

# A survey exploration of the research interests and needs of family doctors in Hong Kong

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## Summary

### Objective:

To examine the needs and interests of family doctors regarding participation in primary care research

**Design:** Cross-sectional survey

**Subjects:** Members of the Hong Kong College of Family Physicians (HKCFP)

### Main Outcome measures:

1. Engagement in research
2. Drivers and facilitators to participate in research
3. Research training needs

**Results:** A total of 123 HKCFP members responded to the survey. Characteristics of the respondents: 66% male, 79% > 40 years, 37% worked in the Hospital Authority, 85% used research evidence regularly and 78% had previously participated in research. Over half (N=72) were interested in participating in future research. Key motivators include research questions relevant to their clinical practice; access to mentoring and support from experienced researchers; and better research skills. Respondents were most interested in gaining research skills to generate research ideas and perform data analysis and interpretation.

**Conclusions:** Our survey indicates that there are family doctors in Hong Kong who are intrinsically motivated and willing to participate in research; however, many of these doctors need more support in terms of research supervision and skills training. The HKCFP

can potentially play a role to foster Hong Kong's primary care research capacity through building up research networks and collaborations to do research that address clinically important questions, and by connecting family doctors with research mentors who can provide research skills training.

**Keywords:** Primary care; research capacity; research skills; attitudes; family doctors

## 摘要

**目的：**評估家庭醫生對於參加基層醫療研究的需求及興趣。

**設計：**橫斷面調查。

**參加者：**香港家庭醫學學院成員。

**結果測定：**

1. 研究參與度；
2. 促進與推動其參與研究的因素；
3. 為進行研究而參與訓練的需求。

**結果：**123位香港家庭醫學學院的成員參與了調查：其中66%為男性，79%年齡大於40歲，37%在醫院管理局工作。他們中85%的人會經常採用文獻研究成果，78%的人曾經參與過研究。超過一半的人有興趣在未來參與研究。主要激勵他們進行或參與研究的因素包括與其自身臨床實踐相關的研究問題，接觸有經驗的研究人員並接受他們的指導和支援的機會，以及更好的研究技能。多數調查對象都表達出對於研究技能培訓的興趣，以便他們產生研究方向，分析以及解釋資料。

**結論：**許多香港的家庭醫生擁有內在的動力並且希望去參加研究，但是他們需要在監督和技能培訓兩方面的幫助。為了提高香港基層醫療研究的生產力，香港家庭醫學學院可以在帶動研究發展的過程中發揮作用，例如通過研究協作，為家庭醫生提供更多的研究機會去解決臨床上的重要問題。

**關鍵字：**基層醫療、研究生產力、研究技能、態度、家庭醫生

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### Introduction

In most countries, the health of their population is directly linked to the quality of care that is provided by their primary health care system.<sup>1,2</sup> Family doctors provide integrated, accessible health care services. They address a full range of personal health and health care needs, develop a sustained partnership with their patients and practice in the context of a family and community.<sup>3</sup>

In order to improve the quality of care, primary care providers need access to a wide range of relevant information to support their clinical practice. Unfortunately there is a relative paucity of research evidence regarding many common problems; in particular, problems that are managed almost exclusively outside the hospital settings.

The majority of current research is mostly funded in academic tertiary and quaternary care hospitals.<sup>1</sup> Furthermore, primary care doctors who provide front line services are typically not involved in generating or answering research questions that would be most relevant to their practice.<sup>4</sup> There is a need to improve the quality and effectiveness of primary health care, but without research evidence, it is difficult to facilitate policy development in primary care.<sup>5</sup>

Traditionally, family doctors in clinical practice have not viewed research as an important component of their work and, in the past, Family Medicine trainees were not eager to do research.<sup>6</sup> In a Canadian study published in 2002, 95% of medical graduates stated that they would never consider family medicine as a career if they were interested in research.<sup>7</sup> More recently however, these attitudes have begun to shift as more medical schools and post-graduate training programmes implement greater emphasis and opportunities to incorporate research into their curricula, and the practice of evidence based medicine has become the norm.<sup>8,9</sup> Some General Practice training programmes have now implemented a research training component for their trainees, such as through a participatory research process.<sup>10,11</sup>

Over the past 10-20 years, many countries have begun implementing strategies to build their primary care research capacity.<sup>12-14</sup> In 2004, the American Academy of Family Practice stated, "Participation in the generation of new knowledge will be integral to the activities of all family physicians and will be incorporated into family medicine training. Practice-based research will be

integrated into the values, structures, and processes of family medicine practices."<sup>15</sup> Around the same time, the WONCA Research Working Group made recommendations to prioritise research capacity building in primary care<sup>16</sup> and in 2007 adopted the concept that every family practice in the world should be involved in generating new knowledge.<sup>13</sup> Globally, there have been recent calls to further the primary care research agenda to guide health care and policy reform.<sup>17-20</sup>

