature in black ink, appearing to read 'Lorna NG', with a large, elegant flourish at the end.

Dr. Lorna NG
Chairman, Organizing Committee
Hong Kong Primary Care Conference 2015

Hong Kong Primary Care Conference 2015 “Stay Caring, Go Excelling in Primary Care”

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- Organizer:** The Hong Kong College of Family Physicians
- Conference Secretariat:** Registration:
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Scientific and QA Accreditation:
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Our fourth Chinese Book, 《家庭醫生一百篇》 is born!

《家庭醫生一百篇》is the assemble and selection of the articles in the weekly column of Hong Kong Economic Journal (信報) in the past few years, contributed by 22 members of the College. It is a very good tool for public education, letting the public to recognize the importance of family physicians for their personal health, and understand the key role of FP in the health care system.

The book also serves as a good platform for all the members to share our stories to one another, and experience our whole-heartedness to serve our patients and the community all together!

名家推薦：

書中不少文章闡述家庭醫生在協助個人保持身心健康所擔當的角色，涉及的課題包括預防和及早識別疾病、情緒管理、維繫婚姻、家庭和人際關係等。這些文章清楚解釋基層醫療的重要性，當中不少故事似曾相識，令人細味。

_____ 高永文醫生

我很欣喜看見香港家庭醫學學院編纂家庭醫學手冊第四輯《家庭醫生一百篇》，多位前線醫生熱心就各種家庭醫學問題撰寫文章，惠澤大眾。書中內容豐富，淺顯易懂，讓人倍感親切，對讀者改善自身和家人健康大有裨益，不容錯過。

_____ 梁卓偉教授

這書裏面有很多家庭醫生的個人分享、有病人個案分析，還有其他有用的資訊。每篇文章短短的，當中記載的東西卻是寶貴而無價的；而且用字淺白、言簡意賅。本人誠意向大家推薦這本小讀物。

_____ 李國棟醫生

本書透過輕鬆故事和醫生平日所見所聞，深入淺出講述保健知識和如何維持身心健康，並道出預防疾病的良法；它亦讓大家明白家庭醫生在醫療體系中的重要角色。我翻閱初稿，當中提及醫生診症時向病人查詢病情，並關心情緒，建立互信關係的情節，體現了「醫生不單要醫病，更要醫人」的信念，甚有共鳴，特誠意推介。

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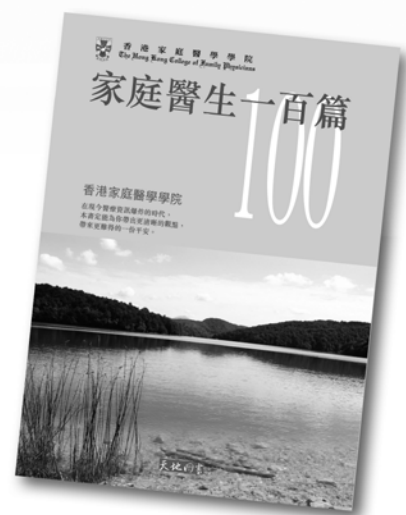
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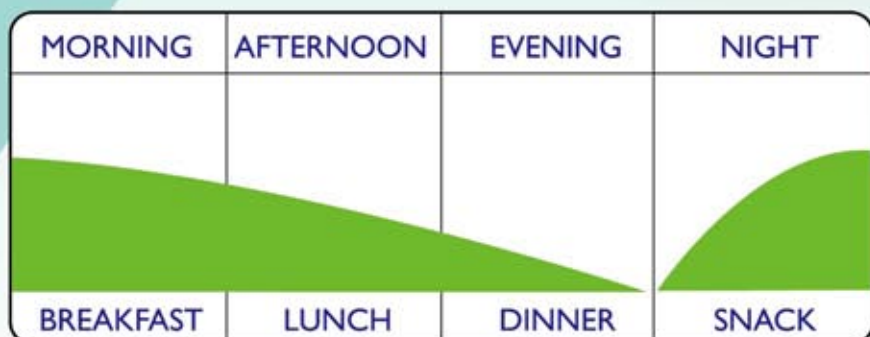
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References

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Further information is available from

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