In Hong Kong, until recently, there has been a greater focus on biomedical research with relatively less support and funding for primary care research. With recent health care reforms and attempts to strengthen primary care in Hong Kong<sup>21</sup>, more locally generated evidence is urgently needed. Hong Kong has a unique health care system with a wide variety of primary care practices and a unique set of patients and providers that need to be better understood. However little is known at this time how motivated Hong Kong's primary care doctors are in contributing to local research and the drivers to facilitate greater engagement.<sup>22-24</sup>

The aim of this present study was to examine the needs and interests of family doctors regarding participation in primary care research, and to gain a better understanding of the factors that could motivate greater involvement and engagement in primary care research. The objectives of this study were to:

1. Assess the level of engagement in research;
2. Explore the drivers and facilitators to research participation;
3. Identify research training needs of family doctors in Hong Kong.

This study was initiated by the Research Committee of the Hong Kong College of Family Physicians (HKCFP) to assess the potential of establishing a practice-based primary care research network and the research training needs of its members.

### Methods

#### *Study design*

An online cross-sectional survey was conducted with three invitations to participate in the study sent from 11 November – 26 December 2016. Responses were accepted until 1 April 2017.

### Participants and sampling

All members of the HKCFP with emails were invited to join the study. Emails were sent from the HKCFP using their email mailing list. A third-party survey company, SoGoSurvey, was engaged to track the survey to ensure respondents remained anonymous. A unique identifying code was used for each invitation to ensure there was no duplication of respondents. Response rates were tracked by SoGoSurvey. In order to boost response rates, two further reminder emails were sent to all College members 14 days apart. Participants were awarded one CME point as an incentive for survey completion.

The survey consisted of a combination of categorical questions and items with Likert-scale responses, with information on:

1. demographic data (gender, age, type of practice, postgraduate qualifications)
2. previous research experience
3. previous research training
4. factors motivating participation in research
5. interest in research skills training

### Outcome Measures:

1. Engagement in research
2. Drivers and facilitators to participate in primary care research
3. Research training needs

### Data Analyses

All data was analysed descriptively. Analyses were performed using SPSS Statistics 24 software.

### Ethics approval

This study was approved by the Institutional Review Board of the University of Hong Kong / Hospital Authority Hong Kong West Cluster.

## Results

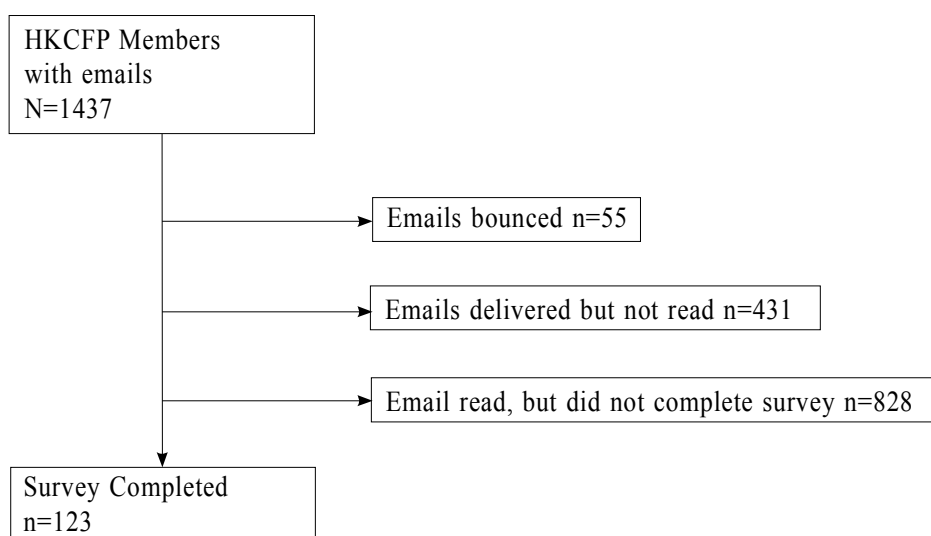
### Response rates

**Figure 1** outlines the subject recruitment process. A commercial survey company was used to administer and track the email responses anonymously using a unique identifying code. A total of 1,437 emails were initially sent out by the HKCFP office. Of these, 55 emails bounced immediately as the emails were no longer valid, 431 emails were delivered but not read and 828 emails were read but the survey was not commenced. By the end of the sampling period, 123 HKCFP members completed the survey.

### Subject characteristics

**Table 1** shows the demographic characteristics of the survey respondents: 66% were male; 79% were >40 years; and 75% graduated from a medical school in Hong Kong; 37% worked for the Hospital Authority; and 74%

**Figure 1: Subject recruitment flow chart**



\* Sampling Period 11 November 2017 – 1 April 2018

were vocationally trained in Family Medicine. Over half of the respondents had previously received research skills training either in medical school, through postgraduate studies, or through experiential participation in research.

## Research Experience and Interest

**Table 2** shows the research experience and interests of the 123 respondents. Almost all respondents agreed that primary care research was important with 85% reported that they regularly applied research-based evidence to their clinical practice. Of the 123 respondents, 69 had previously participated in research activities, most frequently by assisting in data collection or performing clinical audits. Conversely, 89 reported that they had previously turned down invitations to take part in research mainly due to lack of time, tasks being too troublesome, or lack of interest in the research topic.

When asked about interest in participating in future research projects, 72 respondents reported that they would be interested in conducting either clinical and health services research, or medical education research.

## Motivation to participate in research

**Table 3** shows the key drivers to research

participation. The commonest options were: relevance of the research topic to their own practice, access to advice and support from experienced researchers, and support and co-operation from patients.

## Interest in Research skills training

**Table 4** and **Figure 2** shows the spider diagram which illustrated the interest level of various research skills training.<sup>25</sup> There was an even interest level over all the research skills training options offered, with the best interest in generating research ideas, data analysis and interpretation.

## Discussion

This survey was a pilot exploratory study to examine the perceptions and interests among Hong Kong family doctors regarding research participation. It will help to inform the HKCFP of the feasibility and potential for establishing a research network and to identify the key research training needs of its members.

Although only 123 HKCFP members responded to this survey, it is encouraging to see that there was sufficient research interest from doctors of a wide range

**Figure 2: Spider diagram showing interest level in developing research skills by domain**



Table 1: Demographic characteristics of survey respondents

Demographic Information (% , n)	Total Subjects (N =123)
<b><i>Gender</i></b>	
Female	33.33% (41)
Male	64.22% (79)
Not specified	2.43% (3)
<b><i>Age</i></b>	
≤ 40	20.32% (25)
41-50	56.10% (69)
>50	21.95% (27)
Not specified	1.62% (2)
<b><i>Year of Graduation</i></b>	
Before 1980	6.50% (8)
1980-2000	42.28% (52)
2001-2015	43.90% (54)
Not specified	39.13% (9)
<b><i>Place of Graduation</i></b>	
Hong Kong	73.98% (91)
China	5.69% (7)
UK/Ireland	5.69% (7)
Australia/New Zealand	8.94% (11)
Others	4.07% (5)
Not specified	1.62% (2)
<b><i>Type of Practice</i></b>	
Hospital Authority	35.77% (44)
Government Department of Health	39.13% (9)
NGO	1.62% (2)
Private Solo	17.89% (22)
Private Group	20.32% (25)
Private Hospital	6.50% (8)
University	5.69% (7)
Others (Retired, director of several groups)	1.62% (2)
Not specified	3.25% (4)
<b><i>Vocational Training</i></b>	
Family Medicine	73.17% (90)
Others (Paediatrics, Emergency Medicine, Pathology, Community Medicine, Public Health Medicine)	4.07% (5)
None	21.14% (26)
Not specified	1.62% (2)
<b><i>Postgraduate Qualifications</i></b>	
Diploma	14.63% (18)
Fellowship/Membership	56.91% (70)
Master/PhD	17.89% (22)
None	8.94% (11)
Not specified	1.62% (2)

**Table 2: Research experience and interest**

<b><i>How important is of primary care research? (N=123)</i></b>	
Very Important/ Important	93.50% (115)
Not very important/ not important at all	6.50% (8)
<b><i>Do you apply research results to clinical practice (N=123)</i></b>	
Yes	84.55% (104)
No /Not specified	15.44% (19)
<b><i>Have you received research skills training before? (N=123)</i></b>	
Yes	57.02% (69)
No /Not specified	43.90% (54)
<b><i>Where did you receive it? (N=123)</i></b>	
Medical School	26.02% (32)
Postgraduate courses	39.02% (48)
Vocational training	21.14% (26)
Through participation in research	32.52% (40)
Others	0.81% (1)
<b><i>Have you previously participated in research activities? (N=123)</i></b>	
Yes	78.05% (96)
No /Not specified	21.95% (27)
<b><i>Context of participation in research activities (N=96)</i></b>	
Data collection e.g. filling in surveys	88.54% (85)
Literature review	56.25% (54)
Clinical audit	65.63% (63)
Patient recruitment	57.29% (55)
As project investigator	52.08% (50)
Data analysis	53.13% (51)
Writing up paper	56.25% (54)
Others	3.13% (3)
<b><i>Have you previously turned down invitation to take part in research? (N=123)</i></b>	
Yes	72.36% (89)
No/ Not specified	27.64% (34)
<b><i>Reasoning for turning down invitation for research (N=89)</i></b>	
Topic Not Interesting	60.67% (54)
Topic not relevant to my field of practice	47.19% (42)
Not having time to participate	82.02% (73)

Project too troublesome	50.56% (45)
Questionnaire too long	69.66% (62)
Questionnaire too difficult to answer	37.08% (33)
Concern about data confidentiality	12.36% (11)
Others (-research low end quality; no feedback after survey; Not supported by clinic staff; Not useful/not practical; Topic considered unnecessary)	7.87% (7)
<b><i>Are you interested in taking part in future research (N=123)</i></b>	
Yes	58.54% (72)
No /Not specified	41.46% (51)
<b><i>What types of research activities are you interested in contributing (N=113)</i></b>	
Data collection e.g. filling in surveys	84.96% (96)
Literature review	36.28% (41)
Clinic audit	31.86% (36)
Patient recruitment	43.36% (49)
As project investigator	37.17% (42)
Data analysis	30.97% (35)
Writing up paper	31.86% (36)
Others (how to design high impact research)	1.77%% (2)
<b><i>Which area of research are you likely to take part in? (N=123)</i></b>	
Basic Research: to test theories and develop research methods in primary care (N=104)	43.27% (45)
Clinical Research: to improve clinical practice (N=111)	91.89% (102)
Health Services Research: to identify the most effective ways to deliver high quality care (N=108)	81.48% (88)
Health Systems Research: to improve health by enhancing the efficiency and effectiveness of the health system and health policies (N=110)	59.09% (65)
Educational Research: to improve professional performance (N=109)	71.56% (78)
<b><i>Which would you consider as priority areas for future primary care research?</i></b>	
Basic Research: to test theories and develop research methods in primary care (N=107)	69.16% (74)
Clinical Research: to improve clinical practice (N=110)	97.27% (107)
Health Services Research: to identify the most effective ways to deliver high quality care (N=110)	87.27% (96)
Health Systems Research: to improve health by enhancing the efficiency and effectiveness of the health system and health policies (N=111)	59.09% (65)
Educational Research: to improve professional performance (N=108)	91.67% (99)

**Table 3: Motivation to participate in research**

<i>What would motivate you to participate in research?</i>	<i>Agree</i>
Research topic being relevant to your practice (N=122)	95.90% (117)
To improve your own clinical practice (N=121)	88.43% (107)
To fulfil requirement for postgraduate qualification (N=118)	47.46% (56)
To fulfil CME or CPD requirements (N=120)	49.17% (59)
Protected time for research/ compensation of time spent on (N=118)	61.86% (73)
Direct invitation from a colleague (N=118)	50.85% (60)
To develop family medicine as a discipline (N=118)	65.25% (77)
Prestige of publishing (N=119)	43.70% (52)
Financial Incentives (N=118)	26.27% (31)
Advice and support from experienced researchers (N=121)	91.74% (111)
Having statistical and other research skills and/or assistance (N=121)	85.95% (104)
Having computer skills and/or assistance (N=121)	82.64% (100)
Having access to medical literature and other information resources (N=121)	85.95% (104)
Support from employer or superior (N=120)	81.67% (98)
Support among practice colleagues and other staff (N=120)	79.17% (95)
Involvement of other practice staff e.g. nurses (N=120)	70.83% (85)
Support and co-operation from patients (N=121)	90.08% (109)
<i>Other reasons</i>	
<ul style="list-style-type: none"> <li>- High quality research question</li> <li>- Research funding</li> <li>- More platforms for publication</li> <li>- More categories of presentation types and awards at HKPCC,</li> <li>- More chances for non-academic colleagues to compete for research awards</li> <li>- Multidisciplinary research</li> </ul>	

**Table 4: Research training needs**

Which types of research skills are you interested in developing?	Interested
Writing a Research Protocol (N=119)	38.66% (46)
Using Quantitative Research Methods(N=117)	43.59% (51)
Publishing Research (N=119)	42.02% (50)
Presenting a Research Report (N=118)	41.53% (49)
Analysing & Interpreting Results (N=119)	47.06% (56)
Using Qualitative Research Methods (N=117)	40.17% (47)
Critically Reviewing Literature (N=120)	42.50% (51)
Finding Relevant Literature (N=119)	44.54% (53)
Generating Research Ideas (N=118)	46.61% (55)
Applying for Research Funding (N=118)	33.05% (39)



**Key messages**

1. Traditionally, front line doctors are not typically involved in generating and answering research questions that may arise from their practice.
2. Primary care providers need access to a range of locally relevant research evidence to support their clinical practice and help enhance quality of care.
3. In Hong Kong, locally generated evidence is needed to help facilitate the ongoing efforts to strengthen and enhance primary care.
4. This study found over 70 family doctors with an intrinsic motivation to do research and who are willing to contribute to local primary care research, but wanted better access to research supervision, mentoring, and research skills training.
5. The HKCFP can potentially play a role in facilitating research collaborations, identifying mentors and providing research skills training, to help enhance Hong Kong's primary care research capacity.

of demographics, including from both public and private sector providers. This is important when establishing a research network; a wide variety of practices can make research findings more generalisable.

From our findings, it appears that our respondents were already engaged in research in many ways, aligning with Paul Glasziou's "research engagement triangle".<sup>26</sup> Firstly, there was a large pool of "research users" comprising almost all our respondents. Ideally, all clinicians should consciously incorporate research into their clinical practice, such as in the form of management guidelines or practice evidence-based medicine. Secondly, there was a moderate pool of approximately 50 respondents who reported to be 'participants in research'. These respondents had engaged in research in many tangible ways, such as conducting literature reviews, data analysis and writing manuscripts.

Interestingly, a number of respondents had been "project investigators". This indicates that a pool of family doctors are ready to be groomed to become future 'research leaders' whose task is to design and publish research.<sup>26</sup>

Although larger numbers of workers are needed to

reach a critical mass where territory-wide research projects can then be sustainable, it appears that already a pool of family doctors in Hong Kong are already willing to engage further in research.

Barriers against participating in primary care research have previously been identified in the literature, such as availability of protected time to conduct research, impact on income, and general attitudes and willingness towards research.<sup>20-23</sup> In this study, however, most of the barriers reported by our respondents were more related to the practicalities, such as research skills, availability of mentorship, and ease of subject recruitment.

Many of the respondents reported intrinsic motivation to participate in research such as good research questions relevant to their field of practice. Respondents also reported a willingness to participate in translational research, such as in clinical and health services research or medical education research. External motivators, such as protected time to do research, CPD points or financial incentives, rated lower.

All these indicate that within our sample of respondents, there was a high degree of willingness to engage in research, and the motivations tended to be altruistic.

Over half of our respondents reported that they had had already received some research skills training either in their undergraduate or postgraduate training or experientially by participation in research in the past, but there was still significant interest in further research skills training. Given sufficient opportunity, support and mentoring, this group of doctors are ready to embark on research collaborations for clinically relevant questions that can enhance patient care.

Hong Kong could make references from Australia, by using a staged approach.<sup>27</sup> Firstly, by increasing awareness, capability and skills to non-participants of research to increase our pool of participants. Next, by offering more opportunities to increase research skills through formal training and participation in research collaborations. Then, increase the intensity of research training through higher qualifications, publications and supervisory skills. Finally, by nurturing the growth and development of primary care academics.<sup>27</sup>

Our findings show that many family doctors in

Hong Kong are at varying stages of development. One way to enhance research capacity may be to offer more opportunities for research training and research collaboration.

## Limitations

There were several limitations to this study. This was a voluntary survey, and the participation rate was low. Characteristics of the respondents demonstrated that they had had pre-existing interest in research, some of them had prior research experience and training. With such a biased sample, our findings cannot be extrapolated to all family doctors in Hong Kong. However, our findings do indicate that sufficient interested doctors in diverse practice settings are there, to initiate a primary care research network or collaboration.

## Conclusion

This study was a pilot exploration of the interests and needs of Hong Kong family doctors towards participation in primary care research. As only 123 respondents completed the survey, our study findings cannot be generalised to all family doctors in Hong Kong; however, it indicates that there is some interest in primary care research and that some family doctors in Hong Kong are keen to increase their research capabilities. In order to build Hong Kong's primary care research capacity, this willingness to engage in research needs to be capitalised, and it appears that there may be a role for bodies such as the HKCFP or other academic institutions to facilitate this growth.

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## Disclosure of potential conflicts of interest

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